

2017 Symposium on Intellectual Property

May 16, 2017

Panelist Biographies

GW | LAW

pillsbury

MAYER • BROWN



2017 Symposium on Intellectual Property



Ginger D. Anders

Counsel

Munger, Tolles & Olson LLP

Ginger Anders is a complex litigation and appellate lawyer based in the Washington, D.C. office of Munger, Tolles & Olson.

Ms. Anders joined the firm as of counsel from the U.S. Department of Justice, where she served as an Assistant to the U.S. Solicitor General and a Deputy Assistant Attorney General in the Office of Legal Counsel. During her nearly eight-year tenure as an Assistant to the Solicitor General, Ms. Anders represented the United States before the U.S. Supreme Court in a wide range of noteworthy cases, formulating the United States' position before the High Court and consulting on the government's appellate strategy in the lower courts. She has extensive experience in intellectual property law, particularly patent law, as well as transnational litigation and the Foreign Sovereign Immunities Act, administrative law and constitutional law. Ms. Anders has argued 18 cases before the U.S. Supreme Court, and she authored the government's briefs in 35 cases at the merits stage and in hundreds of cases at the *certiorari* stage.

Ms. Anders represented the United States in the most significant patent cases decided by the U.S. Supreme Court in recent years. She argued for the government in *Teva Pharmaceuticals v. Sandoz*, which established the standard for appellate review of factual findings in patent claim construction, and *Commil v. Cisco Systems* and *Limelight Networks v. Akamai Technologies*, both of which concerned the scope of liability for inducement of patent infringement. Ms. Anders also wrote the government's briefs in the landmark line of patent-eligibility cases that began with *Bilski v. Kappos* and continued through *Alice Corp. v. CLS Bank*. In other areas of law, Ms. Anders wrote the government's briefs in *Fisher v. University of Texas at Austin*, *Zivotofsky v. Kerry*, *Bank Markazi v. Peterson* and *American Express Co. v. Italian Colors Restaurant*. She has worked extensively with numerous federal agencies, including the Patent and Trademark Office and the Departments of State and Treasury.

William P. Atkins

Partner

Pillsbury partner William Atkins has been lead counsel in 100+ intellectual property and bet-the-company litigations during his 25 years with the firm.

Recognized for resolving complex IP issues, Bill is a trial lawyer and registered patent lawyer who has won jury verdicts and decisions for both sides in court, the ITC and the USPTO. He is also adept at resolving disputes. Experienced in patent, trademark, trade secret, Lanham Act, unfair competition and copyright matters, Bill is editor-in-chief of two Bloomberg BNA treatises, *Patent Litigation Strategies Handbook* and *The PTAB Handbook*.



LAW

MAYER • BROWN

2017 Symposium on Intellectual Property

Jack S. Barufka

Partner

With more than 20 years of experience representing numerous Fortune 500 companies, Jack Barufka ranks as one of the top intellectual property attorneys in the U.S.

Jack serves as the co-leader of Pillsbury's firmwide Intellectual Property practice. His practice includes strategic intellectual property counseling, litigation, prosecution, dispute resolution, licensing, technology transactions, intellectual property mining and enforcement, copyright protection, and pre-litigation opinions. Mr. Barufka has extensive experience in post-grant proceedings. He works closely with clients on new product launches to minimize risks associated with costly litigation and also concentrates in patent claim interpretation and designing around valid US patents.

Jack's client counseling practice develops strategic patent programs that posture the client's patent portfolio to increase market share, improve margins, and generate licensing revenue in a cost effective manner. His areas of technical focus are electrical, mechanical, semiconductor, computer, software, medical devices and business methods.

Mark Beloborodov,

Senior Director, IP Portfolio & Counseling

Philips Intellectual Property & Standards

Mark Beloborodov is IP Portfolio & Counseling Manager at Royal Philips, N.V., based in Cambridge, MA. In this role, Mark is responsible for the intellectual property strategy, counseling and portfolio management of several business units and research programs of Philips in the domain of connected care & health informatics, and leads a global team of in-house patent attorneys. Prior to joining Philips in 2007, Mark was in private practice in Boston, drafting and prosecuting patent applications for various technology companies, and then served as Deputy General Counsel for Intellectual Property at Color Kinetics, a pioneer in LED lighting, through its acquisition by Philips. Mark is a graduate of National Technical University of Ukraine and Boston University School of Law.



LAW

MAYER • BROWN

2017 Symposium on Intellectual Property



Beth S. Brinkmann

Partner

Covington & Burling LLP

Beth Brinkmann is an experienced appellate and Supreme Court litigator who has served in high-level positions in the Department of Justice, most recently as Deputy Assistant Attorney General in the Civil Division. She has argued 24 cases before the Supreme Court of the United States. Ms. Brinkmann also has argued in numerous federal and state appellate courts across the country.

As the Civil Division's top appellate lawyer, she was responsible for supervising much of the federal government's civil litigation in appellate courts, including constitutional challenges, administrative law issues, intellectual property matters, and national security cases. During her tenure at the DOJ, Ms. Brinkmann presented oral argument in several high-profile court of appeals cases, including the successful defense of the constitutionality of the Affordable Care Act and the government's victory in federal immigration preemption litigation. She also regularly consulted with trial lawyers for the government on legal arguments and strategy at early phases of litigation, made recommendations on appellate matters to the U.S. Solicitor General, and advised senior leadership of cabinet-level departments and at regulatory agencies regarding litigation risk, legislative proposals, and rulemaking matters.

From 1993 to 2001, Ms. Brinkmann served as an Assistant to the Solicitor General in the Department of Justice. In this role, she briefed and argued cases to the Supreme Court on behalf of the United States and also provided advice and analysis on whether to authorize appeals, petitions for certiorari, and petitions for rehearing en banc. Ms. Brinkmann served two years as an Assistant Federal Public Defender, where she represented indigent criminal defendants in federal district court, including approximately a dozen felony jury trials. She also previously handled both trial and appellate litigation in state and federal court at a small boutique litigation firm.

Ken Corsello,

IP Law Site Counsel

IBM Corporation

Ken is the IP Law Counsel for IBM's Storage group, and he also works on IP Law issues relating to microelectronics technology. In his previous roles at IBM, he worked on patent procurement, litigation, and transactional matters. Before joining IBM, Ken was a law clerk to Chief Judge Glenn Archer at the Federal Circuit, an Associate Solicitor in the USPTO, and in private practice at law firms in Washington, D.C. He did his undergraduate work in Computer Science at SUNY Stony Brook, received his JD from the Catholic University, and obtained an LL.M. from George Washington University.

Ken was a member of the IBM team that submitted amicus briefs to the Federal Circuit and Supreme Court in the *Bilski* and *Alice* cases, the team that drafted IBM's internal procedures for drafting and prosecuting claims after *Alice*, and the team that drafted IBM's January 2017 comments to the USPTO on subject matter eligibility.



LAW

MAYER • BROWN

2017 Symposium on Intellectual Property



Mark R. Freeman

Senior Appellate Counsel

US Department of Justice – Civil Division

Mark R. Freeman is Senior Appellate Counsel with the Appellate Staff of the Civil Division at the U.S. Department of Justice. Mr. Freeman supervises most IP-related appeals in which the United States or a federal agency is involved and works closely with the Solicitor General's Office on intellectual property cases in the Supreme Court. Mr. Freeman has argued more than 50 appeals on behalf of the federal government, including numerous patent matters, and has argued in all thirteen federal courts of appeals as well as the Supreme Court. Mr. Freeman clerked for the Hon. Sandra Lynch of the U.S. Court of Appeals for the First Circuit. He graduated magna cum laude from Harvard Law School, where he was an editor of the Harvard Law Review.

Alan Grimaldi

Partner

Mayer Brown LLP

Alan Grimaldi is co-leader of the firm's Intellectual Property practice. Accomplishments include a jury verdict of non-infringement after a five week trial in the Federal court in Arizona. In addition, he obtained a \$76 million judgment against the United States in a breach of contract case for a Midwestern banking client. At his former firm, he was co-chair of a 250 member intellectual property practice and was previously co-chair of that firm's commercial trial group.

He has extensive experience in patent and other intellectual property litigation, including mediation and arbitration, and has represented IP clients in the consumer goods, health care, chemical, electronics, automotive, banking, defense, energy & oil, and drug industries.

Alan has also had significant experience in all aspects of private and government antitrust and other complex commercial litigation including nationwide class action litigation, multi-district litigation in federal and state courts, federal and state administrative agency litigation, unfair competition, insurance coverage, products liability and litigation dealing with trade-related matters.

He was ranked in the 2014 edition of the *IAM Patent 1000*, which noted that Alan is an extremely popular lawyer whose "client-comes-first philosophy sets him apart." He was named Washington DC Patent Law Lawyer of the Year in the 2015 edition of *Best Lawyers*.



LAW

MAYER • BROWN

2017 Symposium on Intellectual Property



Chad Hanson, PhD

Senior Legal Specialist, IP Litigation

Medtronic plc

Dr. Hanson is a Senior Legal Specialist, Intellectual Property Litigation, for Medtronic, Inc. For over a decade, Dr. Hanson has handled all matters of intellectual property disputes, including patent, copyright, trademark, and contract disputes from the district court trials through appellate review. Dr. Hanson has handled over fifty Inter Partes Reviews and Reexams for Medtronic.

Before joining Medtronic, he was a partner at Fish & Richardson, P.C., P.A. There he handled patent, trademark, and commercial disputes with a primary emphasis on patent litigation. Dr. Hanson has extensive experience in client counseling and patent prosecution in the medical, chemical, agriculture, and biotechnology fields.

Jim Howard

Associate General Counsel

Askeladden L.L.C. (a/k/a Patent Quality Initiative)

Mr. Howard is Associate General Counsel of Askeladden, where he supports all of Askeladden's Patent Quality Initiative efforts, and Vice President and Associate General Counsel of The Clearing House Payments Company. He is a registered patent attorney with experience in conducting non-infringement analyses, developing invalidity strategies, and handling various other aspects of patent litigation. Before joining The Clearing House, Mr. Howard was in private practice where he represented a variety of defendants, including technology and financial services companies, in patent litigation matters.

David Jones

Assistant General Counsel for Intellectual Property Policy

Microsoft

David W. Jones is the Assistant General Counsel for intellectual property policy at Microsoft. Prior to joining Microsoft in 2007, David worked as a counsel to the U.S. Senate Judiciary Committee, where he was responsible for intellectual property and antitrust matters, serving in various positions including Chief Antitrust Counsel for the Judiciary Committee and Counsel to the Intellectual Property Subcommittee.

David received his legal education at the University of Virginia School of Law, and completed two appellate clerkships, one with Judge Will Garwood of the U.S. Court of Appeals for the Fifth Circuit and the other with Judge Sharon Prost of the U.S. Court of Appeals for the Federal Circuit. David began his career in the Regulatory and Appellate Litigation practice group at Sidley & Austin in Washington, DC, where he worked primarily on matters involving telecommunication and internet law



LAW

MAYER • BROWN

2017 Symposium on Intellectual Property



Dmitry Karshtedt

Associate Professor of Law

The George Washington University Law School

Dmitry Karshtedt is the newest faculty member at GW Law. Professor Karshtedt's research focuses on patent law. His legal scholarship has appeared in the *Texas Law Review*, *Washington University Law Review*, and *Boston College Law Review*. Professor Karshtedt's academic work has won several awards, including the scholarship grant for judicial clerks sponsored by the University of Houston Law Center Institute for Intellectual Property and Information Law, the Samsung-Stanford Patent Prize, and the Intellectual Property Writing Competition at Stanford Law School.

Before going into law, Professor Karshtedt completed a Ph.D. in chemistry from U.C. Berkeley and worked as a staff scientist for a semiconductor materials startup. Professor Karshtedt received his law degree from Stanford Law School, where he served as the Senior Symposium Editor for the *Stanford Law Review*. Professor Karshtedt practiced in the Patent Counseling and Innovation Group at Wilson Sonsini Goodrich & Rosati and clerked for the Honorable Kimberly A. Moore on the U.S. Court of Appeals for the Federal Circuit. Immediately prior to starting his position at GW, Professor Karshtedt was a Fellow at the Center for Law and the Biosciences at Stanford Law School. Professor Karshtedt received his A.B. from Harvard University.



LAW

MAYER • BROWN

2017 Symposium on Intellectual Property



Michelle K. Lee

Under Secretary of Commerce for Intellectual Property and Director

United States Patent and Trademark Office

As the Under Secretary of Commerce for Intellectual Property and Director of the United States Patent and Trademark Office (USPTO), Michelle K. Lee provides leadership and oversight to one of the largest intellectual property offices in the world, with over 12,000 employees and an annual budget of over \$3 billion. Ms. Lee also serves as the principal advisor to the President, through the Secretary of Commerce, on domestic and international intellectual property policy matters. Ms. Lee is the first woman to serve as Director of the U.S. Patent and Trademark Office in the country's history.

Prior to public service, Ms. Lee has spent most of her professional career advising some of the country's most innovative companies on technical, legal, and business matters. She was Deputy General Counsel for Google and the company's first Head of Patents and Patent Strategy. She also served as a partner at the Silicon Valley-based law firm of Fenwick & West LLP, where she advised a wide range of high-technology clients from startups to Fortune 100 companies on intellectual property, licensing, litigation and corporate matters. Before her career as a legal advisor to technology companies, Ms. Lee worked as a computer scientist at the M.I.T. Artificial Intelligence Laboratory and Hewlett-Packard Research Laboratories.

Ms. Lee worked in the federal judiciary as a law clerk on the U.S. Court of Appeals for the Federal Circuit for Judge Paul R. Michel and District Court for the Northern California for Judge Vaughn R. Walker. She holds a B.S. and M.S. in electrical engineering and computer science from M.I.T., as well as a J.D. from Stanford Law School.

Ms. Lee has been recognized by numerous organizations for her work including by Politico Magazine as one of the "Top 50 Most Influential Visionaries in American Public Policy" in 2015, by Washingtonian Magazine as a "Tech Titan" in 2015 and 2017, by Law360 as a "Top 25 Icon of IP" in 2016, and by the San Francisco Business Times and San Jose Business Journal as one of the top 100 most influential women in the Silicon Valley in 2013.



LAW

MAYER • BROWN

2017 Symposium on Intellectual Property



Scott Markow

Senior Patent Counsel

Stanley Black & Decker, Inc.

Scott Markow is Senior Patent Counsel for Stanley Black & Decker, Inc., where he is head of the professional power tools and accessories division. His practice includes patent portfolio management; preparation and prosecution of patent and trademark applications; preparation of patent and trademark opinions; investigation and management of intellectual property disputes and litigation, and negotiation and drafting of licenses and other agreements. Mr. Markow previously was an associate with Fish & Richardson and Covington & Burling, where he practiced in intellectual property litigation, patent prosecution, and reexamination.

Mr. Markow graduated, *magna cum laude*, from Georgetown University Law Center, where he was an associate editor of the *Georgetown Law Review*. He received a B.S. in Mechanical & Aerospace Engineering, with distinction, from Cornell University.

Cory Myers

Intellectual Property Counsel

Hughes Network Systems, LLC

Cory serves as Intellectual Property Counsel at Hughes Network Systems. As IP Counsel, he manages Hughes' patent, trademark and copyright portfolios, providing strategic advice to members of the business regarding protection of emerging technologies. Cory also supports ongoing Hughes patent litigation matters in district and appellate courts, as well as the USPTO. In this role, he serves as the chief liaison between outside counsel and members of the Hughes' engineering team. Additionally, Cory provides comprehensive advice to the management team regarding favorable resolution to pending litigation matters.

Prior to joining Hughes, Cory was a Senior Associate at WilmerHale LLP and Associate at Leydig, Voit & Mayer. In these positions, he counseled clients in a wide range of matters – including patent prosecution, opinion analysis, and support in high tech patent litigations. Cory's background and undergraduate degree is in electrical engineering. Before graduating from law school, he worked as a software engineer for IBM for over seven years.



LAW

MAYER • BROWN

2017 Symposium on Intellectual Property



Hon. Roy S. Payne

US District Court for the Eastern District of Texas

Judge Roy S. Payne is a United States Magistrate Judge for the Eastern District of Texas in Marshall, Texas, where he has served since 2011. He obtained a B.A. from the University of Virginia, with distinction, in 1974, and then received his J.D. in 1977 from Louisiana State University graduating Order of the Coif and serving as an Associate Editor on the Louisiana Law Review. After clerking for U.S. District Judge Tom Stagg of the Western District of Louisiana (1977-1979), he received his LL.M. from Harvard Law School in 1980. He was a trial lawyer in private practice in Shreveport, La. from 1980 to 1987, and from 2005 to 2011, and is admitted to practice in both Texas and Louisiana. From 1987 to 2005 he served as a U.S. Magistrate Judge for the Western District of Louisiana in Shreveport.



LAW

MAYER • BROWN

2017 Symposium on Intellectual Property



Hon. Rebecca Pallmeyer

US District Court for the Northern District of Illinois

Rebecca R. Pallmeyer graduated from Valparaiso University and earned her law degree from the University of Chicago Law School. Following a one-year clerkship with Justice Rosalie Wahl of the Minnesota Supreme Court, Judge Pallmeyer practiced in the area of commercial litigation for several years with the Chicago law firm of Hopkins and Sutter.

From 1985 until 1991, Ms. Pallmeyer was an Administrative Law Judge with the Illinois Human Rights Commission, a quasi-judicial agency responsible for enforcement of the state's anti-discrimination laws. On October 1, 1991, Ms. Pallmeyer was appointed a United States Magistrate Judge for the Northern District of Illinois. She served as Presiding Magistrate Judge from 1996 until 1998. On July 31, 1997, President Clinton nominated her for a seat in the U.S. District Court in Chicago. The Senate confirmed her nomination on October 21, 1998. In March 2002 and April 2003, Judge Pallmeyer traveled to Romania to consult with Romanian court officials on judicial administration and court reform.

Judge Pallmeyer has presided over dozens of civil and criminal trials, including the prosecution for public corruption of the former governor of the State of Illinois, George Ryan. She speaks frequently on practice and procedure in federal court and on substantive legal issues. Judge Pallmeyer participates in the District Court's Patent Pilot Program.

Judge Pallmeyer serves as a member on the Committee on Court Administration and Case Management of the United States Judicial Conference. She is an honorary fellow of the College of Labor and Employment Lawyers, fellow of the American Bar Foundation, and a member of the ALI-CLE Employment and Labor Law Advisory Panel. Since 2006, Judge Pallmeyer has served on the faculty for the annual ALI-CLE program, Current Developments in Employment Law, held in Santa Fe, New Mexico. Judge Pallmeyer is past President of the Lawyers Club of Chicago, Judicial Counselor of the Richard Linn American Inn of Courts, and an active member of the Chicago Bar Association, the Chicago Chapter of the Federal Bar Association, the Women's Bar Association of Illinois, and the American Bar Association.



LAW

MAYER • BROWN

2017 Symposium on Intellectual Property



Erick Palmer

Partner

Mayer Brown LLP

Erick Palmer is a partner in Mayer Brown's Chicago office, where his practice focuses on complex patent litigation and post-grant proceedings before the Patent Trial and Appeal Board. Erick has provided litigation representation for industry-leading clients in various fields, including chemicals, pharmaceuticals, medical devices, medical diagnostics, nutraceuticals, and food science. Erick has substantial experience in all aspects of patent cases, from fact discovery, motion practice, and claim construction to expert discovery, dispositive motions, trial, and appeal. Prior to joining Mayer Brown in 2008, Erick received a Ph.D. in Chemistry from The Ohio State University. He was also a judicial extern for the Honorable Jeffrey S. Sutton of the United States Court of Appeals for the Sixth Circuit.

Andrew Pincus

Partner

Mayer Brown LLP

Andrew Pincus focuses his appellate practice on briefing and arguing cases in the Supreme Court of the United States and in federal and state appellate courts; developing legal strategy for trial courts; and presenting policy and legal arguments to Congress, state legislatures, and regulatory agencies.

Andy has argued 25 cases in the Supreme Court, including *Spokeo, Inc. v. Robins* (2015), and *AT&T Mobility v. Concepcion*, 131 S. Ct. 1740 (2011). Law360 [ranked](#) Andy's victory in *Concepcion* as the most important Supreme Court class action decision of the last 15 years. Andy was [named](#) a 2015 Litigation Trailblazer by *The National Law Journal*, and was [profiled](#) as a member of Law360's 2014 Appellate A-List. Andy's work in *Concepcion* and successful defense of Chicago Mayor Rahm Emanuel's right to run for office were cited by the *American Lawyer* in its [article](#) naming Mayer Brown as one of the top six US litigation firms in the 2012 Litigation Department of the Year report.

A former Assistant to the Solicitor General in the United States Department of Justice (1984-1988), Andy co-founded and serves as co-director of the [Yale Law School's Supreme Court Advocacy Clinic](#) (2006-present), which provides pro bono representation in 10-15 Supreme Court cases each year. Andy's Supreme Court oral arguments are available [here](#). A selection of his more than 250 appellate briefs is available [here](#).

Andy's practice also includes detailed written and oral advocacy before Congress, other legislative bodies, and regulatory agencies regarding a variety of policy and legal issues. He frequently testifies before Congress on a variety of subjects, including patent reform, the Consumer Financial Protection Bureau, reform of the federal litigation system, and the Supreme Court's decisions in cases involving business law issues. Andy successfully represented clients in connection with passage of the Private Securities Litigation Reform Act.



LAW

MAYER • BROWN

2017 Symposium on Intellectual Property



Hon. David P. Ruschke

Chief Judge for the Patent Trial and Appeal Board

United States Patent and Trademark Office

David P. Ruschke is Chief Judge for the Patent and Trial Appeal Board (PTAB). He was appointed to the position in May 2016.

As Chief Judge, Dr. Ruschke leads the PTAB which is authorized to conduct post-grant trials following the passage of the American Invents Act in 2011. Dr. Ruschke manages the PTAB as it conducts trials, including inter partes, post-grant, and covered business method patent reviews and derivation proceedings, hears appeals from adverse examiner decisions in patent applications and reexamination proceedings, and renders decisions in interferences.

In his previous role, Dr. Ruschke managed the intellectual property portfolio of Medtronic's CSH business unit, with sales in excess of \$3 billion. As Chief Patent Counsel, Dr. Ruschke participated in numerous patent appeals, interferences, post grant reviews, inter partes reviews, and covered business method patent reviews. He gained extensive experience in post-grant proceedings in Europe and participated in third-party contested proceedings before administrative agencies and courts around the world. He has significant experience in shaping and integrating teams of professionals, as well as managing a workforce that is geographically dispersed.

Prior to joining Medtronic, Dr. Ruschke practiced with Covington & Burling in Washington DC, where he litigated claims of patent infringement. Dr. Ruschke's judicial experience includes clerking for Chief Judge Glenn L. Archer, Jr. and Circuit Judge Arthur J. Gajarsa at the U.S. Court of Appeals for the Federal Circuit.

Dr. Ruschke received his JD from Georgetown University Law Center, and holds a PhD in organometallic chemistry from the Massachusetts Institute of Technology and a BS in chemistry from the University of Minnesota.



LAW

MAYER • BROWN

2017 Symposium on Intellectual Property



Hon. Gregory Sleet

US District Court for the District of Delaware

Gregory M. Sleet, a native of New York City, is a graduate of Hampton University, Hampton, Virginia and Rutgers University School of Law at Camden, New Jersey, where he was an Earl Warren Legal Scholar. He received his Juris Doctorate in 1976.

On April 27, 1998, Judge Sleet was confirmed by the United States Senate to the United States District Court for the District of Delaware. He was sworn-in as the first African American to become a Judge of that Court on September 28, 1998, and served as Chief Judge from July 1, 2007 to June 30, 2014.

Judge Sleet has had a varied professional experience in the law consisting primarily of civil and criminal litigation and corporate legal work. From 1992-1994, he served as in-house counsel in the legal department of Hercules Incorporated. Prior to that, he was a Deputy Attorney General for the State of Delaware and, prior to that, practiced law in Philadelphia, Pennsylvania for fourteen years -- six of those as an assistant public defender with the Defender Association of Philadelphia.

At age 43, Judge Sleet took the oath of office on Monday, June 13, 1994, to become the first African-American U.S. Attorney for the District of Delaware. In January of 1995, he was appointed by United States Attorney General Janet Reno to the Attorney General's Advisory Committee for a two-year term. The AGAC is a group of U.S. Attorneys from around the country that meets regularly in Washington, D.C. to assist and advise the Attorney General in setting policy and strategic direction for the U.S. Department of Justice. On August 4th of 1995, Ms. Reno further honored U.S. Attorney Sleet by naming him the Vice Chair of the Committee for the 1995-96 session. Additionally, Judge Sleet is the 1994 Distinguished Service Award recipient of the National Association for the Advancement of Colored People, Central Delaware Branch. In 1998, Delaware Today magazine selected him as Delawarean of the Year. In 2000, Judge Sleet was named one of "Fifty of the Finest" graduates in the first fifty years of Rutgers University - Camden Division. In 2014, Judge Sleet received the Outstanding Public Service Award from the New York Intellectual Property Law Association. He was also the Philadelphia Intellectual Property Law Association's honoree in 2014.

Judge Sleet has served as an Adjunct Professor of Law teaching courses in Patent Litigation at Duke University School of Law, Widener University School of Law, and Rutgers School of Law. He is a former member of the Third Circuit Judicial Council and presently serves on the Council's Automation & Technology and Facilities & Security Committees, as well as the Council's Committee on Model Criminal Jury Instructions.

Judge Sleet has presided over more than 92 civil trials and 32 criminal trials. A substantial majority of his civil trial work has involved intellectual property, principally patent cases, and a substantial number of those have been so-called Hatch-Waxman or Abbreviated New Drug (ANDA) cases.



LAW

MAYER • BROWN

Potential Materials for GW Law IP Symposium, 2017

<https://www.law.gwu.edu/2017-gw-ip-law-symposium>

Panel 1: Hot Topics at the PTAB

- This panel will highlight recent trends and approaches for arguing disputes at the USPTO Patent Trial and Appeal Board.
- Moderator: William Atkins, Partner, Pillsbury Winthrop Shaw Pittman LLP
- Panelists:
 - ❖ Chad Hanson, PhD, Senior IP Litigation Attorney, Medtronic
 - ❖ Timothy Jezek, VP, IP and Litigation, EchoStar Corporation
 - ❖ Scott Markow, Senior Group Patent Counsel, Stanley Black & Decker
 - ❖ Erick Palmer, Partner, Mayer Brown LLP

Materials:

- “PTAB chief judge Ruschke discusses ex parte appeals, PGR reform and more with PPAC,” IPWatchdog.com (May 8, 2017)
 - <http://www.ipwatchdog.com/2017/05/08/ptab-chief-judge-ruschke-ex-parte-appeals-pgr-ppac/>
- “Administrative Law Observations on *Cuozzo Speed Technologies v. Lee*,” David Boundy, ABA’s Landslide (January-February 2017)
 - http://www.americanbar.org/publications/landslide/2016-17/january-february/administrative_law_observations_cuozzo_speed_technologies_v_lee.html
- “The Patent Trial and Appeal Board's Evolving Impact on Claim Construction,” Holbrook, Timothy R. (August 24, 2016). Texas Intellectual Property Law Journal, vol. 24, pp. 301-332, 2016
 - <https://ssrn.com/abstract=2828962>
- “Giving the Federal Circuit a Run for Its Money: Challenging Patents in the PTAB,” Dreyfuss, Rochelle Cooper (May 1, 2015). Notre Dame Law Review, Vol. 91, 2015; NYU School of Law, Public Law Research Paper No. 15-16
 - <https://ssrn.com/abstract=2572647>

Panel 2: From the Bench: Litigating Patent Cases in the Federal Courts

- Judges from key patent jurisdictions will discuss tips and trends for litigating patent matters in the US District Courts. The Judges will highlight several recent decisions and provide an inside look at how patent cases are litigated.
- Moderator: Alan Grimaldi, Partner and Co-Leader, IP Practice, Mayer Brown LLP
- Panelists:
 - ❖ Hon. Rebecca R. Pallmeyer, U.S. District Court, Northern District Of Illinois
 - ❖ Hon. Roy Payne, United States District Court, Eastern District of Texas
 - ❖ Hon. Gregory Sleet, United States District Court, District of Delaware

Materials:

- “Strategic Decision Making in Dual PTAB and District Court Proceedings,” Vishnubhakat, Saurabh and Rai, Arti K. and Kesan, Jay P. (July 22, 2016). Berkeley Technology Law Journal, Vol. 31, 2016; Duke Law School Public Law & Legal Theory Series No. 2016-14; Texas A&M University School of Law Legal Studies Research Paper No. 16-34
 - <https://ssrn.com/abstract=2731002>
- “Predictably Expensive: A Critical Look at Patent Litigation in the Eastern District of Texas.” Love, Brian J. and Yoon, James C. (January 3, 2017). Stanford Technology Law Review, Vol. 20, 2017; Santa Clara U. Legal Studies Research Paper No. 11-16
 - <https://ssrn.com/abstract=2835799>
- “Forum Shopping under the Patent Cases Pilot Program: Patent Litigation in a District Tailored to Your Technology,” DaSilva, Jack, 97 J. Pat. & Trademark Off. Soc’y 630 (2015)
 - https://gwlaw.idm.oclc.org/login?url=http://heinonline.org/HOL/Page?handle=hein.journals/jpatos97&g_sent=1&collection=journals&id=652

Panel 3: Intellectual Property Disputes in the Supreme Court and Federal Circuit

- A discussion of recent IP cases before the courts and their impact on patent law.
- Moderator: Andrew Pincus, Partner, Mayer Brown LLP
- Panelists:
 - ❖ Ginger Anders, Counsel, Munger, Tolles & Olson LLP
 - ❖ Beth S. Brinkmann, Partner, Covington & Burling LLP
 - ❖ Mark Freeman, Appellate Staff, Civil Division, U.S. Department of Justice

Materials:

- “Opinion analysis: Justices reject application of laches in patent cases,” Ronald Mann, SCOTUSblog (March 21, 2017)
 - <http://www.scotusblog.com/2017/03/opinion-analysis-sca-hygiene/>
- “Beyond Cuozzo,” Scott McKeown and Yaraswi Raparla, 44 AIPLA Quarterly Journal 619 (Fall 2016)
 - <http://www.oblon.com/scott-a-mckeown/publications/aipla-quarterly-journal-volume-44-number-4/>
- “Patent Venue Exceptionalism after *TC Heartland v. Kraft*,” Ana Santos Rutschman, 25 U. Miami Bus. L. Rev. 29 (2017)
 - <http://repository.law.miami.edu/umblr/vol25/iss2/4>
- “Wrongly Affirmed Without Opinion,” Crouch, Dennis David (January 31, 2017). Wake Forest Law Review, Vol. 52, 2017; University of Missouri School of Law Legal Studies Research Paper No. 2017-02
 - <https://ssrn.com/abstract=2909007>

Panel 4: Section 101: Latest Jurisprudence and Can It Be Fixed?

- The panel will explore the most recent developments relating to subject matter patent eligibility after the Supreme Court’s Alice decision and its interpretation of 35 USC Section 101. We will look at both court decisions and PTAB decisions applying the Alice two prong test, and discuss the ramifications on patent law. We will also consider changes to the law that may be beneficial.
- Moderator: Jack Barufka, Partner and Co-Leader, Intellectual Property Practice, Pillsbury Winthrop Shaw Pittman LLP
- Panelists:
 - ❖ Mark Beloborodov, Senior Director, IP Portfolio Management and Counseling, Philips
 - ❖ Ken Corsello, Attorney, IBM
 - ❖ Jim Howard, Associate General Counsel, Askeladden, L.L.C. (a/k/a Patent Quality Initiative)
 - ❖ David Jones, Assistant General Counsel for IP Policy, Microsoft Corporation
 - ❖ Dmitry Karshedt, Associate Professor of Law, The George Washington University Law School

Materials:

- “Kappos Calls For Abolition Of Section 101 Of Patent Act,” Law360 (April 12, 2016)
 - <https://gwwlaw.idm.oclc.org/login?url=https://www.law360.com/articles/783604/kappos-calls-for-abolition-of-section-101-of-patent-act>
- “Two Years After *Alice v. CLS Bank*,” Tran, Jasper L. (June 20, 2016). *Journal of the Patent and Trademark Office Society*, Vol. 98, p. 354, 2016
 - <https://ssrn.com/abstract=2798992>
- “What Should Be Patentable? — A Proposal for Determining the Existence of Statutory Subject Matter Under 35 U.S.C. Section 101,” Beckerman-Rodau, Andrew, (June 2013). *Wake Forest Journal of Business and Intellectual Property Law*, Vol. 13, p. 145, 2013; Suffolk University Law School Research Paper No. 13-18:
 - <https://ssrn.com/abstract=2203564>

2017 Symposium on Intellectual Property

Agenda | May 16, 2017

8:30 AM BREAKFAST & REGISTRATION

9:00 AM WELCOMING REMARKS

9:15 AM KEYNOTE ADDRESS

Hon. David Ruschke, Chief Administrative Patent Judge, United States Patent and Trademark Office

10:00 AM HOT TOPICS AT THE PTAB

Moderator: William Atkins, Partner, Pillsbury Winthrop Shaw Pittman LLP

- ◆ **Chad Hanson**, PhD, Senior IP Litigation Attorney, Medtronic
- ◆ **Timothy Jezek**, VP, IP and Litigation, EchoStar Corporation
- ◆ **Scott Markow**, Senior Group Patent Counsel, Stanley Black & Decker
- ◆ **Erick Palmer**, Partner, Mayer Brown LLP

11:15 AM BREAK

11:30 AM FROM THE BENCH: LITIGATING PATENT CASES IN THE FEDERAL COURTS

Moderator: Alan Grimaldi, Partner and Co-Leader, Intellectual Property Practice, Mayer Brown LLP

- ◆ **Hon. Rebecca R. Pallmeyer**, United States District Court, Northern District of Illinois
- ◆ **Hon. Roy Payne**, United States District Court, Eastern District of Texas
- ◆ **Hon. Gregory Sleet**, United States District Court, District of Delaware

12:45 PM NETWORKING LUNCHEON

2:00 PM INTELLECTUAL PROPERTY DISPUTES IN THE SUPREME COURT AND FEDERAL CIRCUIT

Moderator: Andrew Pincus, Partner, Mayer Brown LLP

- ◆ **Ginger Anders**, Counsel, Munger, Tolles & Olson LLP
- ◆ **Beth S. Brinkmann**, Partner, Covington & Burling LLP
- ◆ **Mark Freeman**, Appellate Staff, Civil Division, United States Department of Justice

3:15 PM BREAK

3:30 PM SECTION 101: LATEST JURISPRUDENCE AND CAN IT BE FIXED?

Moderator: Jack Barufka, Partner and Co-Leader, Intellectual Property Practice, Pillsbury Winthrop Shaw Pittman LLP

- ◆ **Mark Beloborodov**, Senior Director, IP Portfolio Management and Counseling, Philips
- ◆ **Ken Corsello**, Attorney, IBM
- ◆ **Jim Howard**, Associate General Counsel, Askeladden, L.L.C. (a/k/a Patent Quality Initiative)
- ◆ **David Jones**, Assistant General Counsel for IP Policy, Microsoft Corporation
- ◆ **Dmitry Karshedt**, Associate Professor of Law, The George Washington University Law School

4:45 PM CLOSING REMARKS

5:00 PM COCKTAIL RECEPTION

LANDSLIDE®

A PUBLICATION OF THE ABA SECTION OF INTELLECTUAL PROPERTY LAW

[Home](#) > [Publications](#) > [Landslide](#) > [2016-17](#) > [January-February 2017](#) > [Administrative Law Observations on *Cuozzo Speed Technologies v. Lee*](#)

Administrative Law Observations on *Cuozzo Speed Technologies v. Lee*

Vol. 9 No. 3

By David Boundy

David Boundy of Cambridge Technology Law LLC, in Cambridge, Massachusetts, practices at the intersection of patent and administrative law, and consults with other firms on PTAB trials and appeals. In 2007–09, David led the teams that successfully urged the Office of Management and Budget to quash the USPTO’s continuations, claims, information disclosure statements, and appeal regulations under the Paperwork Reduction Act.

 [Download a printable PDF of this article \(log in for access\).](#)



*Cuozzo Speed Technologies v. Lee*¹ illustrates an important lesson for the patent bar: federal courts are far more familiar with administrative law than with patent law. Almost every federal court hears several times as many administrative law cases as patent cases. Even the Federal Circuit sees at least as many

administrative law issues (involving various federal employees and contracts) as patent law issues. We patent lawyers need better issue spotting skills for administrative law issues, and when a case presents them, to best serve our clients, we must argue on administrative law grounds with administrative law expertise. Basic principles of good advocacy urge us to argue our cases on the courts’ choice of turf.

Cuozzo is a prime illustration. Many federal agencies have statutes that provide for judicial review of some agency decisions, and

PATENTPAK™
A CAS SOLUTION

Locate a chemical substance of interest within a full-text patent in seconds with PatentPak™!

PatentPak in STN® radically reduces the time it takes to track down hard-to-find chemistry within patents.

[LEARN MORE](#)

CAS
A DIVISION OF THE AMERICAN CHEMICAL SOCIETY

STN

LANDSLIDE®
WEBINAR SERIES

[REGISTER!](#)
WEBINAR/TELECONFERENCE

TUESDAY, JUNE 20, 2017
Practical Insights on Software Copyright Registration and Enforcement

preclude review of others. These “preclusion of review” statutes have been considered in a long line of Supreme Court cases. For 200 years, the Supreme Court has applied a strong presumption of judicial review: agency decisions are presumed to be reviewable, and preclusion statutes are construed narrowly. Even within the scope of preclusion, an agency decision that reflects “brazen disregard” of procedure, or “abuse,” or that has sufficiently grave consequences often can be reviewed.

The 2011 America Invents Act (AIA) created new patent reviews within the United States Patent and Trademark Office (USPTO): inter partes review (IPR), post-grant review (PGR), and covered business method review (CBM). Congress included preclusion statutes that limit judicial review of USPTO decisions to institute such reviews.

In *Cuozzo*, the Supreme Court extended its line of preclusion cases to confirm that even though *Cuozzo*’s specific institution was unreviewable, some decisions to institute are judicially reviewable—but the guidance from the Supreme Court is murky. Both *Cuozzo*’s loss and the Court’s murkiness stem from *Cuozzo*’s brief: the brief fails to mention a dead-on statute, and is all but silent on the Supreme Court’s administrative law case law. The murkiness creates many future opportunities for informed administrative law advocacy, as the law redevelops in light of *Cuozzo*’s ambiguities.

The AIA, Its Preclusion Statutes, and *Cuozzo*’s Path to the Supreme Court

The preclusion statutes for IPR and PGR decisions to institute, 35 U.S.C. § 314(d) and § 324(e) respectively, are essentially similar: “The determination by the Director whether to institute [a review] under this section shall be final and nonappealable.” As we’ll see, this is decidedly on the weak end of the spectrum of preclusion statutes.

In February 2015, the Federal Circuit gave its first deep consideration to these statutes in *In re Cuozzo Speed Technologies LLC*.² The IPR petition against *Cuozzo*’s patent had applied reference A to claim 10, and references A, B, and C to claim 17 (which depended from claim 10). However, the Patent Trial and Appeal Board (PTAB) instituted on references A, B, and C against claim 10. The PTAB cited no statute or regulation, only its own naked claim of “discretion” to mix and match among the grounds in the petition.³

The IPR ended in cancellation of claim 10, on references A, B, and C.

Cuozzo appealed the final decision to the Federal Circuit, and as one ground, challenged the decision to institute as an underlying issue. The Federal Circuit held that § 314(d) precluded all review of all issues embedded in a decision to institute: “On its face, the provision is not directed to precluding review only before a final



About LANDSLIDE

Landslide[®] magazine, published by the ABA Section of Intellectual Property Law (ABA-IPL), provides articles on contemporary issues in intellectual property law for attorneys practicing in the field and others interested in the subject matter. Landslide magazine is available online to ABA-IPL members.

- [Visit the ABA-IPL Section](#)
- [More publications from ABA-IPL](#)

Subscriptions

The price of an annual subscription for members of ABA-IPL (\$35.00) is included in their dues and is not deductible therefrom. The price of membership in the ABA Section of Intellectual Property Law is the price of ABA membership plus \$105. ABA membership is a prerequisite for Section membership. Individuals who are not ABA-IPL Section members and institutions not eligible for ABA membership may subscribe to Landslide magazine for \$295.00 per year, \$350.00 per year for subscriptions addressed outside

decision. It is written to exclude all review of the decision whether to institute review.”⁴

Several progeny cases followed in 2015, in which the Federal Circuit read these preclusion statutes so broadly as to give the USPTO near carte blanche to institute or not institute.

In June 2016, the Supreme Court nominally gave a “reset” to this entire line of cases. However, where all decisions leave open issues, *Cuozzo* introduces several internal contradictions. This will continue to be a difficult area of the law that will reward lawyers who carefully explain the relevant administrative law principles to courts.

Judicial Review of Agency Decisions

Government-Wide Grounds of Judicial Review

The Administrative Procedure Act (APA), in 5 U.S.C. § 706(2), confines judicial review of agency action to a specific list of errors—a court may set aside agency actions that are:

- (A) arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law;
- (B) contrary to constitutional right, power, privilege, or immunity;
- (C) in excess of statutory jurisdiction, authority, or limitations, or short of statutory right;
- (D) without observance of procedure required by law; [or]
- (E) unsupported by substantial evidence in a case subject to [the formal trial procedures] of this title

Section 706(2) is famously deferential to agencies, but it doesn’t insulate agencies totally. Courts set aside agency decisions that fail standards of “reasoned decisionmaking” by failing to explain an important point, giving an irrelevant explanation, omitting consideration of important factors or basing a decision on impermissible factors, deciding without evidence, deciding on legal error, acting beyond jurisdictional authority, and the like.

Nondeferential Review of Agency Departures from Own Regulations

In this sea of judicial deference to agencies, one small island of near per se grounds for vacating an agency decision is § 706(2) (D), “without observance of procedure required by law.” As the D.C. Circuit explained:

[I]t is elementary that an agency must adhere to its own rules and regulations. Ad hoc departures from those rules, even to achieve laudable aims, cannot be sanctioned, for therein lie the seeds of destruction of the orderliness and predictability which are the

the United States and its possessions.

More Information

- [Landslide Magazine Index](#)
 - [Magazine Editorial Board](#)
 - [Copyright Information](#)
 - [Advertise with Landslide](#)
 - [Writer's Guidelines \[PDF\]](#)
-

Contact Us

[Erin Remotigue, Managing Editor](#)

American Bar Association
321 N. Clark St.
Chicago, IL 60654
Phone: 312-988-6089
Fax: 312-988-6081

[Amy Mandel, Director, Communications and Publications](#)

American Bar Association
Section of Intellectual Property Law
321 N. Clark St.
Chicago, IL 60654
Phone: 312-988-6264
Fax: 312-988-6800

Advancing Intellectual Property Law[®]

hallmarks of lawful administrative action. Simply stated, rules are rules, and fidelity to the rules which have been properly promulgated, consistent with applicable statutory requirements, is required of those to whom Congress has entrusted the regulatory missions of modern life.⁵

This is one of the few areas of law where courts have given agencies essentially no latitude—when an agency statute, regulation, or guidance promises the public that an agency or agency employee “must” or “will,” the agency must follow those procedures “scrupulously,” and courts enforce those promises nearly per se. While an agency may interpret existing regulations, where an agency has a regulatory vacuum, it has no discretion to make up ad hoc rules adverse to a party. Agency tribunals are not Article III courts—agency tribunals must go through the rulemaking process set by statute.

Preliminary Decisions Are Reviewable with Final Agency Action

Procedural lapses usually find review under 5 U.S.C. § 704: “A preliminary, procedural, or intermediate agency action or ruling not directly reviewable is subject to review on the review of the final agency action.” Thus, if an agency’s final decision is infected by error earlier in the process, the final decision can be attacked on the basis of that underlying error.

Supreme Court’s Presumption of Judicial Review and Resolving the Tension with Preclusion Statutes

Since the days of Chief Justice John Marshall, the Supreme Court has relied on a strong presumption that judicial review is available for executive branch action.⁶ Likewise, the Court has always held agencies to scrupulous observance of their own procedures. The presumption of review has always been extraordinarily high for procedure, and the “holes” in preclusion statutes for procedure and “abuse” have always been quite large. *Cuozzo* is an extraordinary outlier.

1950s Communist Infiltration Cases—Agency Violations of Own Rules Are Reviewable

A pair of cases from the 1950s “red scare” days illustrate how strong the presumption of judicial review is: even where the government alleges a grave threat to national security, a court will review an agency action, and will intervene to protect individual and procedural rights. *Service v. Dulles*⁷ and *Vitarelli v. Seaton*⁸ had almost identical facts: Congress had given the Secretary of State and Secretary of the Interior “absolute discretion” to terminate employees of specified classes for any reason whatsoever, without explanation. *Service* and *Vitarelli* were in the respective classes, and each was dismissed for alleged sympathetic association with the Communist Party. However, in *Service*, the

State Department had an unpublished “Manual of Regulations and Procedures” that set standards and procedures for effecting discharges (analogous to the portions of the Manual of Patent Examining Procedure (MPEP) that instruct examiners in procedures that must be followed and findings that must be set forth in any rejection of claims—even more so, since the MPEP is made available to the public for the public to rely on). Likewise, in *Vitarelli*, the Interior Department had a departmental Order governing certain discharges (analogous to the portions of the PTAB’s Patent Trial Practice Guide that use mandatory language to describe actions of the PTAB). Service and Vitarelli were each fired without the procedures set forth in the Manual and Order.

On judicial review, each agency argued that the agency had “absolute discretion,” and therefore judicial review was not available. The Supreme Court noted that neither agency was obligated to promulgate its rules; nonetheless, “even though generous beyond the requirements that bind such agency, that procedure must be scrupulously observed.”⁹ The Supreme Court ruled that because the two agencies had not followed their Manual and Order, the two discharges were illegal, and were set aside. The Court left the agencies discretion to rehire the two employees, but only if they scrupulously followed their own rules.

The lesson is that courts accept judicial review of underlying issues in agency decisions, even if the final decisions are unreviewable, especially where procedural fairness is at stake.

Abbott v. Gardner (1967)—Preclusion of Review Not Lightly Inferred

In *Abbott Laboratories v. Gardner*,¹⁰ several drug manufacturers sought judicial review of regulations issued by the FDA. The government attempted to have the case dismissed, arguing—much as it did in *Cuozzo*—that because the Food, Drug, and Cosmetic Act specifically granted review for certain categories of regulations, Congress by implication intended no review of all other regulations.

Abbott rejected this argument. The Court went further, and declared that the APA “embodies the basic presumption of judicial review to one [suitably aggrieved by agency action] so long as no statute precludes such relief or the action is not one committed by law to agency discretion.”¹¹ In a footnote, Abbott quoted from the APA’s legislative history: “To preclude judicial review . . . a statute, if not specific in withholding such review, must upon its face give clear and convincing evidence of an intent to withhold it.”¹²

Lindahl v. OPM (1985)—Review of Violations of Procedural Rights Not Precluded

In *Lindahl v. Office of Personnel Management*,¹³ an agency denied retiree disability payments. The Federal Circuit held that it could not review the denial because of a preclusion statute (one that is

far more directive than § 314(d)/§ 324(e)): “decisions . . . concerning these matters are final and conclusive and are not subject to review.”¹⁴

Nonetheless, the Supreme Court held that the issues were reviewable—the Court held that this statute only precluded review of “factual underpinnings.” Lindahl gave a broader principle: “review is available to determine whether there has been a substantial departure from important procedural rights, a misconstruction of the governing legislation, or some like error going to the heart of the administrative determination.”¹⁵

Interestingly, Lindahl quotes two other agencies’ preclusion statutes as models for far-reaching preclusion of review:

The action of the Secretary . . . in allowing or denying a payment under this subchapter is—

(1) final and conclusive for all purposes and with respect to all questions of law and fact; and

(2) not subject to review by another official of the United States or by a court by mandamus or otherwise.¹⁶

and—

[T]he decisions of the Administrator on any question of law or fact under any law administered by the Veterans’ Administration providing benefits for veterans and their dependents or survivors shall be final and conclusive and no other official or any court of the United States shall have power or jurisdiction to review any such decision by an action in the nature of mandamus or otherwise.¹⁷

The contrast between § 314(d)/§ 324(e) and the statutes that specifically close every door to every underlying issue suggests that Congress intended the preclusion of IPR/PGR to be limited only to the ultimate decision.

Lindahl tells us that even where an end result is unreviewable, underlying issues are not precluded unless the preclusion statute speaks expressly to those underlying issues.

Bowen v. MAFP (1986)—Preclusion Statutes Read Very Narrowly

*Bowen v. Michigan Academy of Family Physicians*¹⁸ gives an extended discussion of the history and importance of judicial review. The Court quoted Second Circuit Judge Henry Friendly: “[O]nly in the rare—some say non-existent—case . . . may review for ‘abuse’ be precluded.”¹⁹

At issue in *Bowen* was the following preclusion statute—note how much stronger this statute is than § 314(d)/§ 324(e): “No findings of fact or decision of the Secretary shall be reviewed by any

person, tribunal, or governmental agency except as herein provided. No action . . . shall be brought . . . to recover on any claim arising under this subchapter."²⁰

In *Bowen*, doctors challenged certain Medicare regulations that cut off reimbursement for certain physicians. Applying the presumption of judicial review, the Court finely segregated the issues: while facts relating to individual claimants and final benefit amounts for individual claimants would not be reviewable, "challenges to the validity of the Secretary's instructions and regulations[] are cognizable in courts of law."²¹

In considering a second preclusion statute, *Bowen* split the issues the same way, to find the issues reviewable: "The reticulated statutory scheme, which carefully details the forum and limits of review of 'any determination . . . of . . . the amount of benefits['] simply does not speak to challenges mounted against the method by which such amounts are to be determined rather than the determinations themselves."²²

Bowen teaches that courts read statutes closely to split issues finely, and will review issues (especially underlying issues) that differ by a hair's breadth (or less) from precluded issues.

In sum, review under § 704/§ 706 is a persistent substrate. Additional grounds of review can be created, but to preclude review (especially of underlying issues), Congress must speak expressly.

Supreme Court's Decision in *Cuozzo*

Cuozzo's Brief, the Majority Opinion, and the End Result: Institution Is Nonreviewable

The *Cuozzo* majority opinion follows the basic contour of 50 years of precedent: preclusion statutes are to be read narrowly. However, on the facts, *Cuozzo* lost—the Court characterized *Cuozzo's* complaint to be a "mine-run claim," "an ordinary dispute about the application of certain relevant patent statutes," and "little more than a challenge to the Patent Office's conclusion, under § 314(a), that the 'information presented in the petition' warranted review."²³ That is, the Supreme Court understood the case to be a good faith difference of opinion in application of validly promulgated law, not a case of an agency tribunal exercising "discretion" against a party, making up new rules on the fly with no grounding in any text. Because the Court was not informed of the procedural basis for the case, the *Cuozzo* opinion stands in striking contrast with the Court's precedent that requires agencies' "scrupulous" observance of procedure, and strict "no deference" judicial review for procedural issues.

The Supreme Court majority opinion embeds a number of internal contradictions that leave a great deal of unclear ground. The majority's holding, if applied to the facts—at least the procedural

facts as we patent lawyers understand them—leads to the opposite result.

Most of these contradictions in the majority opinion, and perhaps the final result itself, are invited error. Cuozzo’s brief treats the case as a patent law case, arguing page after page of title 35 U.S.C. and Federal Circuit patent law cases.²⁴ Cuozzo’s opening brief cites Supreme Court “preclusion of review” cases only as a cursory afterthought—a single string cite, with no discussion of analogies to precedential cases.²⁵ The brief compounds the error by citing a 1940s case on a subsidiary issue that had been overruled by the Supreme Court in 2013.²⁶ The table of authorities in Cuozzo’s opening brief has only a single cite to title 5 U.S.C., and only one more in the reply brief.²⁷

Even though Cuozzo’s briefs are all but irrelevant to the administrative law bases on which the Court decided the case, the reasoning comes so close to going Cuozzo’s way. Cuozzo demonstrates the importance of identifying the turf where a court is likely to decide an issue, and arguing it there.

In What Postures Is a Decision to Institute Reviewable?

The Cuozzo majority begins with a head fake, by appearing to agree with the Federal Circuit’s rule of per se and complete preclusion of decisions to institute: “For one thing, that is what § 314(d) says.”²⁸

And then in the next paragraph, the majority disagrees with the Federal Circuit: judicial review of the decision to institute is available with review of the final decision, the posture in which Cuozzo presented it.

Justice Alito’s dissent cites § 704 and notes that § 314(d) says only what it says, and no more—direct appeal is precluded. But Justice Alito would have reviewed institution “with review of the final decision.” As the dissent points out, this was not an appeal of a decision to institute. It was a review of the final agency action, with institution raised as a “preliminary, procedural, or intermediate agency action or ruling not directly reviewable” that would easily be reviewable under § 704.²⁹ The majority opinion expressly characterizes a decision to institute as “preliminary,” but does not explain why § 704 doesn’t apply—the most likely reason is that Cuozzo’s brief simply didn’t ask for § 704 to apply.

What Grounds?

The next incongruity in the majority opinion shows up in the scope of grounds on which the majority would permit review. In a long paragraph toward the end of section II, beginning “Nonetheless,” the majority explains that most issues arising under patent law are precluded, but that issues arising under other bodies of law are not. Review remains available for constitutional questions, and

most importantly, for issues slotted into one of the pigeonholes of the APA:

[W]e do not categorically preclude review of a final decision where a petition fails to give “sufficient notice” such that there is a due process problem with the entire proceeding, nor does our interpretation enable the agency to act outside its statutory limits by, for example, canceling a patent claim for “indefiniteness under § 112” in inter partes review. Such “shenanigans” may be properly reviewable in the context of § 319 and under the Administrative Procedure Act, which enables reviewing courts to “set aside agency action” that is “contrary to constitutional right,” “in excess of statutory jurisdiction,” or “arbitrary [and] capricious.”³⁰

The latter half of the long paragraph, especially the last sentence, opens a wide barn door. Where the dissent would remand for consideration under § 706, specifically whether the USPTO exceeded its authority (§ 706(2)(C)), the majority takes *Cuozzo’s* brief on its own footing (without resolving issues that weren’t presented), a challenge only on patent law grounds. Because *Cuozzo’s* brief did not help the Court apply the APA to this case, the majority only explains that § 706 grounds are available, but leaves application for a future case.

Unfortunately, *Cuozzo’s* briefs never mentioned either § 704 or § 706, and are remarkably light on citation to Supreme Court precedent. *Cuozzo* could have argued: (1) § 704 and the Supreme Court’s case law speak directly to the question; (2) without a clear statement from Congress to displace § 704 and overcome the presumption of review of underlying issues, review is available at the time of challenge to final action, to the full scope of § 704 (for posture) and § 706 (for its catalog of reversible errors); and (3) the PTAB’s exercise of atextual “discretion” was “in excess of statutory jurisdiction,” “not in accordance with law,” and “without observance of procedure,” under § 706(2)(A), (C), and (D). The Court, especially Justice Breyer, would likely have been very sympathetic to an argument that the USPTO is subject to the APA just the same as any other agency, and that underlying issues in a decision to institute are reviewable on the same footing as any other underlying issue in any other agency decision. But without that argument, *Cuozzo* narrowly lost what appears to be a winnable issue, so we’ll never know how this case should have come out.

And the Federal Circuit and patent bar are left with the internal contradiction, with all the problems and opportunities it creates.

Are Agencies Held to Their Own Regulations?

The key split between the majority and dissent is on interpretation of Lindahl,³¹ that an agency's "substantial[] depart[ure] from important procedural rights" pierces almost any preclusion statute, and the clarity with which Congress must speak to preclude review of agency procedure.³² The majority points out that review remains intact for some issues arising under patent law, such as appeals "that depend on other less closely related statutes, or that present other questions of interpretation that reach, in terms of scope and impact, well beyond [§ 314]."³³ But the majority characterizes the PTAB's mix and match as something less than "shenanigans." Because Cuozzo's briefs did not remind the Court of its "no discretion" precedent on procedural predictability and fairness, the Court did not consider the question.

It's hard to reconcile the reasoning with the result, as least as we patent lawyers understand things. The IPR statute, § 312, requires a petition to be pleaded "with particularity." Cuozzo's petition to institute set out a clear list of specific grounds—specific references applied to specific claims—but the PTAB played a game of mix and match as a matter of naked "discretion," in a context that denied the patent owner an opportunity to respond. The majority does not explain how Cuozzo's facts don't fit into § 706(2)(A), (C), and (D), are "in excess of statutory jurisdiction," "not in accordance with law," and "without observance of procedure," apparently because Cuozzo's briefs didn't ask the question.

Had Cuozzo slotted the argument into the Supreme Court's "agency's own regulations" administrative law cases³⁴—explaining that the PTAB overtly jumped into the fight on the side of the petitioner by rewriting the petition in the petitioner's favor—the outcome likely would have been different. Had Cuozzo's brief (1) pointed out that the IPR statute was heavily negotiated by Congress for years, with the USPTO as an active participant; (2) contrasted Congress's careful balancing of interests against three individual administrative patent judges' substituting personal "discretion"; (3) pointed out that the PTAB's "discretion" deprived Cuozzo of an opportunity to respond; and (4) applied those facts under the relevant Supreme Court case law that gives agencies "no discretion" to depart from their procedural regulations, the Court likely would have construed the preclusion statute narrowly, and corralled the USPTO back to its statutory obligations.

In short, Cuozzo lost a very winnable issue because the opening brief argued patent law principles to the near exclusion of administrative law principles. And the Federal Circuit is left with a difficult task of reconciling Cuozzo's reasoning against its end result.

What Are the Limits on the USPTO's Jurisdiction, and Who Enforces Them?

Cuozzo's brief doesn't squarely present the issue of the PTAB's transgression of its own jurisdictional boundaries. Section 312(a) reads, "A petition . . . may be considered only if . . . the petition identifies, in writing and with particularity, each claim challenged, the grounds on which the challenge to each claim is based" Section 314(a) reads, "The Director may not authorize [institution of an IPR] unless the Director determines that the information presented in the petition . . . shows that there is a reasonable likelihood that the petitioner would prevail" These are plainly jurisdictional statutes, confining jurisdiction to the grounds in the petition. The APA, in § 706(2)(C), provides that a court shall set aside agency action "in excess of statutory jurisdiction, authority, or limitations." Subject matter jurisdiction is never waived; yet, Cuozzo's brief argues only breaches of the AIA, not the jurisdictional issues that—the majority tells us—would be reviewable under administrative law principles.

The Supreme Court has been quite strict in enforcing agencies' jurisdictional boundaries, no matter (in the Cuozzo majority's words) how compelling "one important congressional objective" might be.³⁵ For example, *FDA v. Brown & Williamson Tobacco Corp.*³⁶ concerned FDA regulations to limit sale of tobacco to minors. The Court gave a strong reaffirmation of a court's role in enforcing jurisdictional limits:

This case involves one of the most troubling public health problems facing our Nation today Regardless of how serious the problem an administrative agency seeks to address, however, it may not exercise its authority "in a manner that is inconsistent with the administrative structure that Congress enacted into law." . . . [A] reviewing "court, as well as the agency, must give effect to the unambiguously expressed intent of Congress."³⁷

Cuozzo's brief fleetingly nibbles at the edges of the issue, and even cites one of the important cases in this line (for a different proposition), but never squarely frames the challenge as "in excess of [the agency's] jurisdiction"—neither brief mentions § 706 at all. Because the basic issue was a tribunal creating new issues to cover omissions from a party's opening brief, perhaps the Court felt constrained not to correct Cuozzo's oversight by substituting its own framing of the case.

The reasoning of Cuozzo appears to place jurisdictional issues within the scope of judicial review: subject matter jurisdiction is central to a court's duty to prevent agencies from "act[ing] outside . . . statutory limits," or in the language of § 706, "in excess of statutory jurisdiction." Because § 314(d)/§ 324(e) only limit issues arising under "this section," one would expect jurisdictional limits from other statutes and regulations to be especially susceptible to review: deadlines, "privy of petitioner," estoppel, etc. These jurisdictional limits on IPR and PGR were heavily negotiated in Congress, and leaving them outside the reach of judicial review is

an invitation to the kinds of “shenanigans” Cuozzo warns of. However, other language of Cuozzo suggests otherwise: the Cuozzo majority tells us that review under “closely related statutes” may be precluded as well (without telling us what counts as “related” or how “close”).³⁸

Had the issue been presented squarely as a challenge to PTAB action beyond its jurisdiction, presenting the patent law issues as underlying support for APA § 706 grounds, Cuozzo likely would have obtained a favorable result, and the Court majority would not have been left grasping at inconsistent straws to reach its decision.

Looking Ahead

What’s Reviewable?

The Cuozzo majority gives us examples of issues that are reviewable, but no criteria that define the set. The Cuozzo majority’s long paragraph and the dissent both indicate that the full reach of § 706 applies to underlying issues in decisions to institute.

Even if the Federal Circuit reads the latter half of the “long paragraph” to leave § 706 precluded in part, the list of especially egregious “arbitrary and capricious” agency errors listed in the Supreme Court’s landmark 1983 *State Farm* decision³⁹ might form a useful dividing line:

- Failure to “examine the relevant data and articulate a satisfactory explanation for its action including a rational connection between the facts found and the choice made.” “[A]n agency must cogently explain why it has exercised its discretion in a given manner.”
- “[W]hether the decision was based on a consideration of the relevant factors and whether there has been a clear error of judgment.”
- “[I]f the agency has relied on factors which Congress has not intended it to consider, entirely failed to consider an important aspect of the problem, offered an explanation for its decision that runs counter to the evidence before the agency, or is so implausible that it could not be ascribed to a difference in view or the product of agency expertise.”

Under general principles of administrative law, the factors that trouble the Cuozzo majority probably include this list as well. The Cuozzo majority’s reasoning (as opposed to the result) would suggest that preclusion extends little beyond the good faith differences in judgment that the Court believed it had before it.

What Limits Remain?

The Supreme Court all but invites a parade of horrors. Consider a petition that is unquestionably well after the one-year time bar, and the PTAB institutes against a claim that was not mentioned in the petition. To go one step further, imagine institution on art raised sua sponte by the PTAB. Under pre-Cuozzo Supreme Court law, such a decision would clearly be reviewable.⁴⁰ Under the Federal Circuit’s 2015 *per se* approach (now vacated by Cuozzo), it would be unreviewable. After Cuozzo, because the Supreme Court carved out IPR/PGR institution for different treatment than any other agency’s decisions, it’s hard to tell.

Decisions to Not Institute

In *St. Jude Medical, Cardiology Division, Inc. v. Volcano Corp.*,⁴¹ the PTAB had denied institution because the petitioner was served with a complaint alleging infringement more than a year earlier, in a prior litigation. The Federal Circuit was asked to clarify the precise contours and definition of the one-year time bar, but it didn't reach the question because it dismissed under § 314(d).

After *Cuozzo*, that obviously reaches too far. The one-year time bar is just as "jurisdictional" as "indefiniteness under § 112," which *Cuozzo* cites as an example of a nonprecluded issue.⁴² Similarly, a decision to not institute that is so flimsy as to fail *State Farm* criteria—for example, by relying on a principle with no statutory or regulatory basis ("redundant" comes to mind)—should be reviewable.

Issues Grounded in Jurisdiction, Especially Jurisdictional Prerequisites outside § 314/§ 324

The non-patent latter half of *Cuozzo's* "long paragraph" reopens the reviewability issues such as:

- whether a petitioner is a privy of a party that was time barred;⁴³
- whether the IPR was time barred because the petition was filed more than a year after filing of suit;⁴⁴
- whether a supplemental petition, unquestionably filed more than a year after a litigation complaint, was time barred;⁴⁵ and
- whether institution of a CBM is reviewable when the petition raised only anticipation and the USPTO instituted on multi-reference obviousness⁴⁶

We'll see how the Federal Circuit resolves the internal contradictions in *Cuozzo*. These seem to me to be clearly reviewable, if framed (as *Cuozzo* suggests) in terms of administrative law issues such as "in excess of statutory jurisdiction," "not in accordance with law," and "without observance of procedure," reviewable under § 706(2)(A), (C), and (D), instead of patent law.

Mandamus

The majority leaves open whether decisions to institute are reviewable on mandamus. Errors that are simply beyond the pale, like those enumerated by the *Cuozzo* majority, are classic fodder for a mandamus order to an agency to issue a new decision. However, mandamus requires showing that "no other adequate remedy" is available. If review of the decision to institute is available with review of the final decision, it may be difficult to show "no other adequate remedy" for mandamus, and that interlocutory mandamus is consistent with Congress's intent to keep IPRs on track for decision in 18 months. On the other hand, the Supreme Court has never (at least never before *Cuozzo*) taken a "substantive ends justify the procedural means" view of agency procedure, and was not informed of the substantial impairment of patent rights that exists between a wrongful institution and ultimate appellate conclusion years later.

Wi-Fi One v. Broadcom and Husky v. Athena

As of this writing (October 2016), the Federal Circuit has issued two decisions that, while having some grounding in *Cuozzo*, are in deep tension with decades of Supreme Court precedent, and with the assurance of the *Cuozzo* majority that § 706 issues are not precluded.

In *Wi-Fi One, LLC v. Broadcom Corp.*,⁴⁷ the patent owner sought discovery on whether the petitioner was “in privity” with another party, and thus barred from bringing an IPR by § 315(b). The *Wi-Fi One* Federal Circuit rejected an argument that *Cuozzo* had implicitly overruled *Achates*, and held that because review for “in privity” is precluded, the underlying discovery issue was likewise precluded. The reasoning in *Wi-Fi One* is difficult to reconcile with the Supreme Court’s long-standing presumption of review—such underlying and procedural issues are especially amenable to review.

Similarly, in *Husky Injection Molding Systems, Ltd. v. Athena Automation Ltd.*,⁴⁸ the patent owner challenged an IPR institution on grounds of assignor estoppel. The *Husky* opinion gives a scholarly review of the Federal Circuit’s own pre-*Cuozzo* precedent (though with no discussion of the far-longer line of Supreme Court case law) and the patent law discussion in the first half of the “long paragraph” from *Cuozzo*, and from them derives a detailed “cookbook” for preclusion and nonpreclusion of issues arising under patent law. However, *Husky* gives only the lightest consideration to the non-patent second half of the “long paragraph,” and does not mention the APA assurance from *Cuozzo*.

These two panel decisions diverge from the administrative law that governs all other agencies. Perhaps not surprising, because (1) both parties’ post-*Cuozzo* supplemental briefs to the Federal Circuit focused almost exclusively on patent law issues, and overlooked the open barn door in the last half of *Cuozzo*’s long paragraph—“[s]uch ‘shenanigans’ may be properly reviewable . . . under the Administrative Procedure Act”; and (2) *Cuozzo* itself is such an outlier from precedent. Justice Breyer—who, *Cuozzo* aside, is usually the strongest voice in favor of uniform application of administrative law—could not have intended to send the USPTO off on a divergence from the rest of the federal government. In both *Wi-Fi One* and *Husky*, one judge offered an alternative opinion urging the court to grant en banc review. That seems essential to me—but parties before the Court have to explain the relevant administrative law principles for the Court to get it right.

Conclusion

Almost every PTAB proceeding and appeal presents a “target rich environment” of administrative law issues. Teams that include administrative law expertise will successfully exploit many opportunities that are invisible to teams without that expertise.

This article has only skimmed the surface of the administrative law opportunities that Cuozzo missed. There are many differences between the powers of an Article III court and of an agency tribunal, differences between appellate review of an Article III court vs. judicial review of an agency, differences in the arguments that an appellant and appellee can raise, and differences in limits on raising new issues on appeal. For example, many of the USPTO's arguments—arguments relied on in the majority opinion—could have been shut down with a deft cite to *Burlington Truck*⁴⁹ or *Chenery*.⁵⁰ Unfortunately, Cuozzo's brief did not exploit those differences or cite the applicable administrative law. The reviewability issue was highly winnable, had the case been argued on the administrative law grounds on which the Court decided it.

Because of internal tensions in the Cuozzo decision, many issues remain to be decided by the Federal Circuit, and will be decided differently depending on how well parties match their argument turf to courts' choice of decision turf.

Endnotes

1. *Cuozzo Speed Techs. v. Lee* (Cuozzo III), 136 S. Ct. 2131 (2016).
2. *In re Cuozzo Speed Techs. LLC* (Cuozzo I), 778 F.3d 1271 (Fed. Cir. 2015), reissued without change to the reviewability discussion, *Cuozzo II*, 793 F.3d 1268 (Fed. Cir. 2015).
3. See *infra* note 6 and accompanying text.
4. *Cuozzo I*, 778 F.3d at 1276.
5. *Reuters Ltd. v. FCC*, 781 F.2d 946, 950–51 (D.C. Cir. 1986) (citation omitted); see also *Berkovitz v. United States*, 486 U.S. 531, 544 (1988) (“The agency has no discretion to deviate from [its procedural regulations].”).
6. 5 U.S.C. § 702 (“A person suffering legal wrong because of agency action, or adversely affected or aggrieved by agency action within the meaning of a relevant statute, is entitled to judicial review thereof.”); *Citizens to Preserve Overton Park, Inc. v. Volpe*, 401 U.S. 402 (1971).
7. 354 U.S. 363 (1957)
8. 359 U.S. 535 (1959).
9. *Vitarelli*, 359 U.S. at 547 (citing *Service*).
10. 387 U.S. 136 (1967).
11. *Id.* at 140.
12. *Id.* at 140 n.2.
13. 470 U.S. 768 (1985).
14. *Id.* at 771.
15. *Id.* at 791 (internal quotation marks omitted).

16. *Id.* at 780 n.13 (quoting 5 U.S.C. § 8128(b)).
17. *Id.* at 780 n.13 (quoting 38 U.S.C. § 211(a)).
18. 476 U.S. 667 (1986).
19. *Id.* at 672 n.3 (quoting *Wong Wing Hang v. INS*, 360 F.2d 715, 718 (2d Cir. 1966)).
20. *Id.* at 679 (quoting 42 U.S.C. § 405(h)).
21. *Id.* at 680.
22. *Id.* at 675 (citations omitted, emphasis the Court's).
23. *Cuozzo III*, 136 S. Ct. 2131, 2136, 2139, 2142 (2016).
24. See Brief for the Petitioner, *Cuozzo III*, 136 S. Ct. 2131 (Feb. 22, 2016) (No. 15-446).
25. *Id.* at 52–53.
26. *Id.* at 54 (citing *Soc. Sec. Bd. v. Nierotko*, 327 U.S. 358 (1946)).
27. *Id.* at xiv; Reply Brief for the Petitioner at iii, *Cuozzo III*, 136 S. Ct. 2131 (Apr. 15, 2016) (No. 15-446).
28. *Cuozzo III*, 136 S. Ct. at 2139.
29. *Id.* at 2151–53 (Alito, J., dissenting).
30. *Id.* at 2141–42 (majority opinion).
31. See *supra* notes 14–18 and accompanying text.
32. See *supra* notes 11–13 and accompanying text.
33. *Cuozzo III*, 136 S. Ct. at 2141.
34. See *supra* notes 6, 8–10 and accompanying text.
35. *Cuozzo III*, 136 S. Ct. at 2139–40.
36. 529 U.S. 120 (2000).
37. *Id.* at 125 (citation omitted).
38. *Cuozzo III*, 136 S. Ct. at 2141.
39. *Motor Vehicle Mfrs. Ass'n of U.S. v. State Farm Mut. Ins. Co.*, 463 U.S. 29, 43, 48, 52 (1983).
40. See *supra* note 6 and accompanying text.
41. 749 F.3d 1373, 1375–76 (Fed. Cir. 2014).
42. *Cuozzo III*, 136 S. Ct. at 2154.
43. *Achates Reference Publishing, Inc. v. Apple Inc.*, 803 F.3d 652 (Fed. Cir. 2015).
44. *MCM Portfolio LLC v. Hewlett-Packard Co.*, 812 F.3d 1284 (Fed. Cir. 2015).
45. *Shaw Industries Group, Inc. v. Automated Creel Systems, Inc.*, 817 F.3d 1293 (Fed. Cir. 2016).

46. *SightSound Technologies LLC v. Apple, Inc.*, 809 F.3d 1307 (Fed. Cir. 2015).
47. 837 F.3d 1329 (Fed. Cir. 2016).
48. 838 F.3d 1236 (Fed. Cir. 2016).
49. *Burlington Truck Lines, Inc. v. United States*, 371 U.S. 156, 168–69 (1962) (recognizing that an agency decision can only be affirmed “on the same basis articulated in the order by the agency itself”).
50. *SEC v. Chenery Corp.*, 318 U.S. 80, 93–95 (1943).



PTAB chief judge Ruschke discusses ex parte appeals, PGR reform and more with PPAC



By **Steve Brachmann** & **Gene Quinn**
May 8, 2017

Print Article



PTAB Chief Judge David Ruschke addressing PPAC on May 4, 2017.

On Thursday, May 4th, the U.S. Patent and Trademark Office's Patent Public Advisory Committee (PPAC) convened its quarterly meeting at the USPTO's headquarters in Alexandria, VA. At approximately 1:30 PM, an update on operations at the Patent Trial and Appeal Board (PTAB) was given by PTAB's Chief Judge David Ruschke. Despite recent reports of questionable ethics surrounding potential conflicts of interests of

administrative patent judges (APJs) at PTAB (see [here](#), [here](#), [here](#) and [here](#)), the day's discussion revolved mainly around appeal inventory, pendency rates and America Invents Act (AIA) trial proceeding trends at PTAB.

Slides presented by Ruschke at the PPAC meeting showed that judges at PTAB have been reducing the pendency of ex parte reexaminations across a range of tech centers. The most dramatic drop in pendency was seen in tech center 1600 for bio/pharma patents, decreasing from an average pendency of 33.2 months at the end of fiscal year (FY) 2016 down to an average pendency of 20.7 months at the end of FY 2017. Other tech centers seeing major

reductions in average pendency over the past year include 2100, 2400, 2600 and 2800 for electrical/computer patents and 2900 for design patents. In one case involving tech center 3900, the central reexamination unit, average pendency actually increased slightly, from 7.1 months to 7.3 months. Overall, the average pendency for *ex parte* reexams dropped from 27.5 months at the end of FY 2016 to 19.2 months at the end of FY 2017.

Reductions in PTAB's inventory of pending *ex parte* appeals have been accomplished along with the lowered average pendencies. PTAB's pending *ex parte* appeals have dropped from a high of 26,484 pending cases at the end of FY 2012 down to an eight-year low of 14,611 as of this March 31st, the end of USPTO's second quarter for 2017. Ruschke indicated that PTAB's goal was to achieve a 12-month average pendency with a pending *ex parte* appeal inventory of 12,000 cases or lower. "We don't want to hit zero, it wouldn't be particularly useful for our judges," Ruschke said. He added that, since PPAC's last quarterly meeting, PTAB had completed every *ex parte* appeal docketed in FY 2013 and it only had 50 cases remaining from FY 2014.

Of course, it doesn't seem the PTAB is in any risk of hitting zero given we are nearly halfway through 2017 and there are all those appeals docketed in 2015, 2016 and through the first half of 2017 still to resolve.

Ruschke also spoke to the hiring practices of administrative patent judges (APJs) at PTAB, noting that it was standard practice of having recent APJ hires to "spend a significant amount of time on *ex parte* work" before moving APJs over to AIA trial casework. Later, Ruschke would note that judges moving over to AIA trials are typically given an APJ experienced in AIA trials as a mentor. Judges which are then moved back to *ex parte* cases after having worked on AIA trials provided what Ruschke called "extensive firepower" for deciding *ex parte* appeal cases in an extremely efficient manner. A higher percentage of electrical cases on the AIA trial side of PTAB has led to increased hiring of judges with electrical expertise in recent months.

Currently, PTAB is operating with 275 APJs and Ruschke called that number "pretty static." "We're not planning on doing any hiring in judge ranks in the near future, except maybe for attrition," he said. When the PTAB has hired judges in recent years, they have sought to hire judges with expertise in multiple areas, such as a judge who has a degree in electrical engineering but also has work experience in mechanical engineering. "It's that kind of mining of the judge's expertise that we use to realign their workloads," Ruschke said. That line of thinking certainly seems to support why APJ Matt Clements would have been assigned AIA casework coming from a petitioner who Clements used to represent as an attorney. PTAB decisions finding something as tangible as an MRI machine to be an "abstract idea" are the

natural consequence of assigning APJs to cases involving technologies outside of the core competencies (more on this below).

At least one voice at the meeting opined that the 12-month pendency goal was far too long in the eyes of some of their clients, noting that a year was “a lifetime” in certain business cycles. Ruschke noted that, in his discussions with PTAB stakeholders, some prefer a longer pendency while others prefer shorter. In either case, an average of 10,000 *ex parte* appeals are filed with PTAB each year, making reductions to the average pendency difficult to achieve. Ruschke said that while the current goal was to achieve a 12-month average pendency, PTAB might look at reducing pendencies to eight- or six-month averages. “It depends on the overall intake and the firepower of our judges,” Ruschke said.

The first quarter of 2017 saw a record number of petitions for *inter partes* review (IPR) proceedings at PTAB. Ruschke said that he couldn’t discern why 237 IPR petitions were filed in January alone as no single petitioner or patent seemed to be driving the upswing in petitions. Graphs included in Ruschke’s slides showed how February saw a large drop in IPR petitions but they spiked up again to higher than normal levels in March.

Discussion during the meeting also centered around the low number of post grant review (PGR) petitions filed at PTAB and changes to PGRs, which could encourage a greater number of filings. Estoppel provisions that prevent PGR petitioners from bring multiple petitions were considered as one aspect of those proceedings which could be changed to encourage greater filing activity. Later, members of the meeting discussed whether making PGR petitions anonymous, similar to *ex parte* review petitions, could encourage PGR filings from entities who don’t want to become “a target.”

Any patent owner who feels as though PTAB takes an extraordinarily dim view of their intellectual property rights could be forgiven for making that assumption, especially given this discussion on ways the Office can increase PGR petitions. Particularly alarming for patent owners will be any attempt to water down or do away with the PGR estoppel provision, which is a not too thinly veiled attempt at enabling perpetual challenges to any patent. Patent owners are already being harassed with gang-tackling by multiple petitioners, for example. What patent owner would want to encourage further validity challenges on a property right that was deemed valid when the USPTO originally granted it but is no longer even presumed valid when it is challenged?

The PTAB treats patents like they were piñatas. If a challenger’s first IPR petition wasn’t instituted, that entity gets to take swings at the piñata until an IPR is finally instituted. Now, PTAB is trying to think of ways to give petitioners even more cracks at a property right that, to

many owners, increasingly feels like it's made out of papier-mâché and not held together by the strength of the U.S. Constitution. Enough whacks and the patent is finally torn asunder, the candy falling to the floor for efficient infringers like Apple and Google and the rest of Silicon Valley to scoop up like greedy children.

Ruschke then spoke about institution rates for all trial types, which he said was stabilizing at about two-thirds of all petitions filed at PTAB. Of the 6,700 PTAB trials for which petitions had been filed through the end of this March, about half of the petitions (3,382) were instituted and less than one-quarter of all petitions filed (1,539) got to a final written decision. "The message is, two-thirds of your petitions are instituted, one-third are not," Ruschke said. "Those never see the light of day of an AIA trial." Of course, some might take away the message that final written decisions tend to be a death knell for patents, as 1,014 of the 1,539 trials reaching final written decisions found all claims to be unpatentable and only 269 decisions found that all claims were valid.

Of course, any talk of PTAB institution rates is incomplete without acknowledging the highly questionable manner in which the PTAB calculates statistics. It is not unheard of for a petition to be denied, but if a petition is denied the petitioner can refile again and again. In some cases the petitioner has refiled virtually the same petition over and over again and for reasons that are never explained on the 4th or 5th filing the petition is instituted. What is the institution rate in those cases? According to the PTAB it would either be 25% (1 in 4) or 20% (1 in 5). For the patent owner, the institution rate is worse than 100%. Not only was the patent ultimately instituted, but the patent owner had to deal with the same or very similar petition multiple times. For more on the questionable PTAB statistics see [here](#), [here](#) and [here](#).

"I can understand getting a patent and having it invalidated later on," Ruschke said, noting that, as a chemical engineer who developed IP that his firm decided not to file on, he can understand a patent owner being dismayed by proceedings at PTAB. Quickly thereafter, however, he surmised reasons why patent owners might face PTAB petitions which almost made it sound like the patent owner is culpable in how many petitions are filed. "Let's say that the patent owner sues 10 defendants," Ruschke said. "Should the patent owner expect 10 petitions back?" Ruschke evinced a similar point of view for patent owners who sue and then amend the asserted claims. "If I sue on claims 1 through 10, and then amend to claims 11 through 20, should I expect two petitions? Maybe," he said. PPAC member Julie Mar-Spinola questioned this logic, wondering aloud whether such validity challenges should be made on the merits and not simply the number of times the patent has been asserted. "Basically, the petitioner is saying that the PTO got it wrong 10 times," Mar-Spinola noted. Ruschke noted that he had heard this argument before.

Another question was raised by another PPAC member on a common concern among clients that PTAB judges may not be well-versed in the subject matter of a case in front of them. Ruschke responded that, in *ex parte* appeals, PTAB only assigns judges who have a very specific technical expertise. “You will not see a chemist paneled on an electrical case,” Ruschke said. However, the analysis was more “multifactorial” when assigning judges to panels deciding AIA trials. “Judges like myself, my resume doesn’t reflect that I could probably do mechanical [cases], but judges, if they run into a case they’re uncomfortable with, they very frequently recuse themselves,” Ruschke said.

Ruschke’s claim that only PTAB judges familiar with the technology involved are assigned in *ex parte* appeals seems false based on what we know has happened in at least one high-profile matter. As previously mentioned, in *Ex parte Hiroyuki Itagaki* the PTAB ruled a magnetic resonance imaging (MRI) machine to be patent ineligible because it is an abstract idea. See *PTAB rules MRI machine an Abstract Idea*. Judge Hubert Lorin, who authored the opinion in *Itagaki*, has a B.S. in Chemical Engineering and a B.S. in Chemistry according to [his LinkedIn profile](#). Similarly, Judge Matthew Meyers, who was also on the panel, has a B.S. in Biology according to [his LinkedIn profile](#). The third judge, Judge Bibhu Mohanty, does not list his technical expertise on [his LinkedIn profile](#), but we have been told his expertise is also in the chemical area. Therefore, the PTAB does in at least some cases assign cases to judges who are not technically trained in the technology area of the invention, which in and of itself would raise an interesting ethical question if the APJs were governed by the Code applicable to attorneys. [37 CFR 11.101](#), which mandates practitioners provide competent representation, explains that competent representation requires scientific and technical knowledge reasonably required for the tasks at hand.

PPAC chairwoman Marylee Jenkins also raised the topic of PTAB conflicts of interest, which we have been reporting on over the last several weeks (see [here](#), [here](#), [here](#) and [here](#)). Ruschke indicated that the topic of conflicts would be discussed at PPAC’s next quarterly meeting.

Tags: [appeals](#), [conflict of interest](#), [David Ruschke](#), [ex parte](#), [patent](#), [patent office](#), [Patent Public Advisory Committee](#), [Patent Trial and Appeal Board](#), [patents](#), [PPAC](#), [PTAB](#), [USPTO](#)

Posted In: [America Invents Act](#), [Courts](#), [Government](#), [IP News](#), [IPWatchdog Articles](#), [IPWatchdog.com Articles](#), [Patent Trial and Appeal Board](#), [Patents](#), [Post Grant Procedures](#), [USPTO](#)

There are currently **17 Comments** comments. [Join the discussion.](#)

What new judges have they hired? I think there was one announcement on <http://www.usajobs.gov> a few months and there is no current announcement. Just type in “patent” for the search. I think they select for anti-patent people in the hiring.

Wow. This guy seems pretty shifty to me. So much of what he said above is simply false. I don't have the time to go into it.

angry dude May 8, 2017 10:48 am

Blah-blah-blah...

Bottom line: the fees for instituting IPRs and re-exams MUST NOT be refunded if those challenges are not instituted by PTO and there can be only ONE challenge for each NEW piece of relevant “prior-art” found.

Same “prior art” considered – no new IPR

This is just common sense and this should quickly rectify the situation (if that's what they want which they don't...)

Curious May 8, 2017 12:29 pm

The pendency is dropping because I'm seeing a lot more “we agree with the Examiner's findings, the Examiner is affirmed” type of decisions.

For example, I had an application transferred to me in which the original attorney probably presented 5 or 6 different arguments as to the independent claim and separately argued about 4 or 5 of the dependent claims. The Board distilled the arguments as to the independent claim down to two — concluded that Appellant did not adequately rebut the Examiner's findings and then ignored the dependent claims aside from saying “we agree with the Examiner.”

The Board doesn't spend a whole lot of time on ex parte appeals anymore — probably in an attempt to make up for time spent on inter-parte reexams.

Night Writer May 8, 2017 1:15 pm

<https://www.nytimes.com/2017/05/08/science/nasa-supercomputer-pleiades.html>

OT, but I just wish the NYTimes wouldn't print this garbage. Don't they know that the CAFC has held that an algorithm is abstract and that it doesn't matter if you make improvements to the algorithm. (I hear that J. Lourie questioned NASA why they weren't using lanterns to solve the problem.)

Night Writer May 8, 2017 1:18 pm

@3 >The Board doesn't spend a whole lot of time on ex parte appeals anymore — probably in an attempt to make up for time spent on inter-parte reexams.

Probably because it is another way to trash patent law and increase Lee's payout from Google when she leaves.

(By the way, that is the way it works. The federal employees get compensated by the corporations in proportion to how much they helped the corporation while working for the federal government.)

Lee is looking at a huge payout from Google—huge. She knows her life is taken care of.

IPdude May 8, 2017 1:33 pm

What may be lost in all of this is that if we get a pro-patent director, he/she will have the same discretion and authority and can flip the script. I suspect Google will then lobby congress and the courts to strip the overbroad powers of the USPTO director.

Paul Morinville May 8, 2017 2:13 pm

Ruschke seems to argue that because the dispute is settled, it is not realistic to count them as bad in the numbers. I don't know the reasons why any one in particular settles, but my bet is that they are settling for either nothing or a very small fraction of the infringement damages. The patent holder has basically walked to the end of the plank, the PTAB sharks are swirling in the water below, but if the patent holder settles he doesn't get eaten. These are not settlements. These are extortions. The whole thing is a sham.

Night Writer May 8, 2017 3:12 pm

@7 Great point Paul. Ruschke comes off as more than just a bit slimey.

Jeff Lindsay May 8, 2017 9:41 pm

“Discussion during the meeting also centered around the low number of post grant review (PGR) petitions filed at PTAB and changes to PGRs, which could encourage a greater number of filings. Estoppel provisions that prevent PGR petitioners from bring multiple petitions were considered as one aspect of those proceedings which could be changed to encourage greater filing activity.”

So troubling! They really are treating patents like piñatas, encouraging as many swings as it takes to deny the inventors of their property. Good analogy and nicely written article.

Tess Foley May 8, 2017 10:54 pm

“In some cases the petitioner has refiled virtually the same petition over and over again and for reasons that are never explained on the 4th or 5th filing the petition is instituted.”

Utter Nonsense. Post one example, just one where a same petitioner was successful after 4 or 5 tries on the same patent claims. I'll even make it easier post a single example of a third try case.

You can't because it's never happened.

Night Writer May 9, 2017 8:20 am

@9 Jeff Lindsay: you are right. I guess Lee wants to get up to the \$100 million pay out. (For all you people who think me talking about Lee taking a payoff for her service to Google at the PTO: you know nothing of inside the Beltway politics. Lee is going to get very, very rich when she leaves the PTO.)

Ternary May 9, 2017 8:49 am

“You will not see a chemist paneled on an electrical case,” Ruschke said. But we do, as Steve points out in the MRI machine case, which was ruled an “abstract idea” by PTAB judges with a chemical/biology background.

Judge Ruschke's statement is verifiably and empirically false as checked and reported by Steve.

Judge Ruschke makes a refuted statement that creates doubt on important skills required of PTAB judges to make well-reasoned decisions as expressed by Judge Ruschke himself.

This does not improve confidence in the PTAB.

Paul F. Morgan May 9, 2017 9:51 am

This is likely the result of the way the PTO classifies and assigns patent applications to art units, as also affecting who gets ex parte appeals from those art units. E.g., even if this MRI patent application was entirely directed to an improvement in magnets, image processing or other electronics, it would likely get sent to examiners in a medical arts unit to which MRI applications are assigned.

Also, when an art unit backlog runs low examiners can get reassigned to an art unit with a longer backlog even if their technical education is not really appropriate for that.

Ternary May 9, 2017 10:30 am

Paul. I could have come up with such explanation also. As a former government worker I would have “determined” that an MRI case is not an electrical case.

The MRI case was about an MRI machine with “moving stations” using “a classification processing unit.” The classification was related to MRI imaging parameters, technical parameters, just to refresh people’s minds.

What Judge Ruschke said was “You will not see a chemist paneled on an electrical case.” (they would even recuse themselves) This was said to create confidence in PTAB cases being decided by technology specific knowledgeable Judges. The statement is false, and thanks to Steve’s article verifiably so. Basically, what Judge Ruschke said is factually not true and it is not true in the spirit in which it was said, as further explained by you.

If the statement is so obviously not true in view of current PTAB and PTO practices, don’t say it. Maybe suggest that current practice should be changed if technology knowledgeable judges are desirable. But don’t try to pull the wool over our eyes with promoting non-existing formal practices.

Gene Quinn May 9, 2017 10:49 am

Tess-

It has happened. Please see the harassment that Finjan has experienced. There are others. Enjoy!

-Gene

Tess Foley May 9, 2017 1:30 pm

Gene,

An example of a patentee that sues 20 DIFFERENT companies and sees 20 invalidity defenses is not surprising in any forum.

The point made in the article is that the SAME petitioner can't try 4 or 5 times at the PTAB, this is false.

Gene Quinn May 9, 2017 1:50 pm

Tess-

As I said, it is not false. You asked for me to tell you where you could verify what I said was true. I provided you that information. If you choose not to look and prove to yourself I am right that does NOT make me wrong. It makes you obstinate.

As far as your characterization of Finjan, again you are wrong. Finjan is the owner of many valid property rights that are both presumed valid statutorily, and which are confirmed as valid over and over and over again by PTAB trials and refusals to institute. Finjan property rights are also confirmed as valid over and over and over again by federal district courts.

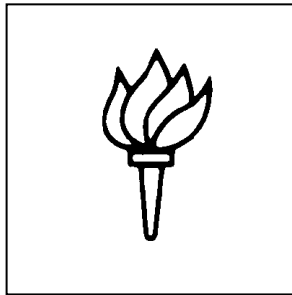
It is time to stop blaming the victim and start blaming the tortfeasors. Those stealing valid property rights are the villains, not property rights owners.

-Gene

NEW YORK UNIVERSITY

SCHOOL OF LAW

PUBLIC LAW & LEGAL THEORY RESEARCH PAPER SERIES
WORKING PAPER NO. 15-16



Giving the Federal Circuit a Run for its Money:
Challenging Patents in the PTAB

Rochelle Cooper Dreyfuss

May 2015

GIVING THE FEDERAL CIRCUIT A RUN FOR ITS MONEY: CHALLENGING PATENTS IN THE PTAB

*Rochelle Cooper Dreyfuss**

Passage of the America Invents Act of 2011 (AIA)¹ inaugurated three new procedures for challenging patents in the U.S. Patent and Trademark Office (PTO). Inter partes review (IPR) supplements the ex parte reexamination system and replaces its variant, inter partes reexamination;² the transitional program for covered business methods (CBM) institutionalizes what had been a more informal mechanism for reviewing such claims,³ and post-grant review (PGR) initiates a way to challenge patent claims immediately

© 2015 Rochelle Cooper Dreyfuss. Individuals and nonprofit institutions may reproduce and distribute copies of this Article in any format at or below cost, for educational purposes, so long as each copy identifies the author, provides a citation to the *Notre Dame Law Review*, and includes this provision in the copyright notice.

* Pauline Newman Professor of Law and Co-Director of the Engelberg Center on Innovation Law and Policy. I am grateful to the co-directors of the Engelberg Center and to Rachel Barkow, Annemarie Hassett, Helen Hershkoff, Patricia Martone, and John Pegram for their helpful comments, and to David Kappos for arranging a panel discussion with Judge Faith Hochberg and Micky Minhas, where I learned a great deal. The Filomen D'Agostino and Max E. Greenberg Research Fund of NYU provided financial support for this research.

1 Leahy-Smith America Invents Act (“AIA”), Pub. L. No. 112-29, 125 Stat. 284 (2011) (codified in scattered sections of 35 U.S.C.).

2 35 U.S.C. §§ 311–19 (2012) (supplanting the inter partes reexamination procedure; 35 U.S.C. §§ 311–17 (pre-AIA—enacted in 1999); 35 U.S.C. §§ 301–07 (supplementing ex parte reexamination). These systems were generally perceived as underutilized, see Dale L. Carlson & Robert A. Migliorini, *Past as Prologue for Patent Reform: Experience in Japan with Oppositions Suggests an Alternative Approach for the U.S.*, 88 J. PAT. & TRADEMARK OFF. SOC'Y 101, 105 (2006) (noting that only fifty-three requests for inter partes reexamination were filed between 2001 and 2004); Allan M. Soobert, *Breaking New Grounds in Administrative Revocation of U.S. Patents: A Proposition for Opposition—and Beyond*, 14 SANTA CLARA COMPUTER & HIGH TECH. L.J. 63, 66 (1998), or inadequate to protect patent quality, see Brian J. Love & Shawn Ambwani, *Inter Partes Review: An Early Look at the Numbers*, 81 U. CHI. L. REV. DIALOGUE 93, 95–96 (2014).

3 AIA § 18 (codified at 35 U.S.C. § 321 note). For the earlier procedure, see *Patent Quality Improvement: Expansion of the Second-Pair-of-Eyes Review*, U.S. PATENT & TRADEMARK OFF., <http://1.usa.gov/OQZfEj> (last modified Sept. 6, 2015). See generally David Orozco, *Administrative Patent Levers*, 117 PENN ST. L. REV. 1 (2012) (discussing the tightening of the patent review process in the area of business patents).

upon issuance.⁴ The increased importance of knowledge production throughout the global economy, coupled with the popularity of the Patent Cooperation Treaty, which eases the burden of filing in multiple countries,⁵ had expanded the number of patent applications and swamped the PTO's examination resources.⁶ The resulting thickets of patents—and especially the increase in patent assertions by nonpracticing entities (NPEs)—were thought to be imposing a high tax on innovation. At the urging of the National Academies of Science and with substantial support from the American Intellectual Property Law Association (AIPLA),⁷ Congress adopted these procedures to improve the likelihood that invalid patents would be quickly weeded out of the system.

To be sure, there are other ways to tackle the problem of low-quality patents. Increasing PTO resources would give examiners more time to search the literature and ensure that all the requirements for patentability are satisfied before patent rights are granted. Indeed, the AIA did some of this as well: it gave the PTO the power to set fees and retain them.⁸ But there are limits to that approach. As Mark Lemley has convincingly argued, many patents have little commercial significance; examining them more thoroughly wastes social resources.⁹ Furthermore, there are inevitable distortions in the process. Although examination is intended to protect the integrity of the public domain and the interest of the public in full disclosure of protected inventions, examiners deal only with those aspiring to acquire protection. While the PTO no longer follows an avowed “customer service paradigm” aimed at satisfying applicants,¹⁰ systematic contact with only one constituency can lead to unconscious bias. Furthermore, as Melissa Wasserman, Michael Frakes, and Rob Merges have demonstrated, factors such as the pressure to earn maintenance fees, time constraints, informational asymme-

4 35 U.S.C. §§ 321–29.

5 Patent Cooperation Treaty, Preamble, June 19, 1970, 28 U.S.T. 7645, 1160 U.N.T.S. 231.

6 See U.S. PATENT & TRADEMARK OFF., PERFORMANCE & ACCOUNTABILITY REPORT 142–52 (2014), <http://www.uspto.gov/about/stratplan/ar/USPTOFY2014PAR.pdf>.

7 See generally STEPHEN A. MERRILL ET AL., A PATENT SYSTEM FOR THE 21ST CENTURY loc. ii (2004) (ebook) (discussing patent reform), http://www.nap.edu/openbook.php?record_id=10976; Joe Matal, *A Guide to the Legislative History of the America Invents Act: Part II of II*, 21 FED. CIR. B.J. 539, 601 (2012) (citing *Patent Quality Improvement: Post-Grant Opposition: Hearing Before the Subcomm. on Courts, the Internet, and Intellectual Prop. of the H. Comm. on the Judiciary*, 108th Cong. 29 (2004) (statement of Michael Kirk, Director, AIPLA)).

8 AIA § 10 (codified at 35 U.S.C. §§ 41–42).

9 Mark A. Lemley, *Rational Ignorance at the Patent Office*, 95 NW. U. L. REV. 1495 (2001).

10 James Farrand et. al., *“Reform” Arrives in Patent Enforcement: The Big Picture*, 51 IDEA 357, 437 (2011) (internal quotations omitted) (noting that the PTO viewed patent applicants as the PTO's customers “without adequately recognizing the interests of the public.”); see also, e.g., U.S. PATENT & TRADEMARK OFF., PERFORMANCE AND ACCOUNTABILITY REPORT 2 (2000), <http://www.uspto.gov/sites/default/files/about/stratplan/ar/USPTOFY2000PAR.pdf> (noting a “rise in customer . . . satisfaction”).

tries, metrics for rating examiners' performance, and high examiner turnover can create other pathologies that lead to over-granting.¹¹

Better, to economists like Adam Jaffe and Josh Lerner, is to devote additional resources only to those patents that matter.¹² Of course, litigation does exactly that: patents that are asserted or challenged in a declaratory judgment action are, by definition, significant to someone. But litigation has its own problems. The process is extremely expensive.¹³ While these heavy costs are borne only by the challenger, the industry as a whole enjoys the benefits of invalidation.¹⁴ Thus, there is a collective action problem: every would-be challenger has an incentive to sit back and wait for a competitor to do the heavy lifting.¹⁵ A patent can thus have an impact on an industry even when the industry questions its validity. In addition, not everyone who is affected by the exclusivity of a patent has standing to challenge it in court.¹⁶ To be sure, the patentee's competitors will often have direct enough interests, but as members of the same industry, they are unlikely to make arguments that could imperil their own patent holdings. Accordingly, there may be patents that impair the public interest that no one has both an incentive and the capacity to challenge. For example, it took decades for patents on isolated genes to be questioned.¹⁷ The parties who finally did so (the ACLU and various doctors and patients) barely managed to convince a court that

11 See generally Michael D. Frakes & Melissa F. Wasserman, *Does Agency Funding Affect Decisionmaking?: An Empirical Assessment of the PTO's Granting Patterns*, 66 VAND. L. REV. 67 (2013) (analyzing the impact of funding on USPTO decisionmaking); Robert P. Merges, *As Many as Six Impossible Patents Before Breakfast: Property Rights for Business Concepts and Patent System Reform*, 14 BERKELEY TECH. L.J. 577 (1999) (analyzing how business concept patents overload the patent system); Melissa F. Wasserman, *The PTO's Asymmetric Incentives: Pressure to Expand Substantive Patent Law*, 72 OHIO ST. L.J. 379 (2011).

12 ADAM B. JAFFE & JOSH LERNER, *INNOVATION AND ITS DISCONTENTS: HOW OUR BROKEN PATENT SYSTEM IS ENDANGERING INNOVATION AND PROGRESS, AND WHAT TO DO ABOUT IT* 22 (2004).

13 See, e.g., AM. INTELLECTUAL PROP. LAW ASS'N, 2013 REPORT OF THE ECONOMIC SURVEY (2013), <http://www.patentinsurance.com/custdocs/2013aipla%20survey.pdf> (estimating that patent infringement litigation costs over \$2 million through trial for cases worth less than \$25 million and close to \$6 million for the most valuable cases).

14 See *Blonder-Tongue Labs., Inc. v. Univ. of Ill. Found.*, 402 U.S. 313, 335 (1971) (abolishing the doctrine of mutuality of estoppel).

15 See, e.g., Joseph Farrell & Robert P. Merges, *Incentives to Challenge and Defend Patents: Why Litigation Won't Reliably Fix Patent Office Errors and Why Administrative Patent Review Might Help*, 19 BERKELEY TECH. L.J. 943 (2004) (explaining the problems in the existing administrative system); John R. Thomas, *Collusion and Collective Action in the Patent System: A Proposal for Patent Bounties*, 2001 U. ILL. L. REV. 305, 307 ("Not only are opposition regimes ripe with collective action and free rider problems, they do not account for the possibility of collusion between the patentee and holder of patent-defeating prior art.").

16 See Michael J. Burstein, *Rethinking Standing in Patent Challenges*, 83 GEO. WASH. L. REV. 498, 500 (2015).

17 See *Ass'n for Molecular Pathology v. U.S. Patent & Trademark Office*, 689 F.3d 1303, 1343 (Fed. Cir. 2012) (Moore, J., concurring in part) ("[T]he United States Patent Office has allowed patents on isolated DNA sequences for decades . . ."), *aff'd in part, rev'd in part sub nom.*, *Ass'n for Molecular Pathology v. Myriad Genetics, Inc.*, 133 S. Ct. 2107 (2013).

one of them was affected in a manner that met the standing requirements of federal law.¹⁸

Even after a challenge is brought, there are obstacles to successfully attacking invalid claims. Deference to administrative procedures, along with a provision of patent law providing that “[a] patent shall be presumed valid,” has led courts to assign to the challenger the burden of establishing invalidity by clear and convincing evidence.¹⁹ While this burden seemingly makes little sense in situations where the PTO did not find—and thus never reviewed—all the evidence relevant to validity, the Supreme Court has insisted on fidelity to that longstanding practice.²⁰

Prior to 1982, there was also a problem of persistent inconsistencies among the appellate courts hearing patent appeals, which led to forum shopping, uncertainty, and (arguably) a flight from patents to trade secrecy. The Federal Circuit was established in 1982 to remedy that concern; it hears virtually all patent appeals arising from the district courts, the PTO, and the International Trade Commission (ITC).²¹ But as I documented in a series of articles,²² channeling cases to a single appellate court introduced new complications. The court apparently saw in its creation an expression of congressional desire to strengthen protection. Thus, it reduced the standards of patentability; for example, it made it easier to find an invention nonobvious and extended the scope of patentable subject matter (to include, for instance, business methods).²³ This deepened the patent thicket, which led

18 See *Ass’n for Molecular Pathology v. U.S. Patent & Trademark Office*, 653 F.3d 1329, 1343–48 (Fed. Cir. 2011), *aff’d in part, rev’d in part sub nom.*, *Ass’n for Molecular Pathology v. Myriad Genetics, Inc.*, 133 S. Ct. 2107 (2013).

19 35 U.S.C. § 282(a) (2012); see also Stuart Minor Benjamin & Arti K. Rai, *Who’s Afraid of the APA? What the Patent System Can Learn from Administrative Law*, 95 GEO. L.J. 269, 280–81 (2007) (alteration in original).

20 See *Microsoft Corp. v. i4i Ltd. P’ship*, 131 S. Ct. 2238, 2245–46, 2252 (2011).

21 28 U.S.C. § 1295 (2012).

22 See generally Rochelle C. Dreyfuss, *Abolishing Exclusive Jurisdiction in the Federal Circuit: A Response to Judge Wood*, 13 CHI.-KENT J. INTEL. PROP. 327 (2014); Rochelle Cooper Dreyfuss, *The Federal Circuit: A Case Study in Specialized Courts*, 64 N.Y.U. L. REV. 1 (1989); Rochelle Cooper Dreyfuss, *The Federal Circuit: A Continuing Experiment in Specialization*, 54 CASE W. RES. L. REV. 769 (2004); Rochelle Cooper Dreyfuss, *The Federal Circuit as an Institution: What Ought We to Expect?*, 43 LOY. L.A. L. REV. 827 (2010); Rochelle Cooper Dreyfuss, *In Search of Institutional Identity: The Federal Circuit Comes of Age*, 23 BERKELEY TECH. L.J. 787 (2008); Rochelle C. Dreyfuss, *Percolation, Uniformity, and Coherent Adjudication: The Federal Circuit Experience*, 66 SMU L. REV. 505 (2013) [hereinafter Dreyfuss, *Percolation*]; Rochelle Cooper Dreyfuss, *What the Federal Circuit Can Learn from the Supreme Court—and Vice Versa*, 59 AM. U. L. REV. 787 (2010) [hereinafter Dreyfuss, *Learning*].

23 See, e.g., *In re Sang-Su Lee*, 277 F.3d 1338, 1344 (Fed. Cir. 2002) (rejecting the use of common sense in determining obviousness); *State St. Bank & Tr. Co. v. Signature Fin. Grp., Inc.*, 149 F.3d 1368, 1368 (Fed. Cir. 1998) (finding business methods patentable).

the Supreme Court to grant certiorari in increasing numbers of cases and to reverse or modify the Federal Circuit's resolution in most of them.²⁴

Not only has the Federal Circuit had difficulty persuading others that it has taken normatively appropriate positions,²⁵ it has also had problems implementing the Supreme Court's views and guiding district court practice.²⁶ Some scholars and judges have suggested revising the jurisdictional rules to give other courts some authority over adjudicating patent disputes.²⁷ This would increase percolation and bring other points of view, including an antitrust perspective, to bear on questions of patentability, infringement, defenses, and remedies. But because practitioners prefer certainty and predictability, Congress is unlikely to make that change.²⁸

The new procedures instituted by the AIA could remedy many of these problems. Because these challenges are adjudicated within the PTO, the Patent Trial and Appeal Board (PTAB or Board), which hears these cases, applies the same preponderance of the evidence standard used to determine whether to grant a patent in the first place.²⁹ Since the cost of engaging in these administrative adjudications is lower than litigation, those who believe the patent invalid may be less likely to wait for someone else to come forward. Furthermore, the availability of a less expensive procedure to challenge patents could make the NPE business model less viable. Both IPRs and PGRs can be brought by any interested party. Accordingly, the public can use the procedures to vindicate interests that are not shared by the patent holder's rivals. And because a request for a PGR must be made within nine months of the issuance of the patent and all three procedures are subject to strict time

24 See, e.g., *Bilski v. Kappos*, 561 U.S. 593, 3222 (2010) (barring patents on abstractions); *KSR Int'l Co. v. Teleflex Inc.*, 550 U.S. 398, 419 (2007) (raising the standard of nonobviousness).

25 See Dreyfuss, *Percolation*, *supra* note 22, at 515–18 (citing, among others, reactions of the Supreme Court, the Federal Trade Commission, and the Department of Justice).

26 For examples of the Federal Circuit's difficulties, consider the Supreme Court's four attempts to narrow the scope of patentable subject matter, *Alice Corp. Pty. v. CLS Bank Int'l*, 134 S. Ct. 2347 (2014); *Ass'n for Molecular Pathology v. Myriad Genetic, Inc.*, 133 S. Ct. 2107 (2013); *Mayo Collaborative Servs. v. Prometheus Labs., Inc.*, 132 S. Ct. 1289 (2012); *Bilski*, 130 S. Ct. 3218 (2010), and its attempts to retain the doctrine of equivalents, *Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co.*, 535 U.S. 722 (2002); *Warner-Jenkinson Co. v. Hilton Davis Chem. Co.*, 520 U.S. 17 (1997); see also generally Craig Allen Nard & John F. Duffy, *Rethinking Patent Law's Uniformity Principle*, 101 Nw. U. L. Rev. 1619 (2007); Kathleen M. O'Malley et al., *A Panel Discussion: Claim Construction from the Perspective of the District Judge*, 54 CASE W. RES. L. REV. 671 (2004).

27 See, e.g., Nard & Duffy, *supra* note 26, at 1642–50; Diane P. Wood, *Keynote Address: Is It Time to Abolish the Federal Circuit's Exclusive Jurisdiction in Patent Cases?*, 13 CHI.-KENT J. INTELL. PROP. 1 (2014).

28 See, e.g., Harold C. Wegner, *Federal Circuit Exclusive Appellate Patent Jurisdiction: A Response to Chief Judge Wood*, 13 CHI.-KENT J. INTELL. PROP. 394, 395 (2014).

29 See 35 U.S.C. §§ 316(e), 326(e) (2012).

limits, invalid patents can be cleared quickly and more timely feedback provided to the examining corps.³⁰

As important, these procedures have the potential to change the institutional culture of both the PTO and the federal courts. They require the PTO to focus on the concerns of nonpatentees (that is, to consider challengers to be among its “customers”) and to evaluate patents later in their life, after more art pertinent to the question of validity has emerged. Furthermore, the PTAB is likely to be among the first to implement new Supreme Court pronouncements; it will probably also be the first to consider questions raised by the substantive changes made in the AIA.³¹ Unlike the district courts, which must also grapple with these issues, the PTAB has expertise to cope with the technical aspects of its cases: it is composed entirely of patent and technology experts and there is an effort to staff each three-member panel with at least one judge who has specific familiarity with the field of the patented invention.³² With these improvements over its predecessor, the Board of Patent Appeals and Interferences (BPAI), the PTAB could provide the Federal Circuit with a partner in the enterprise of interpreting patent law and implementing Supreme Court decisions. While it is true that the Federal Circuit, as the reviewing court, has the final say,³³ the PTAB breaks its isolation. At the same time, the thorough analysis furnished by the PTAB could give district courts better guidance on how to apply the law to emerging technologies.

The question is whether these salutary effects will, in fact, come to pass. At this point, there have been several statistical studies of the new procedures, including some by the PTO. This Article is intended to look beyond the numbers. To that end, I read all the final written decisions in CBM reviews handed down by the end of November 2014 as well as a set of final written decision in IPRs, starting with the first case filed, more than fifty cases in total. In addition, I read a selection of decisions to institute review, decisions on various motions, all the opinions issued by the Federal Circuit reviewing the PTAB, as well as the considerable outpouring (mostly in the form of blogs) published by those practicing before the PTAB. This is very

30 Cf. Bronwyn H. Hall & Dietmar Harhoff, *Post-Grant Reviews in the U.S. Patent System—Design Choices and Expected Impact*, 19 BERKELEY TECH. L.J. 989 (2004) (analyzing the efficiency effects of proposals for post-grant opposition procedures).

31 See *infra* text accompanying notes 181–185.

32 35 U.S.C. § 6(a) (requiring “persons of competent legal knowledge and scientific ability”); Erin M. Dunston & Philip L. Hirschhorn, *The New America Invents Act Post-Grant Procedures: IPRs, CBMs, and PGRs—Effective Complements to or Alternative for Traditional IP Litigation Strategies*, in LITIGATION STRATEGIES FOR INTELLECTUAL PROPERTY CASES 101, 105 (2014). Appointees are drawn from the USPTO examining corps, other government agencies, private practice, and industry. See U.S. PATENT & TRADEMARK OFF., PATENT PUBLIC ADVISORY COMMITTEE QUARTERLY MEETING: PATENT TRIAL AND APPEAL BOARD UPDATE (Feb. 12, 2014), http://www.uspto.gov/about/advisory/ppac/20140212_PPAC_PTABUp date.pdf.

33 The standard of review is, however, a difficult question, see *infra* text accompanying notes 227–278.

early in the life of these procedures; CBMs and IPRs began on September 16, 2012, and the PGR procedure can only be used to challenge patents issued on applications filed after the AIA went into full effect on March 16, 2013. Only a few PGR petitions have been publicly filed so far; the PTAB has instituted only two reviews, and as of this writing, no case has been decided.³⁴ While the other two procedures have been in use for two years, the early cases may be clearing a backlog of questionable patents and thus may not be representative of future practice.³⁵ Furthermore, the Federal Circuit has reviewed very few final decisions of the PTAB under the new procedures. Most of the cases have been decided without written opinion.³⁶

Nonetheless, it is valuable to consider what has happened so far. The cases I considered were sufficient to provide a sense of how the procedures operate and the opportunities they create to streamline—but also to game—the system. My main objective is directed at institutional questions, to help the PTO and Congress as each considers changes to the system³⁷ and to gauge how well the PTAB could function to ameliorate the effect of Federal Circuit isolation and provide a basis for the court to consider new perspectives, write more persuasively, and provide better guidance. A second goal is

34 The instituted cases are *American Simmental Ass'n v. Leachman Cattle of Colorado, LLC*, No. PGR2015-00003 (P.T.A.B. June 19, 2015), and *American Simmental Ass'n v. Leachman Cattle of Colorado, LLC*, No. PGR2015-00005 (P.T.A.B. June 19, 2015). As of June 29, 2015, eleven PGRs had been filed. USPTO, https://ptabtrials.uspto.gov/prweb/PRWebLDAP2/Hcl5xOSeX_yQRYZAnTXXCg%5B%5B*/!STANDARD?UserIdentifier=searchuser (last visited Oct. 27, 2015).

35 See Colleen Chien & Christian Helmers, *Inter Partes Review and the Design of Post-Grant Patent Reviews*, STAN. TECH. L. REV. (forthcoming) (manuscript at 14–16), http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2601562 (noting other selection effects).

36 See FED. CIR. R. 36 (permitting entry of judgment without opinion). The cases decided with written opinion include *Versata Development Group, Inc. v. SAP America, Inc.*, 793 F.3d 1306 (Fed. Cir. 2015), *Microsoft Corp. v. Proxyconn, Inc.*, 789 F.3d 1292 (Fed. Cir. 2015), and *In re Cuozzo Speed Technologies, LLC*, 793 F.3d 1268 (Fed. Cir. 2015). Only the decision in *Proxyconn* was reversed.

37 The STRONG Patents Act, S. 632, 114th Cong. (2015), would change many aspects of post-grant review, including the burden of proof on invalidity, the standard for claim construction, and standing to petition for review. The PATENT Act, S. 1137, 114th Cong. (2015), was initially directed at other issues, but Section 11 of the current Manager's Amendment includes a section on PTAB procedures that would change the standard for claim construction, broaden the grounds for amending claims, and alter other rules for conducting post-grant opposition; the Innovation Act, H.R. 9, 114th Cong. (2015), is similar. The changes contemplated by the PTO are outlined in PTO Director Michelle K. Lee's blog. See Michelle K. Lee, *PTAB'S Quick-Fixes for AIA Rules Are to Be Implemented Immediately*, U.S. PATENT & TRADEMARK OFF. (Mar. 27, 2015, 10:18 AM), http://www.uspto.gov/blog/director/entry/ptab_s_quick_fixes_for. These include changing page limits, adjusting motion practice (including for amending claims), permitting the introduction of more evidence (including live testimony), allowing more discovery (especially on the question of who is the real party in interest), and adding new rules to deal with multiple challenges to the same patent. See also Amendments to the Rules of Practice for Trials Before the Patent Trial and Appeal Board, 80 Fed. Reg. 50720 (proposed Aug. 20, 2015) (to be codified at 37 C.F.R. pt. 42).

to draw greater academic attention to the potential these procedures have for changing the patent system and to provoke discussion—outside the emerging PTAB bar—on how they ought to operate. In particular, the statute layers inter partes review in a specialized agency under appellate review in a specialized court. I offer some thoughts on how authority over patent jurisprudence should be allocated between these two centers of expertise.

The Article proceeds as follows. Part I describes the three procedures. Part II evaluates use of the new system. Part III discusses the interaction between the PTAB and the Federal Circuit. Part IV looks at the problems these procedures raise for the parties, the adjudicators, and the sound administration of patent law.

I. THE NEW PROCEDURES

The AIA provisions establishing the three new procedures, coupled with the PTO's regulations implementing them, create a complex procedural landscape. This Part describes the provisions and how they interact.

As noted above, Congress had many reasons to create new mechanisms for challenging patents within the PTO. First among them, however, were cost and timing.³⁸ The procedures Congress mandated and the regulations adopted by the PTO reflect that priority.³⁹ PGRs, IPRs, and CBMs are loosely referred to by attorneys as “trials,” and are presided over by the PTAB using many procedural safeguards. But they are not the demonstrative spectacle of the courtroom. Instead, reviews are conducted in staggered fashion, according to a strict time table, and with page and discovery limitations, preferably on “paper” (in fact, electronic) filings.⁴⁰ In theory, the parties are represented by individuals who practice before the PTO, although other attorneys (such as litigators) can be admitted *pro hac vice* upon a showing of good cause.⁴¹ The fees are relatively low but rise as more claims are challenged.⁴²

The three proceedings have much in common. Each begins with a petition to institute,⁴³ to which the patent owner may file a preliminary response. Once a petition is granted in whole or part,⁴⁴ the panel and parties agree on

38 See Jonathan Tamimi, *Breaking Bad Patents: The Formula for Quick, Inexpensive Resolution of Patent Validity*, 29 BERKELEY TECH. L.J. 587, 591 (2014).

39 35 U.S.C. § 312 (2012) (giving the PTO authority to create rules); 37 C.F.R. §§ 41–42 (2014).

40 For a fuller description, see Dunston & Hirschhorn, *supra* note 32, at 102–08; for a detailed exposition, see Tamimi, *supra* note 38.

41 37 C.F.R. § 42.10(c) (2014).

42 *Id.* § 42.15. For figures, see *infra* note 364.

43 See *id.* §§ 42.20–.80, 42.100–.123, 42.200–.224, 42.300–.304.

44 The PTAB's decisions concerning institution can be reheard by the Board. *Id.* § 42.71. However, they cannot be appealed directly to the Federal Circuit, 35 U.S.C. §§ 314(d), 324(e), or set aside by a district court, *Versata Dev. Grp., Inc. v. Lee*, 793 F.3d 1352 (Fed. Cir. 2015). Whether they can be reviewed in conjunction with review of the final written decision is unclear. In *In re Cuozzo Speed Technologies, LLC*, the Federal Circuit denied review on an IPR challenge. 793 F.3d 1268, 1273–74 (Fed. Cir. 2015). However, in *Versata*, a CBM case, the Federal Circuit restyled the question as whether the PTAB

how the proceedings will be conducted, usually through a telephone conference. The parties then have a limited period in which to conduct discovery. The patent owner can file a response to the petition, which can include a motion to amend any claims found to be unpatentable; the petitioner can then file a reply and an opposition to the motion to amend. The next few months provide the parties with opportunities to challenge evidence, file observations, and request and engage in oral argument. All in all, the procedure, once instituted, should conclude in one year (although it can be extended for six additional months).⁴⁵ Given the tight time limits on pre-institution activity, the entire process should, at most, take two years from start to finish.

In considering the challenge to a claim, the statute requires the Board, sitting in panels of three judges, to evaluate whether the petitioner sustained the burden of proving that it is more probable than not that the claim is invalid.⁴⁶ This is identical to the burden the PTO bears in the examination process. Similar to examination, the regulations require the Board to give unexpired claims their broadest reasonable interpretation.⁴⁷ Because challenges can be brought only against individual patents, but many challenges against a patent (or particular claims in it) can be mounted, the PTAB must also consider whether proceedings should be joined and considered together.⁴⁸

Once the PTAB hands down a final written decision, the losing party may appeal to the Federal Circuit.⁴⁹ By statute, a disappointed patent holder may also propose a reasonable number of amendments, but may not broaden the scope of the patent.⁵⁰ As interpreted by the PTO, each proposed amendment must be a direct response to the successful challenge.⁵¹ After the time to appeal has expired or the appeal is terminated, the PTAB

exceeded its authority in calling the invention in question a covered business method and then invalidating it. 793 F.3d at 1319–20. Over a strong partial dissent by Judge Hughes, *id.* at 1337–42, it then held it could decide whether the PTAB made the institution decision correctly.

45 37 C.F.R. §§ 42.100–.200.

46 35 U.S.C. §§ 316(e), 326(e). Section 18(a)(1) of the AIA mandates the use of PGR standards and procedures for CBMs, with some exceptions. Accordingly, the statutory provision for CBMs will not be cited separately unless the issue is within the exception.

47 37 C.F.R. §§ 42.100(b), 42.200(b), 42.300(b).

48 35 U.S.C. §§ 315(c), 325(c); 37 C.F.R. §§ 42.122, 42.222, 42.300. The PTAB also has discretion to refuse to institute if the petition relies on previously presented prior art or arguments. *See* 35 U.S.C. § 325(d); *Conopco, Inc. v. Proctor & Gamble Co.*, No. IPR2014-00507 (P.T.A.B. July 7, 2014) (institution decision applying § 325(d) to IPR cases). When cases are joined, the Board will consider the challenges raised in each complaint, even if they do not overlap. *See, e.g., Ariosa Diagnostics v. ISIS Innovation Ltd.*, No. IPR2012-00022, at 20 (P.T.A.B. Sept. 2, 2014). All citations of PTAB decisions are to final written decisions unless otherwise noted.

49 35 U.S.C. §§ 319, 329.

50 *Id.* §§ 316(d), 326(d).

51 37 C.F.R. §§ 42.121, 42.221, 42.300. The PTAB has added other considerations. *See infra* text accompanying notes 212–15.

issues a certificate in accordance with its findings (cancelling, confirming, or amending each challenged claim).⁵² Settlements are possible, but any agreement made in connection with the settlement must be filed with the PTO. These can, however, be made confidential.⁵³

Along the way, the parties must plead with considerable precision. For example, the petition to institute must identify the real parties in interest and all administrative and judicial matters related to the proceedings,⁵⁴ and include a certification that the petitioner is not barred from bringing the challenge, the precise relief requested for each claim challenged, the basis for the challenge (including, according to the PTO, how the claim should be construed), and citation of the evidence that supports the challenge.⁵⁵ Petitions and responses must also conform to strict page limits.⁵⁶ Testimony and cross-examination (which are time-limited) are submitted in the form of exhibits (affidavits, transcripts of depositions);⁵⁷ supplemental information can be filed, but only within a narrow time frame or on a good-cause or interests-of-justice standard.⁵⁸

While the three new procedures have much in common, there are also important distinctions. Together, PGRs and IPRs are meant to provide a way to challenge patents throughout their term, but the proceedings are separately crafted to deal with right holders' growing reliance interests. CBMs are different again: they are meant to help clear particularly questionable patents from the system.

A. *Post-Grant Review*

The PGR is, in essence, the main response to the National Academies' call to "weed out invalid patents or revise and narrow the claims."⁵⁹ Nominally, it is available only to challenge patents issued under the first-to-file priority rule, which was also instituted by the AIA.⁶⁰ Thus, it applies to patents issued on applications filed on or after March 16, 2013.⁶¹ However, because the statute refers to patents that contain "a claim" with this effective filing date,⁶² it is possible that PGRs can be brought to challenge claims in patents

52 35 U.S.C. §§ 318(b), 328(b); 37 C.F.R. § 42.80.

53 35 U.S.C. §§ 317, 327; 37 C.F.R. § 42.74.

54 35 U.S.C. §§ 312, 322; 37 C.F.R. § 42.8 (b).

55 37 C.F.R. §§ 42.104, 42.204, 42.304.

56 *Id.* § 42.24 (limiting IPRs to 60 pages, PGRs and CBMs to 80, and motions, including motions to amend, to 15).

57 *Id.* § 42.53.

58 *Id.* §§ 42.123, 42.223.

59 MERRILL ET AL., *supra* note 7, at 96.

60 *See* 35 U.S.C. §§ 102–03 (2012).

61 AIA §§ 6(d), (329)(f)(2)(A), Pub. L. No. 112-29, 125 Stat. 284 (2011) (codified in scattered sections of 35 U.S.C.).

62 *See id.* § 3(n)(1)(A).

with earlier priority dates, so long as one claim that was not supported by the original disclosure was added after that date.⁶³

A petition for post-grant review may be filed by anyone who is not the owner of the patent, has not (or whose real party in interest has not) already filed a civil action challenging a claim in the patent, and is not estopped by a prior action.⁶⁴ It must be instituted within nine months of the grant of a patent or the broadening reissuance of a patent previously granted.⁶⁵ In keeping with the notion that patents may be of low quality for many reasons, including lack of novelty, obviousness, indefiniteness, inadequacy of a written description, or failure to enable, the petitioner is permitted to raise any of the grounds of invalidity denominated in the Patent Act as “defenses” to an infringement action.⁶⁶ And in keeping with this broad scope of challenge, the scope of discovery is potentially liberal: notwithstanding the explicit limits,⁶⁷ additional discovery is available upon a showing of good cause.⁶⁸ Discovery is, however, limited to “evidence . . . related to factual assertions advanced by either party.”⁶⁹

The decision to institute a PGR requires the Board to determine whether the petition presents information that “if [it] is not rebutted, would demonstrate that it is more likely than not that at least [one] of the claims challenged . . . is unpatentable.”⁷⁰ Importantly, the Board can also institute if the petition raises a “novel or unsettled legal question that is important to other patents or patent applications,”⁷¹ for this allows the PTAB to consider questions that will arise as the PTO implements the substantive provisions of the AIA. Once the determination to institute is made, other claims in the patent can also be challenged. While a petitioner cannot institute a PGR if it has already instituted a civil action challenging validity,⁷² a civil action can be

63 See *In re Choon's Design Inc.*, No. PGR2014-00008 (petition filed Aug. 5, 2014) (pending).

64 35 U.S.C. §§ 325 (a), (e); 37 C.F.R. § 42.201 (2014).

65 35 U.S.C. § 321(c); 37 C.F.R. § 42.20. Reissuances that are identical to or narrower than the claims in the original patent cannot be challenged nine months after the original patent issued.

66 35 U.S.C. § 321(b) (citing 35 U.S.C. § 282(b)). This covers all statutory grounds of unpatentability, including challenges to subject matter under § 101. *Versata Dev. Grp., Inc. v. SAP Am., Inc.*, 793 F.3d 1306, 1329–30 (Fed. Cir. 2015). But it does not cover common law grounds, such as double patenting. *Cf. Apple Inc. v. Sightsound Techs., LLC*, No. CBM2013-00021, at 25 (P.T.A.B. Oct. 8, 2013) (denying petition to institute and interpreting a similar provision for CBMs).

67 37 C.F.R. § 42.51 (setting out mandatory initial disclosures and permitting the parties to agree to additional discovery).

68 37 C.F.R. § 42.224(a).

69 *Id.* § 42.224(b).

70 35 U.S.C. § 324(a).

71 *Id.* § 324(b); 37 C.F.R. § 42.208(d).

72 35 U.S.C. § 325(a)(1).

filed *after* the PGR is instituted. In that case, the civil action is stayed until the patent owner moves to lift the stay or files an infringement action.⁷³

Although adverse decisions can be appealed to the Federal Circuit, once a final written decision is handed down, the statute provides that the petitioner, its privies, and real party in interest are estopped from raising before the PTO, in a civil action, or in the ITC, an issue that was raised or reasonably could have been raised in the PGR.⁷⁴ Given the narrow window for bringing PGRs and the limitations on discovery and argument, however, it is not clear that Congress intended to extend estoppel to grounds that were not raised. Because the “reasonably could have raised” language appears to have been a drafting error, legislative efforts are being made to strike it.⁷⁵ Arguably, however, estoppel plays an important role in protecting patent owners from harassment.⁷⁶ As discussed more fully below, the impact of PGRs may depend heavily on the fate of this provision—or on how reasonably “reasonably” is interpreted and who are considered in privity with the challenger. A final written decision also estops the patent holder. It cannot take “action inconsistent with the adverse judgment.”⁷⁷ This includes obtaining a claim that is the same as a claim that was cancelled or a proposed amendment that was rejected.⁷⁸

B. *Inter Partes Review*

To some extent, IPRs pick up where PGRs leave off: for first-to-file claims, they can be instituted as soon as the date to file a PGR has passed.⁷⁹ IPRs are, however, also available to challenge patents issued under the first-to-invent system. Since these are not subject to PGR review, a challenge can be filed as soon as the patent is granted.⁸⁰ As with PGRs, anyone who is not the patent owner and is not already estopped may file one,⁸¹ but as before, petitioners face a choice: no one who has filed a civil action challenging the validity of a claim in the patent can then file an IPR.⁸² As with PGRs, there is

73 *Id.* § 325(a)(2). In addition, PGRs can be instituted after validity is challenged in a counterclaim. *Id.* § 325(a)(3).

74 *Id.* § 325(e); 37 C.F.R. § 42.73(d)(1).

75 See *Implementation of the Leahy-Smith America Invents Act: Hearing Before the Comm. on the Judiciary House of Representatives*, 112th Cong. 60 (2012) (statement of Robert A. Armitage, Senior Vice President and Gen. Counsel of Eli Lilly and Co.); Matal, *supra* note 7, at 618.

76 See Robert L. Stoll, *Maintaining Post-Grant Review Estoppel in the America Invents Act Revisited: A Call for Legislative Restraint*, 23 FED. CIR. B.J. 15, 33–37 (2013) (arguing that a broader estoppel protects the judicial system as well as the patent holder).

77 37 C.F.R. § 42.73(d)(3).

78 *Id.*

79 35 U.S.C. § 311(c); 37 C.F.R. § 42.102(a)(1). When it is possible to institute an IPR after a PGR, the IPR can be instituted as soon as the PGR is terminated. 37 C.F.R. § 42.102(a)(3).

80 37 C.F.R. § 42.102(a)(2).

81 35 U.S.C. §§ 311(a), 315(e).

82 *Id.* § 315(a)(1); 37 C.F.R. § 42.101(a), (c). Again, counterclaims for invalidity do not count. See 35 U.S.C. § 315(a)(3).

a provision to stay court proceedings the petitioner files after filing an IPR.⁸³ In addition, if the petitioner, his privy, or real party in interest has already been served with a complaint alleging infringement, the IPR must be sought within a year of service.⁸⁴

IPRs are different from PGRs in one critical respect: claims can be challenged only on the grounds of novelty and nonobviousness, and then only if the prior art constitutes a patent or a printed publication.⁸⁵ The standard for finding the claim unpatentable is the same as for PGRs, but the limit on the grounds for invalidation means that the patent holder and its post-issuance investment are exposed to invalidation on this standard only with respect to issues that could not easily be determined soon after issuance (and only with the use of materials that can be easily put into evidence). There are other subtleties. Institution depends only on whether there is “a reasonable likelihood that the petitioner would prevail with respect to at least [one] of the claims challenged in the petition,” taking into account the patent owner’s preliminary response (if one is filed).⁸⁶ There is no provision for additional discovery on a good-cause standard, although it can be provided in the interest of justice.⁸⁷ While estoppel for the patent holder is the same as for PGRs, the effect of preclusion is different for the petitioner. As the only grounds that can be raised in the IPR are novelty and nonobviousness based on a narrow range of prior art, there are many grounds on which the identical claims can be challenged in court or in the ITC.

C. Transitional Program for Covered Business Methods

CBMs were added to the AIA at the tail end of legislative deliberations,⁸⁸ in the wake of several Supreme Court cases questioning the Federal Circuit’s interpretation of the scope of patentable subject matter and as NPE actions emerged as a problem.⁸⁹ As its formal name implies, the program is

83 35 U.S.C. § 315(a)(2).

84 *Id.* § 315(b). There is controversy over how this bar applies when the suit is dismissed, multiple suits are filed, or the infringement allegation is in a counterclaim. *See* Tamimi, *supra* note 38, at 629–31.

85 35 U.S.C. § 311(b). Note, however, that other issues, including § 101 challenges, can arise in IPRs in connection with motions to amend because the panel will consider whether the amended claim is patentable subject matter. *See, e.g.,* Ariosa Diagnostics v. ISIS Innovation Ltd., IPR2012-00022, at 51 (P.T.A.B. Sept. 2, 2014).

86 35 U.S.C. § 314(a); 37 C.F.R. § 42.108(c).

87 35 U.S.C. § 316(a)(5)(B); *Garmin Int’l, Inc. v. Cuozzo Speed Techs. LLC*, No. IPR2012-00001, at 6–7 (P.T.A.B. Mar. 5, 2013). *Garmin* was a decision on a motion for additional discovery, setting out a five-part test, which looks, among other things, at the probability (not possibility) of gaining useful information and the burden in terms of time, money, and human resources. *Id.* at 6–7.

88 Matal, *supra* note 7, at 628–32.

89 *See, e.g.,* 157 CONG. REC. S1053 (daily ed. Mar. 1, 2011) (statement of Sen. Schumer).

intended to sunset.⁹⁰ Presumably, by September 16, 2020, anyone affected by these questionable patents will have had time to challenge them. As with IPRs, claims in both first-to-file and first-to-invent patents can be challenged; as with PGRs, the challenge can be on any of the grounds that are denominated defenses to an infringement action.⁹¹

CBMs can be brought any time in the life of the patent, but the patent holder is arguably protected from harassment in that a petition may be instituted only if the petitioner, its real party in interest, or privy has been sued for, or charged with, infringement and is not estopped by a prior action.⁹² Furthermore, only the holders of “covered business method patent[s]”⁹³ are vulnerable. Presumably the patents whose validity is most questionable are the ones most often asserted by NPEs. These are defined as patents that claim “a method or corresponding apparatus for performing data processing or other operations used in the practice, administration, or management of a financial product or service, except that the term does not include patents for technological inventions.”⁹⁴ The PTO determines whether a patent is a technological innovation by considering, on a case-by-case basis, “whether the claimed subject matter as a whole recites a technological feature that is novel and unobvious over the prior art; and solves a technical problem using a technical solution.”⁹⁵ These limitations may appear to narrow the set of challenges that can be considered. Nevertheless, the PTAB has shown itself willing to consider a fairly wide variety of cases.⁹⁶ Furthermore, once it finds one claim to be within the definition, the PTAB can consider challenges to other claims in the patent.⁹⁷

On the whole, the conduct of proceedings for CBMs mirrors that for IPRs.⁹⁸ However, because CBMs can mainly be brought in cases where litigation is pending or threatened, the procedures include a special provision on

90 AIA § 18(a)(3), Pub. L. No. 112-29, 125 Stat. 284 (2011) (referring to CBMs as the “transitional program for covered business methods patents”).

91 37 C.F.R. § 42.304(b)(1). Despite the language, the Federal Circuit rejected an argument that the PTAB cannot consider subject matter challenges under AIA § 101 because that provision is not mentioned in § 282(b) of the statute as a defense. *Versata Dev. Grp., Inc. v. SAP Am., Inc.*, 793 F.3d 1306, 1330 (Fed. Cir. 2015) (“It would require a hyper-technical adherence to form rather than an understanding of substance to arrive at a conclusion that § 101 is not a ground available to test patents under either the PGR or § 18 processes.”).

92 AIA § 18(a)(1)(B); 37 C.F.R. § 42.302.

93 37 C.F.R. § 42.301.

94 AIA § 18(d)(1); 37 C.F.R. § 42.301(a).

95 37 C.F.R. § 42.301(b).

96 See *infra* text accompanying notes 150–151.

97 See *Versata Dev. Grp., Inc. v. SAP Am., Inc.*, 793 F.3d 1306, 1327 (Fed. Cir. 2015) (“We accept the PTAB’s use of claim 17 as representative.”); see also *Liberty Mut. Ins. Co. v. Progressive Cas. Ins. Co.*, No. CBM2012-00003, at 7 (P.T.A.B. Feb. 11, 2014) (“Section 18(d)(1) of the AIA sets forth a single threshold based on just one claim—the satisfaction of which qualifies an entire patent as eligible for review . . .”).

98 See 37 C.F.R. § 42.300.

stays of trial court actions. According to the statute, trial courts must determine

- (A) whether a stay, or the denial thereof, will simplify the issues in question and streamline the trial;
- (B) whether discovery is complete and whether a trial date has been set;
- (C) whether a stay, or the denial thereof, would unduly prejudice the non-moving party or present a clear tactical advantage for the moving party; and
- (D) whether a stay, or the denial thereof, will reduce the burden of litigation on the parties and on the court.⁹⁹

There is a right to an immediate interlocutory appeal from the trial court's decision and this may be *de novo* to ensure consistent application.¹⁰⁰ In its first decision involving this provision, *VirtualAgility Inc. v. Salesforce.com, Inc.*, the Federal Circuit reversed the denial of a stay, criticized the trial court for reviewing the PTAB's determination that it was more likely than not that one claim was not patentable, and stressed the need to consider whether the stay would simplify the issues and streamline the trial.¹⁰¹

Unlike PGRs and IPRs, the estoppel provision for CBMs is narrow. Upon issuance of a final written decision, the petitioner or its real party in interest may not later assert invalidity on any ground *raised*—not any ground that reasonably could have been raised—during the proceeding.¹⁰² The estoppel applies to district court and ITC proceedings, but the statute makes no mention of subsequent proceedings in the PTO. Nor does it mention the petitioner's privies.

II. USE OF THE PROCEDURES

In a sense, the numbers speak volumes. Despite the fears that the estoppel provision or collective-action problems would discourage use of these procedures, IPRs and CBMs have proven extremely popular. The number of petitions is impressive. Near the two-year mark, the statistics were as follows:

99 AIA § 18(b)(1).

100 *Id.* § 18(b)(2).

101 *VirtualAgility Inc. v. Salesforce.com, Inc.*, 759 F.3d 1307, 1314 (Fed. Cir. 2014); *see also* *Benefit Funding Sys. LLC v. Advance Am. Cash Advance Ctrs. Inc.*, 767 F.3d 1383 (Fed. Cir. 2014) (using the provision to affirm the granting of a stay). The Federal Circuit also reversed a decision denying a stay in *Versata Software, Inc. v. Callidus Software, Inc.*, 771 F.3d 1368 (Fed. Cir. 2014). Interestingly, the parties then settled and the decision was vacated. *Versata Software, Inc. v. Callidus Software, Inc.*, 780 F.3d 1134 (Fed. Cir. 2015).

102 AIA § 18(a)(1)(D).

TABLE 1 NUMBER OF AIA PETITIONS (AS OF 9/11/14)¹⁰³

FY	Total	IPR	CBM	PGR
2012	25	17	8	-
2013	563	514	48	-
2014	1,406	1,240	159	2
Cumulative	1,994	1,771	215	1

Even more revealing than the number of cases have been the dispositions. Initially, around 85% of the claims challenged in an instituted IPR were cancelled; that figure was 100% for CBMs.¹⁰⁴ While these rates appear to be dropping for IPRs,¹⁰⁵ a study by Brian Love and Shawn Ambwani shows that over the first two years, petitioners were extremely successful:

- The PTAB grants—or “institutes”—IPR petitions for at least one challenged claim 84 percent of the time;
- Among instituted IPRs, *all* challenged claims are instituted 74 percent of the time;
- Among IPRs that reach a final decision on the merits, *all* instituted claims are invalidated or disclaimed more than 77 percent of the time.¹⁰⁶

103 PATENT TRIAL & APPEAL Bd., AIA PROGRESS STATISTICS (AS OF 9/11/14) 1 (2014), http://www.uspto.gov/ip/boards/bpai/stats/aia_statistics_091114.pdf. The PTO did not provide numbers for the two-year mark (September 16, 2014). However, the fiscal year runs from October 1 through September 30 and numbers were published for fiscal year 2014. They show that by September 30, 2014, seventy more IPRs and eighteen more CBMs had been filed.

104 See CYRUS A. MORTON & DAVID A. PRANGE, *Is the PTAB a Death Sentence for Patent Rights?*, ROBINS KAPLAN LLP (June 19, 2014), <http://www.rkmc.com/resources/articles/is-the-ptab-a-death-sentence-for-patent-rights>. Morton and Prange note that

Through May 2014 . . . :

- In the PTAB’s first 67 final written decisions, only 9 of the patents submitted for review have emerged unscathed.
- Out of the 1,093 claims addressed by those 67 decisions, only 231 claims survived, resulting in a survival rate of about 21 percent.
- Patent owners have also been largely unsuccessful in trying to introduce claim amendments. In 24 motions to amend, only one has been successful (and the successful patent owner was the United States government).

Id.

105 See generally Tony Dutra, *America Invents Act Post-Grant Oppositions After Two Years: Benefit or ‘Death Squad’?*, BNA PAT. TRADEMARK & COPYRIGHT L. DAILY, Sept. 19, 2014; see also U.S. PATENT & TRADEMARK OFF., INTER PARTES REVIEW PETITIONS TERMINATED TO DATE (AS OF 9/4/2014) (2014), http://www.uspto.gov/ip/boards/bpai/stats/inter_partes_review_petitions_terminated_update_20140904.pdf (suggesting that as of September 4, 2014, only 12% of all claims challenged in an IPR were cancelled); Daniel F. Klodowski, *Claim and Case Disposition*, FINNEGAN, <http://www.aiablog.com/claim-and-case-disposition/> (showing that as of August 1, 2015, 74.49% of claims on which an IPR was instituted were cancelled and that 94.89% of the claims on which CBMs were instituted were cancelled).

106 Love and Ambwani, *supra* note 2, at 94.

Not surprisingly, over time, the number of settlements has increased. By close to the two-year mark, the figures were as follows:

TABLE 2 AIA TRIALS INSTITUTED/DISPOSALS (AS OF 9/11/14)¹⁰⁷

		Trials Instituted	Joinders	Denials	Total Decisions Instituted	Disposals			
						Settled	FWD*	RAJ**	Other***
I P R	F Y 1 3	167	10*	26	203	38	-	2	1
	F Y 1 4	509	15*	167	691	165	114	35	1
C B M	F Y 1 3	14	-	3	17	3	1	-	-
	F Y 1 4	74	1*	25	100	26	11	1	2

* Final Written Decisions on the merits.

** Judgments based on Request for Adverse Judgment.

*** Includes terminations due to dismissal.¹⁰⁸

While these statistics speak loudly about the public's eagerness and ability to use these procedures to "weed out" bad patents, it is more difficult to interpret what the numbers mean from a normative standpoint. To some, they suggest that the Board is out of control. As Randall Rader, once chief judge of the Federal Circuit, put it, the judges of the PTAB are "acting as death squads, killing property rights."¹⁰⁹ Or in the words of two bloggers,

107 See PATENT TRIAL & APPEAL BD., *supra* note 103. By the end of fiscal year 2014, the number of IPR settlements increased by forty-five; there was one additional CBM settlement. See also Carlson & Migliorini, *supra* note 2, at 106 (suggesting that the invalidation rate in the new proceedings is much higher than in the reexamination proceedings that these new procedures augment (citing Joseph D. Cohen, *What's Really Happening in Inter Partes Reexamination*, 87 J. PAT. & TRADEMARK OFF. SOC'Y 207, 217 (2005))).

108 It is somewhat difficult to determine the number of settlements from the PTO figures because some cases that settled are marked "no institution" on the PTAB Portal. See, e.g., Oracle Corp. v. Cmty. United IP, LLC, No. CBM2013-00015 (P.T.A.B. July 25, 2013) (termination of proceeding).

109 Tony Dutra, *Rader Regrets CLS Bank Impasse, Comments on Latest Patent Reform Bill*, BNA PAT. TRADEMARK & COPYRIGHT L. DAILY, Oct. 29, 2013.

the PTAB is “where patent claims go to die.”¹¹⁰ More temperately, after comparing cancellation rates in IPRs to invalidation rates in court and considering the number of claims cancelled in IPRs that had previously survived ex parte reexamination,¹¹¹ Gregory Dolin concluded that it is “too easy to invalidate a duly issued patent” in an IPR. He called the CBM statistics “even more staggering.”¹¹²

But the numbers can be understood in a very different way. Before the PTAB can issue a final written decision cancelling claims, it must decide whether to institute a proceeding. The standard for determining whether to institute, although slightly different for the three procedures, is essentially whether it is more probable than not that at least one challenged claim is unpatentable. Since the preponderance of the evidence standard for determining whether a claim *should* be cancelled is also, essentially, whether it is more probable than not invalid, the high invalidation rate is basically a reflection of the PTAB’s ability to forecast correctly how it will decide on at least one claim. Because the panel that decides whether to institute also decides the case on the merits, a strong correlation is to be expected.¹¹³ This is especially so because the institution decisions are far from pro forma: they are often as long as the merits decision, cover the same issues (claim construction is often central), and are as thoughtful and probing of the arguments as the decisions on the merits.¹¹⁴ Admittedly, once the PTAB decides one claim may be invalid, it can entertain challenges to other claims as well. But it need not hear *every* claim the petitioner seeks to cancel. Partial institutions are possible, and in practice, the PTAB screens out claims that appear to be valid at the institution stage. That is, in deciding whether to institute, the

110 Michelle Carniaux & Michael E. Sander, *Claims Can Survive Inter Partes and Covered Business Method Review (But Few Do)*, IPR BLOG (Apr. 7, 2014), <http://interpartesreview-blog.com/claims-can-survive-inter-partes-covered-business-method-review/>.

111 See Gregory Dolin, *Dubious Patent Reform*, 56 B.C. L. REV. 881, 926–27 (2015) (citing John R. Allison & Mark A. Lemley, *Empirical Evidence on the Validity of Litigated Patents*, 26 AIPLA Q.J. 185, 205–06 (1998)); Shawn P. Miller, *Where’s the Innovation: An Analysis of the Quantity and Qualities of Anticipated and Obvious Patents*, 18 VA. J.L. & TECH. 1, 6–7 (2013).

112 Dolin, *supra* note 111, at 926, 930.

113 The PTO is considering a pilot program in which institution decisions would be made by only one judge; if that judge decides to institute, two new judges would be added to decide the case. See Lee, *supra* note 37. Such a procedure would benefit from continuity and also give a greater appearance of impartiality; it will be interesting to see if it leads to a lower rate of cancellation.

114 To take two examples, arbitrarily chosen, the institution decision in *SAP America, Inc. v. Versata Development Group, Inc.* was forty-four pages long. No. CBM2012-00001 (P.T.A.B. Jan. 9, 2013) (institution decision). In the same case, the final written decision was thirty-five pages. *Id.* (P.T.A.B. June 11, 2013). The institution decision in *U.S. Bancorp v. Retirement Capital Access Mgmt. Co.* was fifteen pages. No. CBM2013-00014 (P.T.A.B. Sept. 20, 2013) (institution decision). There, the final written decision was twenty-one pages. *Id.* (P.T.A.B. Aug. 22, 2014).

PTAB often considers every claim and every ground to determine whether each claim is more likely than not unpatentable on each alleged ground.¹¹⁵

Along the same lines, CBMs cannot be instituted if the claim as a whole is drawn to a “technological feature that is novel and unobvious over the prior art; and solves a technical problem using a technical solution.”¹¹⁶ Because many business-method claims involve fairly abstract ideas tied only to a general-purpose computer, and, per the Supreme Court, can only be considered patentable subject matter if they contain an “inventive concept,”¹¹⁷ the “technical solution” requirement, although not the same as the “inventive concept” test, will filter out some subject-matter challenges that would be losers on the merits.¹¹⁸

It is also important to keep in mind that the claims challenged are not always independent of one another. Depending on their relationship and the grounds considered, cancellation of some claims may be highly likely to lead to the cancellation of others.¹¹⁹ For example, a newly revealed piece of

115 37 C.F.R. § 42.108(a) (2014); *id.* § 42.208 (permitting the Board to institute on only some claims and to refuse to consider all asserted grounds for invalidation); *id.* § 42.300; *see also* Bank of Am., N.A. v. Intellectual Ventures II LLC, No. CBM2014-00031 (P.T.A.B. Aug. 18, 2014) (institution decision) (instituting on nine of eighteen claims challenged). The PTAB then granted the patent holder’s motion for adverse judgment on all challenged claims.

116 37 C.F.R. § 42.301(b). The Federal Circuit agreed with the regulation’s implementation of the statute. *Versata Dev. Grp., Inc. v. SAP Am., Inc.*, 793 F.3d 1306, 1335 (Fed. Cir. 2015).

117 *See* *Alice Corp. v. CLS Bank Int’l*, 134 S. Ct. 2347, 2355 (2014) (citing *Mayo Collaborative Servs. v. Prometheus Labs., Inc.*, 132 S. Ct. 1289, 1294 (2012)).

118 *See, e.g.*, *Metavante Corp. v. Checkfree Corp.*, No. CBM2013-00031 (P.T.A.B. Dec. 23, 2013) (institution decision using similar criteria to decide whether the invention is a covered business method and whether the claims are more likely than not drawn to invalid subject matter and claims that include sufficient elements to avoid institution); *see also* *Versata*, 793 F.3d at 1326–27 (considering whether the challenged claim was technological in nature).

119 Dolin gives the example of seven cases, which all involved the same family of patents, where the challenges arguably “rose and fell together.” Dolin, *supra* note 111, at 930 (citing *Liberty Mut. Ins. Co. v. Progressive Cas. Ins. Co.*, No. CBM2013-00004 (P.T.A.B. Mar. 13, 2014); *Liberty Mut. Ins. Co. v. Progressive Cas. Ins. Co.*, No. CBM2012-00010 (P.T.A.B. Feb. 24, 2014); *Liberty Mut. Ins. Co. v. Progressive Cas. Ins. Co.*, No. CBM2013-00002 (P.T.A.B. Feb. 24, 2014); *Liberty Mut. Ins. Co. v. Progressive Cas. Ins. Co.*, No. CBM2013-00009 (P.T.A.B. Feb. 11, 2014); *Liberty Mut. Ins. Co. v. Progressive Cas. Ins. Co.*, No. CBM2012-00003 (P.T.A.B. Feb. 11, 2014); *Liberty Mut. Ins. Co. v. Progressive Cas. Ins. Co.*, No. CBM2012-00004 (P.T.A.B. Jan. 23, 2014), *aff’d*, *Progressive Cas. Ins. Co. v. Liberty Mut. Ins. Co.*, No. 2014-1466, 2015 WL 5004949 (Fed. Cir. Aug. 24, 2015); *Liberty Mut. Ins. Co. v. Progressive Cas. Ins. Co.*, No. CBM2012-00002 (P.T.A.B. Jan. 23, 2014)). These disputes all involved Liberty Mutual Insurance Company’s challenge to a set of patents owned by Progressive Casualty Insurance Company; the PTAB decisions were all affirmed in a single nonprecedential opinion. *Progressive Cas. Ins. Co. v. Liberty Mut. Ins. Co.*, No. 2014-1466, 2015 WL 5004949 (Fed. Cir. Aug. 24, 2015). CBM2013-00002 alone involved fifty-nine claims, fifty-six of which were cancelled on non-obviousness grounds and the other three of which were voluntarily cancelled. *Liberty Mut. Ins. Co. v. Progressive Cas. Ins. Co.*, No. CBM2013-00002, at 1–2 (P.T.A.B. Feb. 24, 2014).

prior art that anticipates a dependent claim is likely to anticipate the independent claim on which it depends and other dependent claims as well.¹²⁰ Once a claim or a facet of prior art is interpreted in a particular way, the interpretation can have an adverse impact on an entire family of patents.¹²¹ Additionally, multiple parties can file challenges to the same claims.¹²² This practice inflates the cancellation rate. It may also be abusive. That issue is discussed in Part IV.¹²³

It is also misleading to compare the outcome of litigation with the results of PTAB review. The preponderance standard for determining invalidity in PTAB challenges, which is statutorily mandated, can easily lead to the cancellation of claims that Rader, as a Federal Circuit judge applying a clear and convincing standard, would have upheld and which may, indeed, have been previously upheld by district courts.¹²⁴ As important is the difference in the approach to claim interpretation. The PTAB gives unexpired patent claims their broadest reasonable interpretation; in court, they are given their ordinary customary meaning, which is generally narrower.¹²⁵ The broader the claim, the more likely the challenger can find prior art to invalidate it on novelty or obviousness grounds,¹²⁶ the more abstract it is likely to read,¹²⁷

120 Cf. *In re Cuozzo Speed Techs., LLC*, 793 F.3d 1268, 1275 (Fed. Cir. 2015) (noting the relationship between dependent and independent claims).

121 See, e.g., *Micron Tech., Inc. v. Bd. of Trs. of Univ. of Ill.*, No. IPR2013-00005 (P.T.A.B. Mar. 10, 2014) (determining obviousness of a product-by-process claim by the characteristics of the product without regard to the process, and then using the same prior art to invalidate eight different claims related to one patent), *aff'd*, *Bd. of Trs. of Univ. of Ill. v. Micron Tech., Inc.*, 596 F. App'x 923 (Fed. Cir. 2015).

122 See, e.g., *Google, Inc. v. PersonalWeb Techs., LLC*, No. IPR2014-00977, at 2 (P.T.A.B. Oct. 30, 2014) (decision denying joinder and denying institution of IPR review; original petition filed June 18, 2014, challenging the same claims asserted by EMC on Pat. No. 6,415,280); *EMC Corp. v. PersonalWeb Techs., LLC*, No. IPR2013-00083 (P.T.A.B. May 15, 2014) (invalidating claims 36 and 38 of Pat. No. 6,415,280).

123 But see Benjamin and Rai, *supra* note 19, at 326–27 (suggesting that allowing multiple challenges can reduce the collective action problem).

124 See, e.g., *SAP Am., Inc. v. Versata Dev. Grp., Inc.*, No. CBM2012-00001, at 18 (P.T.A.B. June 11, 2013) (refusing to adopt district court's claim construction and then finding claims unpatentable as abstract), *aff'd*, *Versata Dev. Grp., Inc. v. SAP Am., Inc.*, 793 F.3d 1306 (Fed. Cir. 2015); *Interthinx, Inc. v. CoreLogic Sols., LLC*, No. CBM2012-00007, at 6 (P.T.A.B. Jan. 30, 2014) (holding that prior adjudication does not estop challenger because the different standards mean that the issues are not the same in litigation and administrative adjudication), *appeal dismissed sub nom.*, *In re CoreLogic Sols., LLC*, 571 F. App'x 950 (Fed. Cir. 2014). The problem is further discussed *infra*, text accompanying notes 296–304.

125 *Phillips v. AWH Corp.*, 415 F.3d 1303, 1313 (Fed. Cir. 2005) (en banc) (holding that “the ordinary and customary meaning of a claim term is the meaning that the term would have to a person of ordinary skill in the art in question at the time of the invention, i.e., as of the effective filing date of the patent application”).

126 See, e.g., *Liberty Mut. Ins. Co. v. Progressive Cas. Ins. Co.*, No. CBM2013-00004, at 34 (P.T.A.B. Mar. 13, 2014) (holding that because the claim was interpreted to include processed data and not just raw data, prior art disclosing processed data invalidated the claim), *aff'd*, *Progressive Cas. Ins. Co. v. Liberty Mut. Ins. Co.*, No. 2014-1466, 2015 WL

and the less likely it is to be fully supported by the written description, adequately enabled, and distinctly claimed.¹²⁸

Most important from a normative perspective is that many claims deserve to die. Dolin makes much of the fact that 15% of the claims cancelled in an IPR had survived a challenge in *ex parte* reexamination.¹²⁹ Because he fails to say which IPRs these are, it is impossible to know for sure what happened, but it is worth noting that *ex parte* reexaminations, like initial examination, are *ex parte*—that is, without an opportunity for a challenger to respond to the patent holder’s arguments. *Inter partes* review corrects the asymmetry between the patent holder’s and the patent office’s knowledge of the field and the invention; the greater number of invalidations in CBMs and IPRs can be read as affirming the suspicion that *ex parte* procedures are not fully effective at flushing out bad claims.

More to the point, Dolin’s reexaminations may have preceded the Supreme Court’s articulation of the concern that Federal Circuit jurisprudence was producing patents that “impede rather than ‘promote the Progress of Science and useful Arts.’”¹³⁰ In the years following this statement by Justice Breyer, the Supreme Court reworked the law on many key issues of patentability. In *KSR International Co. v. Teleflex Inc.*,¹³¹ the question was non-obviousness, which requires the invention to be beyond the grasp of a person with ordinary skill in the art.¹³² The Federal Circuit had imposed a requirement that the challenger show a “teaching, suggestion, or motivation” to combine prior art references.¹³³ But the Supreme Court rejected the “errors” of the Federal Circuit and its “rigid” rule. It stressed that “a person of ordinary skill is also a person of ordinary creativity, not an automaton,”¹³⁴ that “[t]he obviousness analysis cannot be confined by a formalistic conception of the words teaching, suggestion, and motivation, or by overemphasis

5004949 (Fed. Cir. Aug. 24, 2015); *Intellectual Ventures Mgmt., LLC v. Xilinx, Inc.*, No. IPR2012-00018 (P.T.A.B. Feb. 10, 2014) (noting that the determination of obviousness turned on the definition of “inside”).

127 See, e.g., *Fidelity Nat’l Info. Servs., Inc. v. Cashedge, Inc.*, No. CBM2013-00028 (P.T.A.B. Dec. 23, 2013) (institution decision deciding whether the claims are drawn to patentable subject matter premised on a reading of claim that reads out its nonabstract elements).

128 See, e.g., *SAP Am., Inc. v. Lakshmi Arunachalam*, No. CBM2013-00013, at 11 (P.T.A.B. Sept. 18, 2014) (construing the term “routed transactional data structure” in a manner that leads to a determination of indefiniteness). The breadth of the claim may also determine whether an institution decision is made. See *Petition for Post-Grant Review of U.S. Patent No. 8,684,420, LaRose Indus., LLC v. Choon’s Design, Inc.*, No. PGR2014-00008 (P.T.A.B. Aug. 5, 2015); *supra* note 63. The propriety of using this standard is discussed *infra*, text accompanying notes 216–27.

129 Dolin, *supra* note 111, at 927.

130 *Lab. Corp. of Am. Holdings v. Metabolite Labs., Inc.*, 548 U.S. 124, 126 (2006) (Breyer, J., dissenting from dismissal of certiorari) (quoting U.S. CONST. art. I, § 8, cl. 8).

131 550 U.S. 398 (2007).

132 35 U.S.C. § 103 (2012).

133 See *KSR*, 550 U.S. at 399.

134 *Id.* at 421.

on the importance of published articles and the explicit content of issued patents,¹³⁵ that “it often may be the case that market demand, rather than scientific literature, will drive design trends,”¹³⁶ and that persons of ordinary skill in the art will repurpose solutions to one problem in order to solve a different problem.

By the same token, in a series of four cases, beginning with *Bilski v. Kappos* and ending with *Alice Corp. v. CLS Bank*,¹³⁷ the Court rejected the Federal Circuit’s view that any invention that produces a useful, concrete, and tangible result is drawn to patentable subject matter, as well as its rule that any invention that constitutes a machine or effectuates a physical transformation is statutory subject matter. Instead, the Court emphasized that laws of nature, phenomena of nature, and abstract ideas are not patentable (although abstract claims can be “saved” if they include an “inventive concept”).¹³⁸ And in *Nautilus, Inc. v. Biosig Instruments, Inc.*, the Supreme Court rejected the Federal Circuit’s rule that a claim is valid so long as it is not “insolubly ambiguous”; under the Court’s test, a “patent’s claims, [when] viewed in light of the specification and prosecution history, [must] inform those skilled in the art about the scope of the invention with reasonable certainty.”¹³⁹

Given the fundamental nature of these changes to patent law, it is not surprising that the PTAB would institute review and then invalidate many claims issued, reexamined, or litigated before these cases were handed down. Indeed, the technological distribution of the cases subject to review is suggestive:

135 *Id.* at 419.

136 *Id.*

137 *Alice Corp. Pty. Ltd. v. CLS Bank Int’l*, 134 S. Ct. 2347 (2014); *Ass’n for Molecular Pathology v. Myriad Genetics, Inc.*, 133 S. Ct. 2107 (2013); *Mayo Collaborative Servs. v. Prometheus Labs., Inc.*, 132 S. Ct. 1289 (2012); *Bilski v. Kappos*, 130 S. Ct. 3218 (2010).

138 *Alice Corp.*, 134 S. Ct. at 2355, 2357 (citing *Mayo Collaborative Servs.*, 132 S. Ct. at 1294).

139 *Nautilus, Inc. v. Biosig Instruments, Inc.*, 134 S. Ct. 2120, 2129 (2014). There are questions as to whether the standard for indefiniteness used in a court challenge is the same as the one that applies pre-issuance and, if so, which standard applies to post-grant opposition procedures. See Erika H. Arner et al., *Section 112(b) and the PTAB: Is the Legal Standard for Indefiniteness Itself Indefinite?*, 90 PAT. TRADEMARK & COPYRIGHT J. (BNA) 2335 (2015). As noted in connection with the standard for claim construction, efficiency will be vastly improved if the same standard were applied throughout. See *infra* text accompanying notes 215–14. Given the notice function of definiteness, it is particularly difficult to see why different standards should be used.

TABLE 3 AIA PETITION TECHNOLOGY BREAKDOWN (AS OF 9/11/14)¹⁴⁰

Technology	Number of Petitions	Percentage
Electrical/Computer	1,432	71.8%
Mechanical	308	15.5%
Chemical	134	6.7%
Bio/Pharma	112	5.6%
Design	8	0.4%

The vast majority of the cases are in the electrical/computer sector, where the rejection of the “useful, concrete, and tangible result” and the “machine or transformation” tests are most significant, and in mechanicals, the field of the invention in *KSR* (and arguably, *Nautilus*). The decisions themselves rely heavily on the recent Supreme Court cases. It is also noteworthy that in a 2013 study, Shawn Miller showed that as with the PTAB, courts are more likely to invalidate patents in the areas directly affected by *KSR* and *Bilski*.¹⁴¹ Furthermore, the cancellation rate is comparable to the findings of a 2014 German study, where researchers estimated that around 75% of German patents are at least partially invalid.¹⁴²

Selection effects must also be considered. Unauthorized users have three shots at retaining freedom to operate: it is possible that the patent holder will fail to sue; that if the patent holder does sue, the patent will be invalidated; or that in the suit, the user’s activity will be found noninfringing. At the PTAB, there is only one possibility: invalidation.¹⁴³ Accordingly, challengers are likely to use these proceedings only when the case for invalidity is extremely strong. Table 2, which shows a fairly high number of cases in which the *patent holder* requested an adverse judgment,¹⁴⁴ supports the notion that in the mix of losses are many claims that even the patent holder understood to be defective. Finally, it is not insignificant that, as with the cancellation rate, the percentage of cases in which the PTAB has decided to institute proceedings appears to be declining.¹⁴⁵ This suggests that petition-

140 PATENT TRIAL & APPEAL BD., *supra* note 103.

141 Miller, *supra* note 111, at 35–36, 44.

142 Joachim Henkel & Hans Zischka, Why Most Patents are Invalid—Extent, Reasons, and Potential Remedies of Patent Invalidity (Aug. 7, 2014) (unpublished manuscript), http://www.law.berkeley.edu/files/Henkel_Joachim_IPSC_paper_2014_20140813.pdf. See also Chien & Helmers, *supra* note 35, at 5 (noting that the invalidation percentage in the European Patent Office is 68% and in German revocation proceedings, 75%).

143 See, e.g., John R. Allison et al., *Our Divided Patent System*, 82 U. CHI. L. REV. 1073 (2015) (showing that patent holders’ rather low “definitive win rate” in court is due to a combination of invalidation and noninfringement findings).

144 By the end of fiscal year 2014, there was one additional request for an adverse judgment in a CBM and four in an IPR.

145 Scott McKeown calculated a very high institution rate as of July 17, 2014. Scott A. McKeown, *PTAB Dials Back Petitioner Success Rate*, PATENTS POST-GRANT (July 17, 2014), <http://www.patentspostgrant.com/ptab-dials-back-patent-challenger-success-rate>. By September 11, 2014, the PTO’s statistics suggest the rate had fallen. See Joseph Casino &

ers may have saved claims that were clearly invalid for the onset of these new procedures.

III. INTERACTION BETWEEN THE PTAB AND THE FEDERAL CIRCUIT

If it continues, the eagerness with which the new procedures have been embraced suggests that those who proposed these mechanisms were right: there are many advantages to channeling patent validity challenges back to the PTO. However, the ultimate success of the system depends heavily on the Federal Circuit's approach to reviewing PTAB decisions. This Part elaborates on the benefits and on their viability once the Federal Circuit begins to see more of these cases. But even if all potential benefits are realized, the procedures have significant costs. With three types of review, the system is complex and use of the procedures is not exactly cheap. Their two-year potential duration is less than the length of district court litigation, but there is no right to an expedited appeal. Accordingly, the total period of uncertainty could be almost as long as it is for litigation. These matters are discussed in Part IV.

A. Potential Benefits

The numbers reviewed in the previous Part demonstrate how effectively the PTAB is clearing questionable claims from the system. The potential impact is evident: these procedures can promote freedom to operate, facilitate settlement, lower the incidence of litigation, and curb NPE practice. With a workable procedure for issuing stays, they could also streamline litigation and make what goes on in the courtroom more efficient.¹⁴⁶ Moreover,

Michael Kasdan, *Trends from 2 Years of AIA Post-Grant Proceedings*, LAW360 (Sept. 29, 2014), <http://www.law360.com/articles/581512/trends-from-2-years-of-aia-post-grant-proceedings>; cf. Michael Fuller, *The PTAB May Be Taking a More Balanced Approach in Biotech and Pharmaceutical IPRs*, KNOBBE MARTENS (Mar. 23, 2015) <http://knobbe.com/news/2015/03/ptab-may-be-taking-more-balanced-approach-biotech-and-pharmaceutical-iprs-bloomberg-bna> (noting a 75% institution rate for fiscal year 2015). Still, it was high during the period of examination (82% overall for IPRs as of September 3, 2014, and 80% for CBMs as of that date). See *PTO Trials*, SIDLEY AUSTIN LLP (Sept. 3, 2014), <http://ptotrials.sidley.com/>. It is important to note that the institution rate is hard to calculate because only some claims in a given petition may be subjected to scrutiny and there are sometimes multiple petitions directed at the same claims. Note also that PTAB's categorization of the cases can be unclear. See *supra* text accompanying note 108; see also *Zetec, Inc. v. Westinghouse Elec. Co.*, No. IPR 2014-00384 (P.T.A.B. July 23, 2014) (institution decision refusing to institute because arguments were undeveloped).

146 While the hard line on stays taken in *VirtualAgility*, a CBM case, is not directly applicable to IPRs and PGRs, the Federal Circuit stressed the possibility that PTAB consideration would simplify trial. *VirtualAgility Inc. v. Salesforce.com, Inc.*, 759 F.3d 1307, 1314 (Fed. Cir. 2014). As the text below makes clear, however, presently, the multiplicity of these procedures can make it difficult for a trial court to determine the exact contours of a case or know when to dissolve stays and proceed to trial. See *infra* text accompanying notes 287-288, 306; see also, e.g., *Ultratec, Inc. v. Sorenson Commc'ns, Inc.*, No. 13-cv-346-bbc, 2015 WL 2248437 (W.D. Wis. May 13, 2015) (initially refusing to stay litigation for an IPR,

as Joseph Casino and Michael Kasdan have noted, “[t]he PTAB runs a tight ship.”¹⁴⁷ Discovery has been kept to a minimum and the PTAB has managed to keep within the time limits mandated. Indeed, Love and Ambwani found that the average pendency of IPR petitions within the PTAB is fifteen months.¹⁴⁸ Given the three years it can take to try a patent case in popular jurisdictions, speed can be an important benefit to using these proceedings.¹⁴⁹

As proponents hoped, the Board has taken its duty to protect the public interest seriously. Thus, it has adopted a broad understanding of what constitutes a “financial product” within the meaning of the transitional business method program¹⁵⁰ and what it means to be the object of an assertion in a CBM.¹⁵¹ At the same time, it has interpreted the limits on filing IPRs narrowly,¹⁵² taken a dim view of theories of assignor estoppel,¹⁵³ and adopted a skeptical approach to arguments that a claim is within the “technological innovation” exception to CBMs.¹⁵⁴ Many cases involve challenges to patents held by aggregators,¹⁵⁵ suggesting that the proceedings may have an impact

leading to a \$44 million judgment, which was finally stayed when the PTAB invalidated the relevant claims), *aff’d sub nom.*, *Ultratec, Inc. v. CaptionCall, LLC*, 611 F. App’x 720 (Fed. Cir. 2015).

147 Joseph Casino & Michael Kasdan, *Lessons from 2 Years of AIA Post-Grant Proceedings*, LAW360 (Sept. 30, 2014, 10:18 AM), <http://www.law360.com/articles/581513/lessons-from-2-years-of-aia-post-grant-proceedings>.

148 Love & Ambwani, *supra* note 2, at 99.

149 Casino & Kasdan, *supra* note 145.

150 See *Versata Dev. Grp., Inc. v. SAP Am., Inc.*, 793 F.3d 1306, 1325 (Fed. Cir. 2015) (“We agree with the USPTO that, as a matter of statutory construction, the definition of ‘covered business method patent’ is not limited to products and services of only the financial industry, or to patents owned by or directly affecting the activities of financial institutions such as banks and brokerage houses.”). For examples of the liberal view, see *Salesforce.com, Inc. v. VirtualAgility, Inc.*, No. CBM2013-00024, at 8 (P.T.A.B. Sept. 16, 2014) (illustrating a patent on a method of managing collaborative activity that can include financial aspects of an organization), and *Apple Inc. v. Sightsound Technologies, LLC*, No. CBM2013-00020, at 11–15 (P.T.A.B. Oct. 7, 2013) (institution decision concerning a method of distributing digital signals).

151 See, e.g., *SAP Am., Inc. v. Pi-Net Int’l, Inc.*, No. IPR2013-00195 (P.T.A.B. Sept. 19, 2013) (institution decision).

152 See, e.g., *Ariosa Diagnostics v. ISIS Innovation, Ltd.*, No. IPR2012-00022, at 14–16 (P.T.A.B. Sept. 2, 2014) (interpreting 35 U.S.C. § 315 as, among other things, permitting a party that had brought a declaratory judgment of noninfringement and—in response to a counterclaim of infringement—added a claim of invalidity to nonetheless maintain an IPR).

153 See, e.g., *Synopsys, Inc. v. Mentor Graphics Corp.*, No. IPR2012-00042, at 17 (P.T.A.B. Feb. 19, 2014).

154 See, e.g., *Groupon, Inc. v. Blue Calypso, LLC*, No. CBM2013-00033 (P.T.A.B. Dec. 19, 2013) (institution decision); *SAP Am., Inc. v. Pi-Net Int’l, Inc.*, CBM2013-00013, at 18–19 (P.T.A.B. Sept. 19, 2013) (institution decision).

155 Indeed, a disproportionate number of IPR settlements involve patents held by NPEs. See Scott A. McKeown, *Settlement Stats Show Trolls Fleeing PTAB Patent Challenges*, PATENTS POST-GRANT (Nov. 7, 2013), <http://www.patentspostgrant.com/settlement-stats-show>

on that practice and decrease the tax it is said to impose on innovation. Furthermore, the PTAB has allowed interested parties who may lack standing in court—suppliers are an example—to bring IPRs.¹⁵⁶ Interestingly, although the settlement rate has increased, the PTAB does not always terminate proceedings after the parties settle. Instead, it sometimes retains authority to issue a final written decision cancelling challenged claims.¹⁵⁷ Indeed, for strategic reasons (such as to avoid other invalidations), some patent holders have simply requested adverse judgment once review was instituted.¹⁵⁸

Most important, because the PTAB applies patentability criteria using the preponderance of the evidence standard for invalidation and the broadest reasonable interpretation of the claims, its decisions do what the examiners would have done had they had the PTAB's extra time, resources, and expertise, and had they understood the law as enunciated in recent Supreme Court interventions. Application of the law *nunc pro tunc* goes a longer way than litigation can towards safeguarding the public's interest in the free availability of technology that should not be privately controlled.¹⁵⁹

npes-fleeing-ptab-patent-challenge-proceedings (depicting that 75% of all 2013 IPR settlements involved NPEs); *see also, e.g.*, Bank of Am., N.A. v. Intellectual Ventures I LLC, No. CBM2014-00029 (P.T.A.B. May 19, 2015); Bank of Am., N.A. v. Intellectual Ventures II LLC, No. CBM2014-00031 (P.T.A.B. Aug. 18, 2014); Bank of Am., N.A. v. Intellectual Ventures I LLC, No. CBM2014-00028 (P.T.A.B. May 22, 2014) (institution decision); Bank of Am., N.A. v. Intellectual Ventures I LLC, No. CBM2014-00030 (P.T.A.B. May 22, 2014) (institution decision); Bank of Am., N.A. v. Intellectual Ventures II LLC, No. CBM2014-00033 (P.T.A.B. May 22, 2014) (institution decision); PNC Fin. Servs. Grp., Inc. v. Intellectual Ventures I LLC, No. CBM2014-00032 (P.T.A.B. May 22, 2014) (institution decision); Sony Corp. v. Tessera, Inc., No. IPR2012-00033 (P.T.A.B. Feb. 26, 2013) (institution decision); *see also* Love & Ambwani, *supra* note 2, at 94 (finding that institution rates for NPE-owned patents are higher than for other patents, although invalidation rates are lower).

156 *See, e.g.*, Hewlett-Packard Co. v. MCM Portfolio, LLC, No. IPR2013-00217 (P.T.A.B. Sept. 10, 2013); *see also* Microsoft Corp. v. DataTern, Inc., 755 F.3d 899, 904 (Fed. Cir. 2014) (“To the extent that Appellees argue that they have a right to bring the declaratory judgment action solely because their customers have been sued for direct infringement, they are incorrect.”). Standing to appeal is discussed *infra*, text accompanying notes 368–394.

157 *See, e.g.*, Interthinx, Inc. v. CoreLogic Sols., LLC, No. CBM2012-00007 (P.T.A.B. Jan. 30, 2014), *appeal dismissed sub nom.*, *In re* CoreLogic Sols., LLC, 571 F. App'x 950 (Fed. Cir. 2014).

158 *See, e.g.*, Google, Inc. v. Inventor Holdings, LLC, No. CBM2014-00003 (P.T.A.B. Sept. 12, 2014) (grant of adverse judgment).

159 In her dissent in *Cuozzo*, Judge Newman argued that the PTAB was meant to serve as a “surrogate for district court litigation.” *In re* Cuozzo Speed Techs., LLC, 793 F.3d 1268, 1284–85 (Fed. Cir. 2015) (Newman, J., dissenting); *see also In re* Cuozzo Speed Techs., 793 F.3d 1297, 1301 (Fed. Cir. 2015) (Prost, J., dissenting from denial of rehearing en banc). However, the statutory requirement that the PTAB apply the preponderance of the evidence rule suggests that providing a substitute, cheaper, route to litigation was not Congress's sole concern.

In the future, fear of the “death squads” (or, an efficient PTAB) may discourage patent prosecutors from drafting abstract or overly broad claims.¹⁶⁰

My reading of the cases suggests many more subtle ways in which the invigoration of patent review within the PTO could contribute meaningfully to patent jurisprudence and the administration of patent law. Like the BPAI it replaced, the PTAB is not bound by the Manual of Patent Examining Procedure or PTO Guidelines and thus it brings an independent analysis to bear on patentability questions.¹⁶¹ As noted earlier, the PTAB is staffed with experienced patent lawyers and each panel is meant to include someone with close knowledge of the field of the invention.¹⁶² The institution and final decisions reflect this expertise. The Board’s opinions are extremely well written and closely reasoned; their fluidity suggests deep immersion in both the technical facts of the cases and the law to be applied. In short, the Board is well-structured to add an important new voice to the development of patent jurisprudence.

Most obviously, the PTAB’s expertise can be exploited in a “preview” capacity. Many of the cases coming before the Board raise questions about implementing recent Supreme Court decisions. Consider, for example, definiteness. When the Supreme Court rejected the Federal Circuit’s “insolubly ambiguous” standard, it did not spell out exactly what it meant for a claim to be “precise enough to afford clear notice of what is claimed” while “tak[ing] into account the inherent limitations of language.”¹⁶³ The Federal Circuit’s attempt to anticipate *Nautilus* was a failure¹⁶⁴ and in the immediate aftermath, it considered the issue only twice, rather briefly.¹⁶⁵ Notably, oral argument in the remand of *Nautilus* suggested the court was having a very difficult time coming up with a workable approach;¹⁶⁶ ultimately, it basically reinstated its earlier opinion.¹⁶⁷ In contrast, the PTAB started citing the decision three weeks after it issued.¹⁶⁸ Repeated exposure to definiteness

160 See, e.g., Shana K. Cyr et al., *Preparing Pharma for Generics’ IPR Attacks*, 88 PAT. TRADEMARK & COPYRIGHT J. (BNA) 1220, 1221 (2014) (suggesting better prosecution to stave off challenges).

161 See, e.g., *Ex parte Bilski*, No. 2002-2257, 2006 WL 5738364, at *15 (B.P.A.I. Sept. 26, 2006); *In re Santarsiero*, No. 105,403, 83 U.S.P.Q.2d 1271, 1276 n.6 (B.P.A.I. May 31, 2006).

162 In addition, paralegal specialists are assigned to specific subject matter. To date, however, hiring has not depended on expertise in the subject matter and the staff has been underused. See U.S. DEP’T OF COMMERCE, *REVIEW OF WASTE AND MISMANAGEMENT AT THE PATENT TRIAL AND APPEAL BOARD 11* (2014).

163 *Nautilus, Inc. v. Biosig Instruments, Inc.*, 134 S. Ct. 2120, 2128–29 (2014).

164 See *In re Packard*, 751 F.3d 1307, 1311 (Fed. Cir. 2014) (per curiam).

165 *Interval Licensing LLC v. AOL, Inc.*, 766 F.3d 1364, 1370–71 (Fed. Cir. 2014) (finding the claim indefinite); *Augme Techs., Inc. v. Yahoo! Inc.*, 755 F.3d 1326, 1340 (Fed. Cir. 2014). *Nautilus* was decided on June 2, 2014. 134 S. Ct. 2120.

166 See Tony Dutra, *Fed. Cir. Oral Argument Seeks More Precision on ‘Vague’ Patent Indefiniteness Standard*, 88 PAT. TRADEMARK & COPYRIGHT J. (BNA) 1681, 1681–82 (2014).

167 *Biosig Instruments, Inc. v. Nautilus, Inc.*, 783 F.3d 1374 (Fed. Cir. 2015).

168 *LaRose Indus., LLC v. Capriola Corp.*, No. IPR2013-00120, at 30–31 (P.T.A.B. June 26, 2014) (using the principle to interpret a claim).

problems in CBMs (and eventually in PGRs) is leading to the development of nuanced and context-specific standards. For example, in *SAP America, Inc. v. Lakshmi Arunachalam*, decided three months after *Nautilus*, the claims covered a method and apparatus for providing real-time, two-way transactions on the web.¹⁶⁹ To determine whether the term “routed transactional data structure” was indefinite, the Board engaged in a technical analysis of the specification’s teachings concerning how objects were transmitted over the network and focused considerable attention to the question of what a person of ordinary skill would understand, and in particular, whether a proprietary protocol referenced in the patent disclosed sufficient information to inform such a person of the scope of the claim.¹⁷⁰ While there is some uncertainty as to whether the PTAB should apply the same standard on this issue as courts, PTAB cases can still furnish something of a blueprint for deciding definiteness issues, particularly in the Internet arena, where sharper claims could help alleviate the trolling problem.¹⁷¹

Similarly, the law laid out in the four Supreme Court cases on patentable subject matter is hard to understand, especially with regard to the meaning of “conventional steps” and “inventive concept.” Yet the PTAB rendered decisions based on *Alice* within a few months of the decision.¹⁷² In these cases, the Board set out an analytical framework and did so in specific fields, such as the interactive web applications mentioned above.¹⁷³ Several decisions offer a methodology for thinking about what counts as a general purpose computer,¹⁷⁴ what constitutes more than a “conventional step” in the use of a general-purpose computer, and a way to consider abstractness in the context of computer implementation, including (as some commentators have suggested) by reference to what humans could accomplish on their own.¹⁷⁵ The PTAB tends to begin with a careful construction of the challenged claims; in contrast, the Federal Circuit has shown a willingness to dis-

169 No. CBM2013-00013, at 3 (P.T.A.B. Sept. 18, 2014).

170 *Id.* at 18–20.

171 See Arner et al., *supra* note 139. Construction of means-plus-function claiming has also created many interpretive difficulties. See Mark D. Janis, *Who’s Afraid of Functional Claims? Reforming the Patent Law’s § 112, ¶ 6 Jurisprudence*, 15 SANTA CLARA COMPUTER & HIGH TECH. L.J. 231, 281 (1999). The PTAB approach may similarly be helpful to courts struggling with the issue. See, e.g., *Blackberry Corp. v. MobileMedia Ideas LLC*, No. IPR2013-00016 (P.T.A.B. Feb. 25, 2014) (construing seven means plus function claims in proposed amendments).

172 See *U.S. Bancorp v. Ret. Capital Access Mgmt. Co.*, No. CBM2013-00014, at 10–12 (P.T.A.B. Aug. 22, 2014). *Alice* was handed down on June 19, 2014. *Alice Corp. Pty. Ltd. v. CLS Bank Int’l*, 134 S. Ct. 2347 (2014).

173 See *SAP*, No. CBM2013-00013, at 15–18; *U.S. Bancorp*, No. CBM2013-00014, at 12–20.

174 See, e.g., *LinkedIn Corp. v. AvMarkets Inc.*, No. CBM2013-00025, at 5 (P.T.A.B. Nov. 10, 2014) (discussing a general purpose computer and abstractness).

175 See *eBay, Inc. v. Paid, Inc.*, No. CBM2014-00127 (P.T.A.B. Sept. 30 2014) (institution decision); *U.S. Bancorp.*, No. CBM2013-00014 at 12, 14–15; *Interthinx, Inc. v. Corelogic Solutions, LLC*, No. CBM2012-00007, at 9–10 (P.T.A.B. Jan. 30, 2014), *appeal dismissed sub nom.*, *In re Corelogic Solutions, LLC*, 571 F. App’x 950 (Fed. Cir. 2014); see also *Ex parte Bilski*, No. 2002-2257, 2006 WL 5738364, at *2 (B.P.A.I. Mar. 8, 2006); Kevin Emerson

pense with that step, which, in some cases, may make patents more vulnerable in court than in the PTAB.¹⁷⁶

In some instances, the PTAB considers interstitial issues of fact or law that could have arisen in earlier cases, but did not. Examples include whether an SEC filing constitutes prior art.¹⁷⁷ Some arise out of the new procedures themselves, such as determining the relationships that give rise to privacy¹⁷⁸ or whether challenges based on subject matter limitations can be heard by the PTAB.¹⁷⁹ Others arise from the procedures, but could have relevance in the courtroom as well. An example is determining whether a claim is within the technical solution exception to CBMs, which (as suggested earlier) may sometimes help to decide certain subject matter cases in the wake of *Alice*.¹⁸⁰

The PTAB's preview capacity should also be extremely helpful as examiners apply the new rules on priority, prior art, and the grace period. For example, the AIA substantially changed the language of the novelty provision of the Patent Act, adding a new phrase—"or otherwise available to the public"—to describe art that invalidates a patent.¹⁸¹ The addition raises the question whether prior practice, which made some confidential uses and secret sales patent-barring, has been legislatively overruled.¹⁸² The PTO Guidelines suggests this is so,¹⁸³ but the PTO received numerous comments arguing that Congress did not mean to change the standard.¹⁸⁴ The issue is quite likely to arise first in a PGR, where the grant of a patent despite evidence of a secret sale could be challenged on the basis that the petition raises a "novel or unsettled legal question that is important to other patents or

Collins, *Prometheus Laboratories, Mental Steps, and Printed Matter*, 50 Hous. L. Rev. 391 (2012) (suggesting an approach based on the mental steps doctrine).

176 See *Ultramercial, Inc. v. Hulu, LLC*, 772 F.3d 709, 719 (Fed. Cir. 2014) ("No formal claim construction was required because the asserted claims disclosed no more than 'an abstract idea garnished with accessories' and there was no 'reasonable construction that would bring [them] within patentable subject matter.'" (alteration in original) (citing *Ultramercial, LLC v. Hulu, LLC*, No. CV 09-06918 RGK (PLAx), 2010 WL 3360098, at *6 (C.D. Cal. Aug. 13, 2010))).

177 *Liberty Mut. Ins. Co. v. Progressive Cas. Ins. Co.*, No. CBM2013-00009, at 18–19 (P.T.A.B. Feb. 11, 2014), *aff'd*, *Progressive Cas. Ins. Co. v. Liberty Mut. Ins. Co.*, No. 2014-1466, 2015 WL 5004949 (Fed. Cir. Aug. 24, 2015).

178 *Synopsis, Inc. v. Mentor Graphics Corp.*, No. IPR2012-00042, at 12–14 (P.T.A.B. Feb. 19, 2014).

179 *Versata Dev. Grp., Inc. v. SAP Am., Inc.*, 793 F.3d 1306, 1329–30 (Fed. Cir. 2015) (upholding the PTAB's determination that § 101 challenges could be heard in CBMs).

180 See, e.g., *id.* at 1326–27 (determining whether a claim falls within the technical solutions exception).

181 35 U.S.C. § 102(a) (2012).

182 See Robert P. Merges, *Priority and Novelty Under the AIA*, 27 BERKELEY TECH. L.J. 1023, 1046 (2012).

183 See Examination Guidelines for Implementing the First Inventor to File Provisions of the Leahy-Smith America Invents Act, 78 Fed. Reg. 11059, 11075 (proposed Feb. 14, 2013) (to be codified at 37 C.F.R. pt. 1).

184 See *id.* at 11062.

patent applications.”¹⁸⁵ As noted, the PTAB is not bound by examination guidelines and it would be of considerable value to have its independent judgment on these issues, even though the Federal Circuit will ultimately review the work.

Even regarding issues that arise repeatedly, there are many benefits to be derived from the PTAB’s closer contact with the field of the invention. Nonobviousness provides an example. As we saw, *KSR* stressed the creative powers of the person of ordinary skill in the art to take what is known and adapt or extend it to meet other needs. The issue of what this means in terms of what the prior art teaches and what the person of ordinary skill can do with it comes up in the Internet and software context in CBMs and on a particularly regular basis in IPRs, where nonobviousness is the main basis for challenge. Even the earliest cases show how effectively PTAB panels grapple with questions of nonobviousness law and fact. For example, in *Liberty Mutual Insurance Co. v. Progressive Casualty Insurance Co.*,¹⁸⁶ which involved Internet transactions, one question was whether the prior art on which the challenge relied must be enabling. Citing one Federal Circuit case saying it need not be enabling and a second case saying prior art is presumed to be enabled, the PTAB cut through to the real question: whether the art in fact taught an artisan how to practice the patented claim.¹⁸⁷ In another part of the opinion, it determined what people could do on the Internet, and what the design community was already able to accomplish at the time of the invention.¹⁸⁸ In *Garmin International, Inc. v. Cuozzo Speed Technologies LLC*,¹⁸⁹ a case about GPS devices, the PTAB demonstrated its approach to the questions of how a person of ordinary skill who was “not an automaton” would combine references when there is no explicit statement in the prior art suggesting combination and how such a person would deal with disclosures in patents that did not claim an invention dealing with the same problem facing the inventor.¹⁹⁰ The Board also considered (and rejected) a series of argu-

185 35 U.S.C. § 324(b).

186 No. CBM2012-00010 (P.T.A.B. Feb. 24, 2014), *aff’d*, *Progressive Cas. Ins. Co. v. Liberty Mut. Ins. Co.*, No. 2014-1466, 2015 WL 5004949 (Fed. Cir. Aug. 24, 2015).

187 *Id.* at 3, 24–25 (citing *In re Antor Media Corp.*, 689 F.3d 1282, 1292 (Fed. Cir. 2012); *Amgen Inc. v. Hoechst Marion Roussel, Inc.*, 314 F.3d 1313, 1355 (Fed. Cir. 2003)); *see also* *Liberty Mut. Ins. Co. v. Progressive Cas. Ins. Co.*, No. CBM2012-00004 (P.T.A.B. Jan. 23, 2014), *aff’d*, *Progressive Cas. Ins. Co. v. Liberty Mut. Ins. Co.*, No. 2014-1466, 2015 WL 5004949 (Fed. Cir. Aug. 24, 2015) (stressing that a reference is read for “everything it teaches” and not simply for the invention it describes).

188 *Liberty Mut. Ins. Co.*, No. CBM2012-00010, at 15–23 (P.T.A.B. Feb. 24, 2014).

189 No. IPR2012-00001 (P.T.A.B. Nov. 13, 2013), *aff’d sub nom.*, *In re Cuozzo Speed Techs., LLC*, 793 F.3d 1268 (Fed. Cir. 2015).

190 *Id.* at 5, 32–34, 35–36; *see also* *Kyocera Corp. v. Softview LLC*, No. IPR2013-00007 & IPR2013-00256, at 23 (P.T.A.B. Mar. 27, 2014), *aff’d*, *Softview LLC v. Kyocera Corp.*, 592 F. App’x 947 (Fed. Cir. 2015) (*per curiam*) (distinguishing between a suggestion to combine and what PHOSITA could do with another’s proof of concept); *Micron Tech., Inc. v. Bd. of Trs. of Univ. of Ill.*, No. IPR2013-00006, at 18–20 (P.T.A.B. Mar. 10, 2014), *aff’d*, *Bd. of Trs. of Univ. of Ill. v. Micron Tech., Inc.*, 596 F. App’x 923 (Fed. Cir. 2015).

ments on when an art discourages (“teaches away” from) the claimed invention, including arguments about the absence of affirmative statements on feasibility and cost.¹⁹¹ In *Microsoft Corp. v. Proxyconn, Inc.*, it discussed what constitutes “analogous art” to a system for data access in a packet switched network.¹⁹²

In addition, the PTAB has had to reconcile the parts of Federal Circuit law on nonobviousness that the Supreme Court has not directly reversed with the Court’s current approach to the issue. Thus, in *Kyocera Corp. v. Softview LLC*,¹⁹³ a case on Internet displays (such as HTML), the question was how to use the objective criterion of nonobviousness, which the Federal Circuit has mandated be considered in every nonobviousness case.¹⁹⁴ Reliance on these so-called “secondary considerations” (such as commercial success) to support a finding of patentability has been highly controversial.¹⁹⁵ It is also somewhat difficult to square with *KSR*’s rejection of rigid rules and its notion that commercial demand can *undermine* patentability by providing sufficient motivation to advance the art. In *Kyocera*, the PTAB lessened the tension by assigning to the patent holder a heavy burden of showing a nexus between commercial success and the patented feature. Further, it elaborated on what must be shown: “[P]roof that the sales were a direct result of the unique characteristics of the claimed invention.”¹⁹⁶

In many of these cases, the basic rules derive from Federal Circuit case law. However, the contextual use of the case law, the systematic nature of the inquiry, and the showing required of the party bearing the burden of proof will provide useful guidance to examiners.¹⁹⁷ As Federal Circuit Judge Raymond Chen put it:

191 *In re Cuozzo*, No. IPR2012-00001 at 36–38; *see also* *Illumina, Inc. v. Trs. of Columbia Univ.*, No. IPR2013-00011, at 24–25 (P.T.A.B. Mar. 6, 2014), *aff’d*, *Trs. of Columbia Univ. v. Illumina, Inc.*, No. 2014-1547, 2015 WL 4385761 (Fed. Cir. July 17 2015) (taking a hard line on what constitutes teaching away and taking a very skeptical approach to claims of no reasonable expectation of success); *Nichia Corp. v. Emcore Corp.*, No. IPR2012-00005, at 27–29 (P.T.A.B. Feb. 11, 2014), *aff’d*, *Emcore Corp. v. Nichia Corp.*, 599 F. App’x 959 (Fed. Cir. 2015) (taking a hard line on what constitutes teaching away).

192 Nos. IPR2012-00026 & IPR2013-00109, at 50 (P.T.A.B. Feb. 19, 2014), *rev’d on other grounds*, *Microsoft Corp. v. Proxyconn, Inc.*, 789 F.3d 1292 (Fed. Cir. 2015).

193 Nos. IPR2013-00004, -00257, at 31 (P.T.A.B. Mar. 27, 2014), *aff’d*, 592 F. App’x 949 (Fed. Cir. 2015).

194 *See, e.g.*, *Gambro Lundia AB v. Baxter Healthcare Corp.*, 110 F.3d 1573, 1579 (Fed. Cir. 1997).

195 *See, e.g.*, Robert P. Merges, *Commercial Success and Patent Standards: Economic Perspectives on Innovation*, 76 CALIF. L. REV. 803 (1988).

196 *Kyocera Corp. v. Softview LLC*, No. IPR2013-00007, -00256, at 32 (P.T.A.B. Mar. 27, 2014); *see also* *Apple, Inc. v. Sightsound Techs., LLC*, No. CBM2013-00020, at 43–44 (P.T.A.B. Oct. 7, 2014) (imposing a heavy burden on the patent holder to show the relevance of success); *Illumina, Inc.*, No. IPR2013-00011, at 40 (insisting that success cannot be the result of an unclaimed feature, or to a feature in the prior art).

197 *See also* Tim Bianchi, *AIA Post-Grant Practice Rapidly Integrates Federal Circuit and Board Decisions*, REEXAMLINK (June 1, 2013), <http://www.reexamlink.com/2013/06/aia-cbm-post-grant-practice-becomes-a-convergence-of-sap-v-versata-cbm-and-clb-bank-decision/> (sug-

I foresee an opportunity for these board decisions to assist in a forward-looking way to improve patent quality. The patent board will be developing a large body of data that can perhaps yield patterns or insights for what went right, or what went wrong during the initial examination process. And the agency can use those lessons learned to improve patent examination. In the next few years, the patent board will have created a rich source of in-house generated material the agency can potentially use to further improve the quality of patent examination.¹⁹⁸

PTAB decisions could be similarly helpful to district court judges. Indeed, the availability of detailed instruction from the PTAB could change the nature of Federal Circuit jurisprudence. Thus, one reason why the Federal Circuit tends to create rules that the Supreme Court regards as overly “rigid” may be that it is drawing bright lines that nontechnical trial judges can apply with ease, thereby effectuating its perceived mandate to ensure the uniform application of patent law.¹⁹⁹ The Supreme Court dislikes this approach because—like all rules—it will not lead to the right result in every case and perhaps also because, as in *KSR* and *Mayo*, errors tend to favor the patent holder. Furthermore, although the Supreme Court has never done so directly, one can question the Federal Circuit’s categorization of what constitutes a question of law and what constitutes a question of fact: Why, for example, is enablement a question of law and written description a question of fact when both are meant to guarantee the adequacy of disclosure?²⁰⁰ The answer may again be uniformity: by classifying heavily technical issues as legal questions, the court can review the district court’s resolution *de novo*.

Now that the PTAB is in the picture, the rigid rules and distorted classifications of questions as law or fact may not be needed, for the PTAB’s decisions spell out more clearly how factual issues should be determined and lay out detailed analyses for particularly difficult technologies. If parties begin to cite what Judge Chen calls the PTAB’s “patterns or insights,”²⁰¹ bright line rules and *de novo* review may become less necessary. As a result, the number

gesting that the PTAB will provide guidance on implementing Federal Circuit cases and giving the example of PTAB decisions applying the then-recent Federal Circuit opinion in *Alice*).

198 Tamlin Bason, *Judge Chen: Board Could Develop Rich Data Source that Will Help Improve Patent Quality*, 88 PAT. TRADEMARK & COPYRIGHT J. (BNA) 1676, 1676 (2014) (quoting Federal Circuit Judge Raymond T. Chen). Given these views, it is perhaps not surprising that the approach that Judge Chen has taken to abstractness is very close to that of the one the PTAB uses in its institution decisions. See *DDR Holdings, LLC v. Hotels.com, L.P.*, 773 F.3d 1245 (Fed. Cir. 2014); *Apple Inc. v. SightSound Techs., LLC*, No. CBM2013-00021 (P.T.A.B. Oct. 8, 2013) (institution decision) (articulating in detail how the claims are drawn to a specific implementation of an abstract idea).

199 See Dreyfuss, *Learning, supra* note 22, at 798.

200 Compare *Transocean Offshore Deepwater Drilling, Inc. v. Maersk Contractors USA, Inc.*, 617 F.3d 1296, 1305 (Fed. Cir. 2010) (“Whether a claim satisfies the enablement requirement is a question of law that we review *de novo*.”), with *In re Bimeda Research & Dev. Ltd.*, 724 F.3d 1320, 1323 (Fed. Cir. 2013) (“Written description . . . is a question of fact.”).

201 Bason, *supra* note 198, at 1676 (quoting Federal Circuit Judge Raymond T. Chen).

of reversals could be reduced. And now that the Supreme Court has insisted that the Federal Circuit carefully distinguish between ultimate questions of law and subsidiary questions of fact, such reclassifications would also simplify trials and appeals.²⁰²

The cases suggest that the PTAB can also be helpful in reducing the effects of isolation. As many observers have noted, the Federal Circuit sometimes backslides into old practices.²⁰³ The PTAB could play a role in moderating that tendency. Once again, nonobviousness furnishes an example. As we saw, the Supreme Court has emphasized that people of ordinary skill are creative and not automatons. But in *K/S HIMPP v. Hear-Wear Technologies LLC*,²⁰⁴ the Federal Circuit limited the reach of the decision to the specific context of *KSR*, where the question was whether a person with ordinary skill could combine references without a specific suggestion to do so. Thus, it refused to consider an ordinary artisan creative enough to make use of an element not mentioned in the cited prior art (a plurality of prongs that provide a detachable mechanical and electrical connection), but which was publicly available at the time of the invention. The court held that ordinary knowledge in the field can be used only on “peripheral issues.”²⁰⁵ In his dissent, Judge Dyk argued that the inability of examiners to rely “on their expert knowledge and common sense about what is well known in the art” is inconsistent with the Supreme Court’s concern about rigid rules.²⁰⁶ Had the majority considered what is happening in the PTAB, it might have found the dissent more persuasive. The cases there show that the use of background knowledge can come up in many contexts, making it rather unlikely that the *KSR* Court intended to spawn satellite litigation on whether a particular circumstance was peripheral or central, or to limit consideration of an artisan’s creativity and other motivations to only certain issues.²⁰⁷

202 See *Teva Pharm. USA, Inc. v. Sandoz, Inc.*, 135 S. Ct. 831 (2015).

203 See, e.g., Benjamin & Rai, *supra* note 19, at 289–90 (noting backsliding with regard to the standard of review); Burstein, *supra* note 16, at 507 (discussing backsliding regarding standing); Douglas L. Rogers, *Federal Circuit’s Obviousness Test for New Pharmaceutical Compounds: Gobbledygook?* 20–21 (Ohio St. U. Pub. Law & Legal Theory Working Paper Series, No. 271, 2014), <http://ssrn.com/abstract=2486559> (noting backsliding on obviousness).

204 751 F.3d 1362 (Fed. Cir. 2014).

205 *Id.* at 1365–66.

206 *Id.* at 1367 (Dyk, J., dissenting). As Benjamin & Rai observe, arguments about specialized knowledge (and dissents by Judge Dyk) have a history in the Circuit. Benjamin & Rai, *supra* note 19, at 291–92.

207 See, e.g., *Corning Optical Commc’ns RF, LLC v. PPC Broadband, Inc.*, No. IPR2013-00347, at 22 (P.T.A.B. Nov. 21, 2014) (considering various techniques known by persons of ordinary creativity); *Intelligent Bio-Sys., Inc. v. Illumina Cambridge Ltd.*, No. IPR2013-00266, at 28 (P.T.A.B. Oct. 28, 2014) (finding improvement would have been predictable to one with ordinary skill in the art, as determined by *KSR*); *Ariosa Diagnostics v. ISIS Innovation Ltd.*, No. IPR2012-00022, at 36 (P.T.A.B. Sept. 2, 2014) (finding the ability of an ordinary artisan to perform operation in a manner that always produces a given result); *Intellectual Ventures Mgmt., LLC v. Xilinx, Inc.*, No. IPR2012-00020, at 9 (P.T.A.B. Feb. 11, 2014) (deciding tacit knowledge can be used in IPRs, even though they are statutorily

A less intuitive example is claim construction, where a strong argument can be made that the Federal Circuit should allow itself to be influenced by the PTAB. That is, it should abandon its reliance on the meaning the claim “would have to a person of ordinary skill in the art in question at the time of the invention”²⁰⁸ and instead adopt the practice of giving unexpired claims their broadest reasonable interpretation (BRI). To be sure, this use of the BRI is a PTO innovation. Unlike the standard for proving unpatentability, it is not statutorily imposed. It is by far the most controversial aspect of the administration of the three new procedures;²⁰⁹ indeed, bills pending before Congress would reject its use.²¹⁰ As we saw, using a broad interpretation leads to the invalidation of claims that would have been upheld in court (even on a preponderance of the evidence standard).²¹¹ This comes across as extremely unfair. Of course, if it were as easy to amend claims in CBMs, IPRs, and PGRs as it is to amend them during examination, the system would make some sense: the patent holder would retain exclusivity over advances that it had the right to protect. However in *Idle Free Systems, Inc. v. Bergstrom, Inc.*, the PTAB took a stringent approach to motions to amend: it put the burden of establishing patentability on the patent holder (in examination, the PTO would bear the burden of showing unpatentability).²¹² The patent holder must also set forth the knowledge of one skilled in the art and the closest prior art. Further, the amendment must respond directly to the reason the Board invalidated the original claim, and it must be narrower than the claim it replaces.²¹³ The *Idle Free* approach has led to very few successful amendments: as of the date of the Love and Ambwani study, the only amendment the PTAB granted in an IPR was one that was unopposed and filed by the United States.²¹⁴

limited to the consideration of patents and publications). *But see* Progressive Cas. Ins. Co. v. Liberty Mut. Ins. Co., No. 2014-1466, 2015 WL 5004949, *3 (Fed. Cir. Aug. 24, 2015) (suggesting the PTAB’s opinion would have benefited from more discussion on motivation to combine—one of the issues on which the *KSR* Court thought the Federal Circuit was too rigid).

208 Phillips v. AWH Corp., 415 F.3d 1303, 1313 (Fed. Cir. 2005).

209 See, e.g., John R. Kenny & Scott I. Forman, *The Broadest Reasonable Construction Standard and the Consideration of Claim Construction by a District Court at the Patent Trial and Appeal Board*, 88 PAT. TRADEMARK & COPYRIGHT J. (BNA) 1084 (2014); COAL. FOR 21ST CENTURY PATENT REFORM, WHY THE PTO’S USE OF THE BROADEST REASONABLE INTERPRETATION OF PATENT CLAIMS IN POST-GRANT AND INTER PARTES REVIEWS IS INAPPROPRIATE UNDER THE AMERICA INVENTS ACT (2013), <http://www.patentsmatter.com/issue/pdfs/ThePTOsUseOfBRIIsInappropriate6-19-2013.pdf>.

210 See The STRONG Patents Act, S. 632, 114th Cong. § 102 (2015) (mandating use of the “ordinary and customary meaning of the claim as understood by a person having ordinary skill in the art to which the claimed invention pertains”).

211 See *supra* note 124.

212 No. IPR2012-00027, at 26 (P.T.A.B. Jan. 7, 2014).

213 *Id.* at 26–36.

214 Love and Ambwani, *supra* note 2, at 101–02. Since then, at least two other petitions have been granted. See Reg Synthetic Fuels, LLC v. Neste Oil OYJ, No. IPR2014-00192 (P.T.A.B. June 5, 2015); Chi. Mercantile Exch., Inc. v. 5th Mkt., Inc., No. CBM2013-00027

Surprisingly however, in *In re Cuozzo Speed Technologies, LLC*, the Federal Circuit's first encounter with these procedures, it approved use of the BRI.²¹⁵ However, the use of two standards, one for court and one for the PTAB, creates considerable inefficiency. If both tribunals used the same rule, the PTAB could dispense with claim construction in any case in which the district court had already interpreted the claims. Conversely, construction by the technologically sophisticated experts at the PTAB would provide a wealth of information to district courts later considering the same or related claims. Beyond efficiencies, adopting the BRI for judicial proceedings would have an even more important benefit, for the Federal Circuit's own "ordinary meaning" rule has presented many difficulties, including notoriously high reversal rates, contradictory interpretations, and demoralized trial court judges.²¹⁶ In *Teva Pharmaceuticals USA, Inc. v. Sandoz, Inc.*, the Supreme Court tried to ameliorate the problem by distinguishing between underlying issues of fact, which are resolved by extrinsic evidence and are reviewable only for clear error, and legal issues, which rely on intrinsic evidence (the patent and its prosecution history) and receive de novo review.²¹⁷ However, that decision is likely to produce collateral litigation on whether a construction requires a factual inquiry and lead attorneys to shield district court wins by relying more on experts.²¹⁸

Although proposals before Congress would converge on the claim construction standard used in court,²¹⁹ serious consideration should be given to instead adopting the PTO's standard in litigation. In most cases, the approaches yield similar results in any event,²²⁰ but the PTO uses the BRI for unexpired patents in all office proceedings for good reason: it believes the

(P.T.A.B. Mar. 23, 2015) (granting motion for rehearing). *Chicago Mercantile* was, however, somewhat unique in that the claim was invalidated for indefiniteness, not obviousness. Accordingly, the PTAB did not require a showing that it was patentably distinct from the prior art.

215 793 F.3d 1268, 1275–79 (Fed. Cir. 2015); see also *Microsoft Corp. v. Proxycorr, Inc.*, 789 F.3d 1292, 1297 (Fed. Cir. 2015). For a discussion of the Federal Circuit's reasoning in these cases and the dissents regarding *Cuozzo*, see *supra* note 159 and *infra* text accompanying notes 236–46.

216 See O'Malley et al., *supra* note 26, at 682 (statement of Judge Patti Saris); David L. Schwartz, *Practice Makes Perfect? An Empirical Study of Claim Construction Reversal Rates in Patent Cases*, 107 MICH. L. REV. 223, 230, 229 n.20 (2008); Bryan Hall, Note, *A Flawed Patent System: How to Address the Claim Construction Problem in Litigation*, 11 J. ON TELECOMM. & HIGH TECH. L. 411, 411 (2013) (noting "the egregious claim construction reversal rate of 32.5%" at the Federal Circuit).

217 135 S. Ct. 831 (2015).

218 See *id.* at 852 (Thomas, J., dissenting). Significantly, the majority thought "subsidiary factfinding is unlikely to loom large in the universe of litigated claim construction." *Id.* at 840. Had the Court considered practice before the PTAB, it might have been less sanguine, as use of experts on claim construction is common in these proceedings.

219 See The STRONG Patents Act, S. 632, 114th Cong. § 102 (2015).

220 See *Apple Inc. v. Sightsound Techs., LLC*, No. CBM2013-00020, at 8 (P.T.A.B. Oct. 7, 2014) (PTAB adopted the district court's claim interpretation and used it in the final written decision); Thomas King & Jeffrey A. Wolfson, *PTAB Rearranging the Face of Patent*

BRI to yield “more uniform and satisfactory results.”²²¹ It is not surprising that this is so. The BRI provides a benchmark that the Federal Circuit’s current standard lacks. In an earlier era, claims were construed to preserve their validity (and in light of the claimed infringement); once the Supreme Court’s decision in *Markman v. Westview Instruments, Inc.*²²² made claim construction an issue of law and courts began to interpret claims in separate hearings held before evidence on invalidity (or infringement) was adduced, that canon became “a last resort, not a first principle.”²²³ Courts were then forced to make unguided determinations on what an ordinary artisan would understand, using a variety of tools that have changed throughout the course of the Federal Circuit’s history.²²⁴ In contrast, although the BRI has some wiggle room (“reasonable”), it includes an objective standard (“broadest”) while still incorporating ordinary meanings and the traditional approach of allowing the patent holder to be its own lexicographer. As the PTAB articulates it, “[u]nder the broadest reasonable construction standard, claims terms are given their ordinary and customary meaning as would be understood by one of ordinary skill in the art in the context of the entire disclosure.”²²⁵

Of course, if *valid* claims are construed more broadly, the scope for infringement liability will increase. However, the BRI standard closely matches the construction that risk-averse potential users of the invention likely employ in deciding their freedom to operate. Accordingly, it may not have a significant impact on public access. Furthermore, using this standard would have a disciplining effect. If the BRI is more likely to lead to cancellation and invalidation, then drafters may begin to claim more narrowly; if it is used in enforcement actions, it may deter some infringement. Given that damages awards have been reduced and injunctive relief has become less certain, this approach could restore balance to the system.²²⁶

As this Section demonstrates, there is much in the PTAB’s decisions that could be of considerable value to the examining corps and to the courts.

Litigation, 6 LANDSLIDE 18, 21 (2013) (“[I]t is more likely that the Federal Circuit will simply keep the two claim construction standards as close as possible.”).

221 See *SAP Am., Inc. v. Versata Dev. Grp., Inc.*, No. CBM2012-00001, at 7–8, 11–12 (June 11, 2013), *aff’d*, *Versata Dev. Grp., Inc. v. SAP Am., Inc.*, 793 F.3d 1306 (Fed. Cir. 2015); see also *In re Cuozzo*, 793 F.3d 1268, 1279 (2015) (noting that the BRI permits the PTAB to adopt a single construction for use across multiple proceedings—in other words, it creates uniformity).

222 517 U.S. 370 (1996).

223 *MBO Labs., Inc. v. Becton, Dickinson & Co.*, 474 F.3d 1323, 1332 (Fed. Cir. 2007).

224 See *Phillips v. AWH Corp.*, 415 F.3d 1303, 1312 (Fed. Cir. 2005) (describing the history); see also ROBERT PATRICK MERGES & JOHN FITZGERALD DUFFY, *PATENT LAW AND POLICY: CASES AND MATERIALS* 771–79 (6th ed. 2013).

225 *Liberty Mut. Ins. Co. v. Progressive Cas. Ins. Co.*, No. CBM2012-00003, at 10 (Feb. 11, 2014), *aff’d*, *Progressive Cas. Ins. Co. v. Liberty Mut. Ins. Co.*, No. 2014-1466, 2015 WL 5004949 (Fed. Cir. Aug. 24, 2015).

226 See *Lucent Techs., Inc. v. Gateway, Inc.*, 580 F.3d 1301 (Fed. Cir. 2009); *eBay, Inc. v. MercExchange, LLC*, 547 U.S. 388 (2006).

The Board could, however, do better. Like the Federal Circuit, the PTAB tends to suppress almost all reference to underlying policy. Its contribution would be considerably greater if its reasoning were transparent. A dialogue between the tribunals that included candid analyses of policy options would be more fruitful, and joint consideration of these issues by the PTAB and the Federal Circuit would also enrich ultimate consideration by the Supreme Court.

B. Federal Circuit Review of PTAB Decisions

While the procedures instituted by the AIA could contribute significantly to the sound administration of patent law, enjoying the benefits will depend heavily on whether the Federal Circuit is willing to grant a healthy degree of deference to PTAB decisions (that is, share its authority over patent jurisprudence) and on what it makes of the PTO's rules regulating the proceedings in which these decisions are issued. These are not easy questions. Congress interposed dispute resolution in a specialized agency under review in a specialized court. However, it failed to make clear how the two tribunals ought to relate to one another. The statute gave the PTO authority to "prescribe regulations . . . establishing and governing . . . [the three new methods of] review,"²²⁷ but it did not mandate notice and comment,²²⁸ thus arguably withholding formal rulemaking authority. Similarly, Congress directed the PTO to entertain inter partes PGR, IPR, and CBM review and specifically mentioned discovery, responsive filings, oral hearings, and final written determinations; the AIA also renamed the BPAI the Patent *Trial* and Appeal Board.²²⁹ However the statute nowhere incorporates the phrase "on the record after opportunity for an agency hearing,"²³⁰ which is the best evidence that Congress intended the procedures to constitute formal adjudica-

227 35 U.S.C. §§ 316(a), 326(a) (2012). For CBMs, "the Director shall issue regulations establishing and implementing a transitional post-grant review proceeding for review of the validity of covered business method patents." AIA § 18(a)(1), Pub. L. No. 112-29, 125 Stat. 284 (2011).

228 The PTO did, however, provide notice and opportunities to comment on the regulations. See Changes to Implement Inter Partes Review Proceedings, 77 Fed. Reg. 7041 (proposed Feb. 10, 2012) (to be codified at 37 C.F.R. pt. 42); Changes to Implement Post-Grant Review Proceedings, 77 Fed. Reg. 7060 (proposed Feb. 10, 2012) (to be codified at 37 C.F.R. pt. 42); Transitional Program for Covered Business Method Patents—Definition of Technological Invention, 77 Fed. Reg. 7095 (proposed Feb. 10, 2012) (to be codified at 37 C.F.R. pt. 42). See also *Federal Register Notices – 2012*, U.S. PATENT & TRADEMARK OFFICE, http://www.uspto.gov/news/fedreg/fr_2012.jsp (last modified Jan. 27, 2015), for other notices of proposed rulemakings under the AIA.

229 See 5 U.S.C. §§ 556(b), (d), 557 (2012) (laying out the requirements for adjudication); 35 U.S.C. §§ 6, 316(a) (charging the PTO with creating procedures for inter partes review); Benjamin and Rai, *supra* note 19, at 327–28.

230 5 U.S.C. § 554(a).

tions and thus intended to delegate to the agency interpretive authority entitled to judicial deference.²³¹

Not only is the statute unclear about how much authority Congress meant to vest in the PTO, the Federal Circuit's past approach to agency review has been decidedly mixed. As Arti Rai and Stuart Benjamin documented in 2007, despite *Dickinson v. Zurko*,²³² which admonished the Federal Circuit to apply mainstream administrative law to its review of agency action, the Federal Circuit has not consistently done so. *Tafas v. Doll*,²³³ the Federal Circuit's previous foray into PTO rulemaking, produced a split decision. The court rejected a PTO rule on continuations because, in one judge's view, no deference was owed the PTO, and in the other two judges' view, because the rule had a substantive effect inconsistent with the Patent Act.²³⁴ Substantively, while the Federal Circuit has reviewed factual findings on a substantial evidence standard (or for clear error), it has reviewed PTO legal determinations de novo.²³⁵

The AIA's delineation of the PTO's new authorities and obligations ought to have prompted the Federal Circuit to reconsider its approach to administrative deference. But the early cases reviewing the PTO's authority and PTAB decisions, *In re Cuozzo Speed Technologies, Microsoft Corp. v. Proxyconn, Inc.*, and *Versata Development Grp., Inc. v. SAP America, Inc.*, suggest that the court is not ready to take systematic heed of congressional willingness to rely on the PTO.²³⁶ Quite the reverse.

To be sure, in *Cuozzo*, the court referenced the *Chevron* framework in reaching the decision to approve the PTAB's use of the BRI. It assumed—arguendo—that since Congress was silent on claim construction, the PTO could adopt a reasonable interpretation. It found the BRI to be reasonable because it was supported by the policy rationales applicable to other forms of examination.²³⁷ The *Chevron* analysis was, however, extremely short (two paragraphs) and mechanical. Indeed, the court withdrew its initial opinion in the case²³⁸ in order to add a paragraph emphasizing that it did not, in fact, agree to the use of the BRI on *Chevron* grounds. In the revised opinion,

231 See *United States v. Mead Corp.*, 533 U.S. 218, 229–30 (2001); *Chevron U.S.A. Inc. v. Natural Res. Def. Council, Inc.*, 467 U.S. 837, 865–66 (1984).

232 527 U.S. 150 (1999).

233 559 F.3d 1345 (Fed. Cir. 2009). Further complicating the matter, the rule was withdrawn, mooting the Federal Circuit's decision to rehear the case en banc. *Tafas v. Kappos*, 586 F.3d 1369 (Fed. Cir. 2009) (refusing to vacate the trial court decision invalidating a whole series of PTO regulations).

234 37 C.F.R. § 1.78(d)(1)(i) (since withdrawn); see also *Tafas v. Doll*, 559 F.3d 1345, 1374 (Fed. Cir. 2009) (Rader, C.J., concurring in part and dissenting in part); *id.* at 1360 (majority opinion); *id.* at 1366 (Bryson, J., concurring in part and dissenting in part).

235 Benjamin and Rai, *supra* note 19, at 288–89, 300; see also 5 U.S.C. § 706.

236 *Versata Dev. Grp., Inc. v. SAP Am., Inc.*, 793 F.3d 1306 (Fed. Cir. 2015); *In re Cuozzo Speed Techs., LLC*, 793 F.3d 1268 (Fed. Cir. 2015); *Microsoft Corp. v. Proxyconn, Inc.* 789 F.3d 1292 (Fed. Cir. 2015).

237 *In re Cuozzo*, 793 F.3d at 1279.

238 *In re Cuozzo Speed Techs., LLC*, 778 F.3d 1271 (Fed. Cir. 2015).

it denied that “Congress has newly granted the PTO power to interpret substantive statutory ‘patentability’ standards.”²³⁹ According to the court, “[s]uch a power would represent a radical change in the authority historically conferred on the PTO by Congress, and we could not find such a transformation effected by the regulation-authorizing language of § 316.”²⁴⁰

Instead, the court devoted most of its discussion of the BRI (eight paragraphs) to its own interpretation of the AIA. Noting that the BRI has been applied “for more than 100 years in various types of PTO proceedings,”²⁴¹ it reasoned that Congress must have been aware of it and thus can be said to have implicitly approved its use.²⁴² As to PTO-imposed limitations on amendment (which, as we saw, is a major reason for the BRI controversy), the court did not apply *Chevron* at all. Rather, it found the availability of amendment sufficient,²⁴³ once again reasoning that congressional awareness can be taken as adoption.

Despite the court’s careful clarification that its approval of the BRI was not because of deference to the PTO, the decision to deny a rehearing en banc still drew two strong dissents.²⁴⁴ The dissenters mainly claimed that since post-grant opposition was meant to be a cheap substitute for litigation, it was more appropriate to use what they termed the “actual” construction of challenged claims.²⁴⁵ But echoing her position in *Tafas*, Chief Judge Prost also questioned whether the standard of construction fell within the PTO’s procedural authority. Because in her view it did not, the choice of the BRI merited no *Chevron* deference at all.²⁴⁶

Given the *Cuozzo* court’s heavy reliance on past practice regarding claim construction, it is not surprising the court has been even more skeptical of PTO authority on issues unique to post-grant practices. In *Proxycorr*, the question was whether the Board’s *Idle Free* decision appropriately required the patent holder to prove an amendment was patentably distinct over all the prior art in the record (and not merely the art the petitioner raised). Although this time the court expressly referenced the standard articulated in the Administrative Procedure Act (APA),²⁴⁷ it mainly provided its own assessment of the rule and the procedure used to create it.²⁴⁸

Versata, a CBM, was much the same. The Federal Circuit acknowledged that Congress had left it to the PTO to define the term “covered business method” and carefully noted that the PTO had considered both the legislative history and public responses to the notice it published in the Federal

239 *In re Cuozzo*, 793 F.3d at 1279.

240 *Compare In re Cuozzo*, 793 F.3d at 1279, with *In re Cuozzo*, 778 F.3d at 1282.

241 *In re Cuozzo*, 793 F.3d at 1276.

242 *Id.* at 1278.

243 *Id.* at 1277–78.

244 *In re Cuozzo Speed Techs., LLC*, 793 F.3d 1297 (Fed. Cir. 2015) (denying rehearing en banc).

245 *See id.* at 1301.

246 *See id.* at 1302.

247 *Microsoft Corp. v. Proxycorr, Inc.* 789 F.3d 1292, 1306 (Fed. Cir. 2015).

248 *See id.* at 1306–08.

Register. Nonetheless, the court conducted its own assessment.²⁴⁹ In the end, it decided that it agreed with the PTO that covered business methods are not limited to products and services of the financial sector, noting only at the very end of that section of the opinion that the PTO's expertise entitles it to "substantial deference in how it defines its mission."²⁵⁰ It handled another issue that arose in the case similarly, deciding for itself that in CBMs, the PTAB has authority to decide whether the claims are drawn to patentable subject matter.²⁵¹

The fate of matters like the narrow constraints the PTO placed on how the parties present their cases (the time and page limits; the minimal discovery), which have no history and are not tied to the PTAB's mission, are even more difficult to determine. It is, however, worth nothing that although page, time, discovery, and argument limitations have an impact on the parties' ability to present their cases (especially in light of the broad view of the grounds that can be asserted, at least in CBMs), these limits do not appear to significantly impair argumentation, and they are well tailored to Congress's goal of creating a quick and less expensive way to weed out invalid claims.²⁵² Furthermore, PTAB panels enjoy the discretion to alter many of these limits in the interest of justice or for good cause.²⁵³ Thus, if a *Chevron* standard were applied, these regulations appear to lie squarely within the regulatory authority Congress accorded to the PTO and to be consistent with the Patent Act and permissible interpretations of the AIA.²⁵⁴

249 See *Versata Dev. Grp., Inc. v. SAP Am., Inc.*, 793 F.3d 1306, 1323–26 (2015). For the legislative history considered, see *supra* text accompanying notes 94–95.

250 *Versata*, 793 F.3d at 1325. The court also considered the PTO's regulation defining "technological invention" but apparently found it so devoid in meaning that it did not bother to state a standard for reviewing it. See *id.* at 1326.

251 *Id.* at 1329–30.

252 Cf. *Zetec, Inc. v. Westinghouse Elec. Co., LLC*, No. IPR2014-00384, at 16 (P.T.A.B. July 23, 2014) (institution decision) (exercising discretion to refuse to institute IPR on the grounds that the Office must promulgate procedures that "tak[e] into consideration . . . 'the efficient administration of the Office[] and the ability of the Office to timely complete proceedings instituted,' among other factors" (alteration in original) (quoting 35 U.S.C. § 316(b) (2012))).

253 See, e.g., *Kyocera Corp. v. Softview LLC*, Nos. IPR2013-00007 & IPR2013-00256, at 8 (P.T.A.B. Mar. 27, 2014) (noting the previous permitting of extra briefing), *aff'd*, *Softview LLC v. Kyocera Corp.*, 592 F. App'x 947 (Fed. Cir. 2015).

254 The PTAB procedures have also been challenged for depriving the parties of a trial by jury and for violating separation of power principles. In *Cooper v. Lee*, the issues were raised in a declaratory judgment action but dismissed for failure to exhaust administrative procedures. No. 1:14-cv-00672-GBL-JFA, 2015 WL 686041, at *9 (E.D. Va. Feb. 18, 2015). The district court did, however, note that the Federal Circuit had upheld the constitutionality of *ex parte* reexamination in a decision the Supreme Court declined to review. *Id.* at *2 (citing *Joy Techs., Inc. v. Manbeck*, 959 F.2d 226 (Fed. Cir. 1992)). *B&B Hardware, Inc. v. Hargis Industries, Inc.*, 135 S. Ct. 1293 (2015), which held that an issue decided by the Trademark Trial and Appeal Board (TTAB) is preclusive of later litigation in an Art. III court, suggests that the Supreme Court is unlikely to find that the PTAB deprives the patent holder of a right to a jury trial.

Whereas procedurally, *Cuozzo*, *Proxyconn*, and *Versata* send a somewhat mixed message, substantively, they do no such thing: nothing in these decisions even gestures at the notion that the Federal Circuit is prepared to defer to PTAB decisions.²⁵⁵ In reviewing the merits, *Cuozzo* and *Proxyconn* cited *Teva*.²⁵⁶ In other words, the court adopted the standard the Supreme Court imposed on review of *district court* claim constructions to consider the PTAB's claim construction. Indeed, in *Proxyconn*, the court reversed the PTAB's construction of the claim,²⁵⁷ even though the court is less versed in the application of the BRI than is the PTAB. In *Versata*, it went much further. First, despite having decided in *Cuozzo* that it had no jurisdiction to review PTAB decisions on whether to institute IPRs,²⁵⁸ the *Versata* court redefined the issue: it decided it could review whether the PTAB had exceeded its CBM authority by hearing challenges to patents that it misidentified as drawn to "covered business methods."²⁵⁹ And even though the court accepted the Board's definition of what constituted a "covered business method," and despite its own complete lack of case law on the meaning of a "covered business method" or a "technological invention," it nevertheless reviewed the PTAB decision de novo.²⁶⁰ Similarly, it reviewed the question whether the invention at issue was patentable subject matter in the same way as it would have reviewed a decision of a trial court.²⁶¹

This approach may be a function of the court's skepticism as to whether the APA applies with full force to the PTO (which was created a century before the rise of the administrative state and is mentioned only marginally in the legislative history of the APA).²⁶² Or it may stem from a fear that the PTAB is, indeed, acting like a "death squad." Alternatively, it may derive from what Judge Hughes, in dissenting from *Versata*'s holding that institution decisions are reviewable, claims is an "appetite for arrogating to the court the

255 It is, however, worth noting that Garmin, the party that brought the challenge in *Cuozzo*, withdrew from the appeal as part of a settlement. *In re Cuozzo Speed Techs., LLC*, 793 F.3d 1268, 1272 n.2 (Fed. Cir. 2015). Thus, no one had an incentive to argue for deference to the PTO's determination on the merits of the case. Yet the precedential value of the decision stands. See *Microsoft Corp. v. Proxyconn, Inc.*, 789 F.3d 1292, 1297 (Fed. Cir. 2015). It should also be noted that *Proxyconn* is the first reversal: many PTAB cases are affirmed without opinion. See Tony Dutra, *Federal Circuit Affirms Three Cases Without Opinion Two Days After Oral Arguments*, 89 PAT. TRADEMARK & COPYRIGHT J. (BNA) 1607 (2015) (citing former chief judge of the Federal Circuit Paul Michel as saying that the court may be deferring to the PTAB's expertise in law and technology—or it may simply have too many cases coming from the PTAB to review them more carefully).

256 *Proxyconn*, 789 F.3d at 1297; *In re Cuozzo*, 793 F.3d at 1279–80.

257 *Proxyconn*, 789 F.3d at 1299.

258 *In re Cuozzo*, 793 F.3d at 1273.

259 *Versata Dev. Grp., Inc. v. SAP Am., Inc.*, 793 F.3d 1306, 1321–23 (Fed. Cir. 2015).

260 See *id.* at 1323–27.

261 *Id.* at 1330–36.

262 See Mark D. Torché, Note, *Rubber Stamp or Court of Last Resort: The Proper Standard of Review in Patent and Trademark Cases*, 48 DRAKE L. REV. 211, 227 (1999) (noting an argument by Professor Janice Mueller that the legislative history of the APA made it clear that the PTO was exempt from its standards of review).

Board's statutory authority."²⁶³ But to the extent that the court's attitude derives from the perception that the PTO lacks formal adjudicatory authority, it should be reconsidered. Plenary review is not, as Judge Hughes put it, "how Congress designed the AIA to work."²⁶⁴ As Melissa Wasserman has cogently argued, the imposition of procedural safeguards, as well as the mention of "court-like proceeding[s]" in the House Report on the AIA, suggest that these procedures were to "be accompanied with a policy-making or law-making ability."²⁶⁵ She also notes that it is hard to understand why Congress would have provided for post-grant review of "novel or unsettled legal question[s] that [are] important to other patents or patent applications" if it had not intended the PTAB to speak with the force of law and for its decisions to be entitled to deference.²⁶⁶

As the system has gone into operation, other reasons to believe that Congress expected the court to give substantial deference to the PTAB have emerged. First, as the next Section describes in more detail, the same claims, patents, and families of patents, all using similar terms and concepts, can be the target of multiple proceedings; often, the challenges are brought by the same petitioners. Occasionally, what are essentially protective petitions are filed—that is, petitions challenging claims the PTAB has already cancelled, apparently filed out of concern that the cancellation decision will be reversed.²⁶⁷ Unless the patent holder can rely on the near-binding effect of PTAB determinations on the parties (and a stare decisis effect on nonparties), the tax that these multiple procedures impose will be formidable. Since, presumably, Congress did not (in Judge Hughes's words) adopt these procedures to create "unnecessary and counterproductive litigation costs" or to chill innovation, it can be inferred that it intended the PTAB's decisions to be entitled to deference.²⁶⁸

Notably, Congress made the estoppel effect of PTAB decisions dependent on the issuance of a final written decision of the Board.²⁶⁹ In contrast, the Federal Circuit has suggested that the estoppel effect of other PTO determinations—to which deference is not accorded—is triggered only after all

263 *Versata*, 793 F.3d at 1337 (Hughes, J., concurring in part and dissenting in part).

264 *Id.* at 1343.

265 Melissa F. Wasserman, *The Changing Guard of Patent Law: Chevron Deference for the PTO*, 54 WM. & MARY L. REV. 1959, 1983–84, 1993 (2013) (quoting H.R. REP. NO. 112-98, pt. 1, at 68 (2011)); see also Benjamin & Rai, *supra* note 19, at 327–28.

266 Wasserman, *supra* note 265, at 1993 (quoting AIA, Pub. L. No. 112-29, § 6(d), 125 Stat. 284, 307 (2011) (codified at 35 U.S.C. § 324(b) (2012))). *But see* Matal, *supra* note 7, at 609 (suggesting that the provision was added to "create [] an avenue by which the question can be conclusively resolved by the Federal [C]ircuit before a large number of improper patents" are issued (alteration in original) (quoting 154 CONG. REC. S9988 (daily ed. Sept. 27, 2008) (statement of Sen. Kyl))).

267 See *supra* notes 119–22.

268 *Versata*, 793 F.3d at 1339 (Hughes, J., concurring in part and dissenting in part) (quoting H.R. REP. NO. 112-98, pt. 1, at 40 (2011)).

269 35 U.S.C. § 315(e) (2012); *id.* § 325(e).

appeals are exhausted.²⁷⁰ Although the estoppel provision is tempered by the timing of the issuance of the certificate of cancellation and amendment (which is after appeal),²⁷¹ the difference in the trigger for estoppel suggests an intent that PTAB determinations bind not only the patent holder and the challenger, but also allow the public free use of the claimed invention as soon as the PTAB determines the claim should be cancelled. It is difficult to square that intent with *de novo* review of institution decisions or legal determinations. While review has been sought on almost every final written decision,²⁷² Congress did not provide for expedited appeals. Given the time it takes to hear appeals, and especially the historical frequency with which the Federal Circuit has reversed trial courts on the issue of claim construction, which is of central importance in these procedures,²⁷³ it would be impossible to bring about finality in the rapid time frame Congress had in mind if such a high level of scrutiny were applied.²⁷⁴

I leave the question of the precise effect of the AIA on the standard of review to the administrative law experts. For these purposes, it is enough to say that it behooves the Federal Circuit to do more than reflexively reverse everything that does not accord with its own initial assessment. Not only must it consider the more robust safeguards mandated for these procedures, it should also take the relative capacities of the two institutions into account. After all, members of the Federal Circuit have often expressed frustration with the Supreme Court's lack of expertise and intermittent exposure to patent cases.²⁷⁵ But as between the Federal Circuit and the PTAB, it is the latter

270 See *Abbvie Deutschland GMBH & Co. v. Janssen Biotech, Inc.*, 759 F.3d 1285, 1296 (Fed. Cir. 2014) (finding an interference decision non-final under the preclusion law of the First Circuit because it was subject to court review); Tamimi, *supra* note 38, at 633–34.

271 35 U.S.C. § 318(b) (“If . . . the time for appeal has expired or any appeal has terminated, the Director shall issue and publish a certificate canceling any claim of the patent finally determined to be unpatentable”); *id.* § 328(b) (“If . . . the time for appeal has expired or any appeal has terminated, the Director shall issue and publish a certificate canceling any claim of the patent finally determined to be unpatentable”).

272 As of Sept. 11, 2014, 62 of the 114 written decisions rendered in IPRs had been appealed, and the time to appeal had not run out on most of the others. See *Casino & Kasdan*, *supra* note 145. Similar figures apply to CBMs.

273 See, e.g., Christian A. Chu, *Empirical Analysis of the Federal Circuit's Claim Construction Trends*, 16 BERKELEY TECH. L.J. 1075, 1075 (2001) (analyzing the increased trend in claim interpretation-based reversals); David L. Schwartz, *Pre-Markman Reversal Rates*, 43 LOY. L.A. L. REV. 1073, 1107 (2010) (“[T]he claim construction reversal rate is unduly high and has generally been increasing in the last fifteen years.”).

274 Frequent reversals should change under *Teva*. But see *supra* note 218 and accompanying text.

275 As former Chief Judge Michel once said, “There’s . . . a certain amount of suspicion that there might be some deeper immersion, deeper familiarity, harder thinking and greater exposure [to patent law] at the Federal Circuit than the Supreme Court itself can offer.” Roy Zwhalen, *Mayo v. Prometheus: Thought Leaders Express Concern and Evaluate the Impact*, BIOTECH-NOW (May 21, 2012) (alteration in original), <http://www.biotech-now.org/public-policy/patently-biotech/2012/05/mayo-v-prometheus-thought-leaders-express-concern-evaluate-business-impact-and-discuss-the-future>.

that is closer to the technology and sees the issues more regularly.²⁷⁶ This is not to say that no review should be accorded (particularly on new issues), but given the many differences between these procedures and examination, review of facts on the “substantial evidence” standard the APA mandates for formal proceedings,²⁷⁷ and review of law on the deferential end of the *Skidmore-Chevron* spectrum required for substantive legal and policy decisions, is not inappropriate from both a normative and an institutional perspective.²⁷⁸

While the AIA can be understood as requiring deference to the PTO on both rulemaking and adjudication, experience nonetheless demonstrates the need for the PTO (or Congress) to make some changes. If the Federal Circuit does not adopt the BRI for litigation, then the dual approach will be very difficult to maintain.²⁷⁹ Thus, even though the Federal Circuit approved use of the BRI, the PTO may wish to rethink it. If the PTO retains use of the BRI, then it ought, at least, to reconsider the availability of amendments. It could, for example, alter the regulations and *Idle Free*. For example, one reason the PTAB may be reluctant to allow amendments is that the amended claims go into force without further examination.²⁸⁰ A better approach might be to have the patent holder announce proposed amendments early in the process and put the burden on the petitioner to prove these amendments are invalid.²⁸¹ It would not be a complete solution to the absence of examination—after all, some amendments may not be of enough interest to a petitioner to trigger opposition. But if it were clear to potential petitioners that there is a viable amendment procedure and that they will be required to protect their own interests in it, perhaps fewer petitions for review would be filed. Alternatively, the PTO could clarify when a patent holder whose claims were cancelled can use *ex parte* reexamination or, in the case where error can validly be claimed, reissue, in order to obtain further (albeit narrower) protection.²⁸²

276 See Wasserman, *supra* note 265, at 2007–17 (comparing the institutional features of the PTAB with the Federal Circuit); see also Benjamin & Rai, *supra* note 19, at 315–16, 334, 277 5 U.S.C. § 706(2)(E) (2012).

278 See *Chevron U.S.A. Inc. v. Nat. Res. Def. Council, Inc.*, 467 U.S. 837, 865–66 (1984); *Skidmore v. Swift & Co.*, 323 U.S. 134, 140 (1944); see also *United States v. Mead Corp.*, 533 U.S. 218, 229–30 (2001); cf. *Varsity Brands, Inc. v. Star Athletica, LLC*, 799 F.3d 468, 479 (6th Cir. 2015) (according *Skidmore* deference to the Copyright Office’s determination that a design is protectable); Doug Lichtman & Mark A. Lemley, *Rethinking Patent Law’s Presumption of Validity*, 60 STAN. L. REV. 45, 63–65 (2007) (arguing that more adversarial adjudications should be entitled to greater deference).

279 For further discussion of the problem with a dual approach, see *infra* text accompanying note 336.

280 This, indeed, was the Federal Circuit’s reason for thinking *Idle Free* was correctly decided. See *Microsoft Corp. v. Proxyconn, Inc.*, 789 F.3d 1292, 1307 (Fed. Cir. 2015).

281 See, e.g., S. 632, 114th Cong. § 102(c) (2015); S. 1137, 114th Cong. § 11 (Manager’s Amendment).

282 35 U.S.C. §§ 251–52 (2012) (concerning reissue); *id.* §§ 301–07 (concerning *ex parte* reexamination). Arguably, the patent holder is estopped from returning to the patent office by 37 C.F.R. § 42.73(d)(3), but it may be possible to rely on a different written description. See Scott A. McKeown, *Patent Reissue as an Alternative to PTAB Amendment Prac-*

There are other matters also worth revisiting. For example, the petitioner currently has no right to reply directly to the patent owner's preliminary response to a petition to institute. As a result, the petitioner must anticipate the arguments the patent owner will make and reply to these conjectural arguments in the initial petition itself. This uses precious pages and also requires the PTAB to wade through arguments and hypothetical counterarguments that may never become a part of the merits decisions. Allowing a reply to the preliminary response may be preferable. Additionally, the page limits and other rules appear to be leading parties to file more than one petition challenging claims in the same patent, or similar claims in a family of patents.²⁸³ While the Board can refuse to institute when successive petitions raise "substantially the same . . . argument[]," that practice is within the PTAB's discretion;²⁸⁴ the Board may not be willing to exercise that power if the petitioner did not have the space to fully flesh out its arguments.²⁸⁵ To be sure, the Board can sometimes obtain efficiencies through formal consolidation or by assigning the same panel to hear all the cases,²⁸⁶ but multiple institution decisions and final written decisions must often be handed down and the efficiencies the PTAB achieves internally are not necessarily shared with the parties themselves.²⁸⁷ The multiplicity of proceed-

tice, PATENTS POST-GRANT (Apr. 8, 2014), <http://www.patentspostgrant.com/patent-reissue-escape-hatch-opens-for-ptab-amendments>.

283 See, e.g., *Apple Inc. v. SightSound Techs., LLC*, No. CBM2013-00019 (P.T.A.B. Oct. 8, 2013) (institution decision) (refusing to institute a proceeding to challenge claims 1, 2, 4, and 5 of Patent 5,191,573 for not being subject-matter eligible and for lacking a sufficient written description); *Apple Inc. v. SightSound Techs., LLC*, CBM2013-00020 (P.T.A.B. Oct. 7, 2014) (instituting and then cancelling claims 1, 2, 4, and 5 of Patent 5,191,573 on obviousness grounds). According to Director Lee's blog, the PTO is currently considering changes in this area. Lee, *supra* note 37.

284 See, e.g., *Conopco, Inc. v. The Proctor & Gamble Co.*, No. IPR2014-00507, at 5 (P.T.A.B. July 7, 2014) (institution decision).

285 Cf. *Dell Inc. v. Elec. & Telecomms. Research Inst.*, No. IPR2015-00549, (P.T.A.B. Mar. 26, 2015) (institution decision) (refusing to join two petitions in order to preserve the timeliness of the second one filed).

286 35 U.S.C. § 315(d); *id.* § 325(d).

287 See, e.g., *Groupon, Inc. v. Blue Calypso, LLC*, No. CBM2013-00033, -00034, -00035, 00044, -00046, at *1 n.1 (P.T.A.B. May 7, 2014) (decision on admission *pro hac vice*) (considering five petitions together, with the admonition that the parties "are not authorized to use this style heading in any subsequent papers"). Another example is furnished by the cases between Liberty Mutual Insurance Co and Progressive Casualty Insurance Co., including CBM2012-00002 (regarding a method for determining an automobile insurance premium based on data collected from monitored motor vehicle operational characteristics and operator's driving characteristics); and -00003 (regarding a vehicle monitoring system); -00010 (regarding a system that allows policyholders to access policy information on the internet); CBM2013-00002 (accessing policy information on the internet) (oral argument merged with CBM 2012-00010); -00004 (regarding a system for monitoring the operation of a motor vehicle); and -00009 (regarding a vehicle monitoring system). All these were decided by the same panel of administrative patent judges but (with one exception) were entertained as separate cases. The Federal Circuit similarly obtained efficiencies by reviewing the cases together, see *Progressive Cas. Ins. Co. v. Liberty Mut. Ins. Co.*,

ings is also problematic for trial courts, for they can never be certain when practice before the PTAB is over and any stays they issued can be dissolved. It may, in the end, be more efficient to liberalize the page and time limits and give potential challengers a longer period in which to join ongoing proceedings. Moreover, because the PTAB reconsiders issues decided at the time of institution (like claim construction) at the merits stage as well,²⁸⁸ it might also be useful to give parties more scope for argument earlier in the proceedings.

The point is not that current practice is perfect. Rather, it is that if Congress fails to step in, then changes should be within the sound discretion of the PTO. Federal Circuit judges, many of whom lack case management experience, are not institutionally best situated to decide how to balance the congressional goal of efficiency against the needs of the parties to present their cases effectively.

IV. PROBLEMS: COMPLEXITY, ABUSE, AND THE PUBLIC INTEREST

With the addition of a procedure permitting third parties to submit information to the PTO prior to patent issuance,²⁸⁹ the AIA envisioned a “cradle to grave” opportunity for the public to challenge rights to exclusivity. Preissuance submission hands off to PGR, and then to IPR, with CBMs (temporarily) hovering over claims that are especially questionable. Through the use of separate procedures, Congress attempted to strike a careful balance between promoting public access to unpatentable advances and recognizing reliance interests that mature as patent holders and licensees pour resources into exploiting their inventions. However, three different review procedures create a great deal of complexity. As we have seen, patent families can get caught in a series of successive challenges. These give rise to complicated questions on how the results of one review affect the positions that patent holders, petitioners, their privies or real parties in interest, and strangers can take in later actions.

Some of these procedures allow any interested party to challenge claims. While this, too, is commendable from an access-to-knowledge perspective, it raises procedural questions and can create opportunities for harassment. Furthermore, as Part I described, the review procedures permit the parties to rely on (and challenge) experts, make motions to exclude, amend, file objections to amendments, and present oral arguments. In practice, these oppor-

No. 2014-1466, 2015 WL5004949 (Fed. Cir. Aug 24, 2015). Similarly, a combined oral hearing was held on two cases involving Apple and Sightsound Technologies. This produced two separate written opinions, issued on the same day. See *Apple, Inc. v. Sightsound Techs., LLC*, No. CBM2013-00023 (P.T.A.B. Oct. 7, 2014); *Apple, Inc. v. Sightsound Techs., LLC*, No. CBM2013-00020 (P.T.A.B. Oct. 7, 2014).

²⁸⁸ See, e.g., *SAP Am., Inc. v. Lakshmi Arunachalam*, No. CBM2013-00013, at 11–12 (P.T.A.B. Sept. 18, 2014); *Liberty Mut. Ins. Co. v. Progressive Cas. Ins. Co.*, No. CBM2012-00003, at 11 (P.T.A.B. Feb. 11, 2014), *aff'd*, *Progressive Cas. Ins. Co. v. Liberty Mut. Ins. Co.*, No. 2014-1466, 2015 WL 5004949 (Fed. Cir. Aug. 24, 2015).

²⁸⁹ 35 U.S.C. § 122(e); 37 C.F.R. § 1.290 (2014).

tunities are used in many cases. The expense raises questions as to whether public domain interests are as well protected as the proponents of these procedures hoped. The answers depend on whether problems raised by complexity can be resolved in a fair and evenhanded manner. This Part discusses these issues.

A. Complexity and Abuse

As described earlier, the AIA and PTO introduced rules on estoppel that are designed to prevent the parties from obtaining several bites at the apple. Under the regulations, a patent holder is “precluded from taking action inconsistent with [an] adverse judgment, including obtaining in any patent: (i) a claim that is not patentably distinct from a . . . canceled claim; or (ii) [a]n amendment of a specification . . . that was denied during the trial.”²⁹⁰ For IPR and PGR challengers, the statute provides that once a final written decision is handed down, the petitioner, the real party in interest, and the petitioner’s privies are precluded from maintaining an action in the PTO with respect to that claim “on any ground that the petitioner raised or reasonably could have raised” in the proceeding.²⁹¹ Nor can the petitioner argue in court or in the ITC that the claim is invalid on any ground the petitioner “raised or reasonably could have raised.”²⁹² CBMs are somewhat different: once a final written decision is issued, the petitioners or the real party in interest cannot assert, in courts or in the ITC, an argument that the claim is invalid on any ground that the petitioner “raised” during the CBM.²⁹³ But despite the considerable detail written into these provisions, it is already clear that they fail to cover all the ways in which those involved in these proceedings can nibble at the apple. Thus, for example, Colleen Chien and Christian Helmers observe that 82% of IPRs run parallel to litigation.²⁹⁴ And yet the rules do not say whether the findings of fact and law made in the course of these procedures are binding on other tribunals as a matter of collateral estoppel (issue preclusion) or *stare decisis*.²⁹⁵

The poster child for these omissions is the dispute between Versata and SAP America, where a party that lost in the trial court on the argument that certain claims were invalid,²⁹⁶ then brought a CBM petition to challenge the validity of the same claims.²⁹⁷ Such an action is not barred by the AIA or the

290 37 C.F.R. § 42.73(d)(3).

291 35 U.S.C. § 315(e)(1); *id.* § 325(e)(1).

292 35 U.S.C. § 315(e)(2); *id.* § 325(e)(2).

293 AIA, Pub. L. No. 112-29, § 18(a)(1)(D), 125 Stat. 284, 330 (2011) (codified at 35 U.S.C. § 321 note).

294 Chien & Helmers, *supra* note 35, at 9.

295 *But see* Stoll, *supra* note 76, at 40 (calling the estoppel provision of § 325(e)(2) “something of a hybrid of claim preclusion and issue preclusion”).

296 *Versata Software, Inc. v. SAP Am., Inc.*, No. 2:07-CV-153 CE, 2011 WL 4017944 (E.D. Tex. Sept. 9, 2011).

297 *See* *SAP Am., Inc. v. Versata Dev. Grp., Inc.*, No. CBM2012-00001 (P.T.A.B. June 11, 2013) (involving claims 26–29 of Patent No. 6,553,350), *aff’d*, *Versata Dev. Grp., Inc. v. SAP*

regulations adopted by the PTO. And because potential infringement is continuing, there is no question of claim preclusion. Nor does issue preclusion apply: since the PTAB uses a lower burden of proof on validity and a different rule for claim construction, the issues in the review are not the same as the issues decided by the court.²⁹⁸ The PTAB instituted an action and cancelled the claims.²⁹⁹ But by the time the PTAB handed down a final written decision, much had happened: the Federal Circuit had affirmed the trial court's damage award, vacated part of the order for injunctive relief, and remanded to the district court;³⁰⁰ that court had then awarded damages in the amount of \$391 million (the injunction was abandoned). Arguably, the subsequent invalidation of the claims in the PTAB should have provided grounds for the infringement defendant to petition for relief from the \$391 million judgment under Federal Rule Of Civil Procedure 60.³⁰¹ However, in a short per curiam order that offered no explanation, the Federal Circuit denied a motion to stay or for relief from judgment.³⁰² In a later proceeding, the Federal Circuit essentially gave the patent holder a right to contest the institution decision as part of its review of the merits of the PTAB's invalidation determination.³⁰³ However, the Federal Circuit affirmed the PTAB on both issues, with the result that a party is now forced to pay a rather large award on account of a patent that is not valid.³⁰⁴

Troubling as *Versata* looks, the result can be justified on the ground that it motivates those who believe a patent is invalid to challenge it quickly and put the invention it covers into the public domain. In contrast, the opposite

Am., Inc., 793 F.3d 1306 (Fed. Cir. 2015); *see also* SAP Am., Inc. v. Versata Dev. Grp., Inc., No. CBM2013-00042 (P.T.A.B. Aug. 16, 2013) (challenging, among others, claims 31, 35, and 36 of Patent 5,878,400).

298 *See, e.g.*, *Interthinx, Inc. v. CoreLogic Sols., LLC*, No. CBM2012-00007, at 6 (P.T.A.B. Jan. 30, 2014), *appeal dismissed sub nom.*, *In re CoreLogic Sols., LLC*, 571 F. App'x 950 (Fed. Cir. 2014). In a case involving other patents, Versata unsuccessfully tried to mandamus the PTAB to halt a CBM review. *In re Versata Dev. Grp., Inc.*, 564 F. App'x 1025 (Fed. Cir. 2014).

299 *SAP Am., Inc. v. Versata Dev. Grp., Inc.*, No. CBM2012-00001, at 34 (P.T.A.B. June 11, 2013). An attempt by the patent holder to challenge the institution decision through an action in the district court was rejected. *Versata Dev. Grp., Inc. v. Lee*, 793 F.3d 1352 (Fed. Cir. 2015).

300 *Versata Software, Inc. v. SAP Am., Inc.*, 717 F.3d 1255, 1269 (Fed. Cir. 2013).

301 *See, e.g.*, *Flexiteek Ams, Inc. v. PlasTEAK, Inc.*, No. 08-60996-CIV, 2012 WL 5364263, at *9 (S.D. Fla. 2012) (granting relief under Rule 60(b)(5) and (6) and noting that "it would be inequitable and unjust to let stand, let alone enforce, an injunction and an unexecuted money judgment predicated on a patent claim found to be invalid and cancelled"); *cf.* *Fresenius USA, Inc. v. Baxter Int'l, Inc.*, 721 F.3d 1330, 1341-45 (Fed. Cir. 2013) (permitting reconsideration of relief before a judgment became final).

302 *Versata Comput. Indus. Sols., Inc. v. SAP AG*, 564 F. App'x 600 (Fed. Cir. 2014).

303 *Versata Dev. Grp., Inc. v. SAP Am., Inc.*, 793 F.3d 1306, 1323-27 (Fed. Cir. 2015).

304 *See also* *Ultratec, Inc. v. Sorenson Commc'ns, Inc.*, No. 13-cv-346-bbc, 2015 WL 2248437 (W.D. Wis. May 13, 2015) (staying proceedings after entry of a \$44 million infringement judgment, pending review of a PTAB decision to invalidate the infringed patent).

rule—one that absolves challengers of past liability—encourages sharp practice. A party with private information about invalidity could infringe, safe in the knowledge that if it were sued, it would invalidate the patent and free itself of the obligation to pay damages, all the while retaining any extra profits it captured as a result of, essentially, sharing exclusivity with the patent holder. The *Versata* outcome is not even entirely unprecedented. For example, a licensee who successfully challenges a patent must pay royalties up to the point where it took the affirmative step of prompting adjudication of validity.³⁰⁵ Still, if such cases proliferate, U.S. procedure will take on an aspect of German practice, where infringement suits and validity determinations are bifurcated and decided at different times by different tribunals. That practice, which regularly leads to damages based on invalid patents, has been heavily criticized for imposing unjustified cost on the technology industry.³⁰⁶

Better, perhaps, would be to require the successful challenger to pay damages, but only up to the time that the petition for review was filed. Particularly for patents subject to PGR review, a rule that dates the termination of liability this way would encourage very early weeding out of invalid claims. The incidence of these problems would also be minimized if the courts and the PTAB used the same approach to claim construction, for they would then more often reach the same conclusion on validity. In addition, if the Federal Circuit holds to the position it announced on stays in *VirtualAgility*, and if the PTAB develops efficient procedures for consolidating multiple challenges to the same patents, it will less often happen that a patent is upheld in court before it is invalidated by the PTAB.³⁰⁷

But even if the system largely avoids the *Versata* problem, many more subtle questions on the relationships among these procedures remain to be worked out. Not only does the AIA allow a party who lost in litigation to petition for review, it also appears to permit a party that lost a CBM to bring an IPR on any issue not *actually* raised in the CBM, and for their privies to maintain *any* action in the PTO or in court.³⁰⁸ Furthermore, because IPRs

305 See, e.g., *Bristol Locknut Co. v. SPS Techs., Inc.*, 677 F.2d 1277, 1283 (9th Cir. 1982); *Studiengesellschaft Kohle, M.B.H. v. Shell Oil Co.*, 112 F.3d 1561, 1568 (Fed. Cir. 1997); see also generally Andrew C. Michaels, *Tones that Echo from a Past Era of Rigid Jurisprudence: Pre-Challenge Royalties and the Federal Circuit's Shell Test*, 31 SANTA CLARA HIGH TECH. L.J. 543 (2015).

306 See Chien & Helmers, *supra* note 35, at 20–23 (noting the ambiguous effects of bifurcation on decisions to challenge patents and settle litigation); see also generally KATRIN CREMERS ET AL., *INVALID BUT INFRINGED? AN ANALYSIS OF GERMANY'S BIFURCATED PATENT LITIGATION SYSTEM* (2014), https://www.law.berkeley.edu/files/Helmers_Christian_IPSC_paper_2014.pdf; see also RICHARD VARY, *BIFURCATION: BAD FOR BUSINESS* (2012), https://www.unitary-patent.eu/sites/www.unitary-patent.eu/files/nokia_vary_bifurcation.pdf.

307 See *supra* notes 100–01 and accompanying text. The problems will not disappear entirely, however, because there are few time limits on bringing IPRs. Accordingly, district courts can never know for sure when to proceed to trial.

308 The omission of a rule barring unsuccessful CBM petitioners from further action in the PTO is especially difficult to understand—from a timing perspective, it is unlikely that

can raise only questions about novelty and nonobviousness, IPR losers who are then threatened with suit could bring CBMs on other matters. More generally, because the estoppel applies only to specific *claims*, the same parties can file multiple challenges to other claims, even if they are within the same patent or family of patents.³⁰⁹ Also, the AIA did not abolish ex parte reexamination—yet it says nothing about its relationship to the new procedures. Furthermore, both PGRs and IPRs can be brought by *anyone* who is not the patent holder: there are no standing requirements, as there are in court. Many (according to Dolin, nearly one third) of the patents in IPR proceedings are subject to multiple IPR requests;³¹⁰ the same may eventually happen for PGRs.

Indeed, the availability of these procedures appear to be creating new defensive strategies and business models and extending old ones. Patent risk management services like RPX Corporation, and public interest groups such as the Electronic Frontier Foundation (EFF), have begun to file petitions for review.³¹¹ There are even firms—UnifiedPatents is an example—formed specifically to use IPRs to clear the technology space of their members.³¹² Further, generic drug companies are filing IPRs instead of, or in addition to, engaging in Hatch-Waxman litigation,³¹³ and there are a few cases brought by well-known patent aggregators.³¹⁴ Another purported technique, alleged to be practiced by the principals behind the Coalition for Affordable Drugs,

a PGR (which must be filed within nine months of issuance) could follow a written decision in a CBM (which requires that the petitioner have been accused of infringement). However, because standing to bring a CBM requires only that the challenger be “charged” with—and thus, not necessarily “sued” for—infringement, AIA, Pub. L. No. 112-29, § 18(a)(1)(B), 125 Stat. 284, 330 (2011), an IPR, which cannot be brought more than a year after an enforcement action is filed, 35 U.S.C. § 315(b) (2012), could in some cases be instituted even after a CBM proves to be unsuccessful.

309 See, e.g., Petition for Post-Grant Review of U.S. Patent No. 8,684,420, LaRose Indus., LLC v. Choon’s Design, Inc., No. PGR2014-00008 (P.T.A.B. Aug. 5., 2015). This was brought by the same petitioner who brought *LaRose Industries, LLC v. Choon’s Design LLC*, No. IPR2014-00218 (P.T.A.B. June 7, 2014). The IPR ended in an adverse judgment, but the patent holder filed for a new patent, raising the question whether the new claims were patentably distinct from the old ones and if so, whether the patent holder is estopped from arguing their validity.

310 Dolin, *supra* note 111, at 928.

311 See, e.g., *RPX Corp. v. VirnetX Inc.*, Nos. IPR2014-00171, -00172, -00173, -00174, -00175, -00176, and -00177 (P.T.A.B. June 5, 2014) (institution decision); *Elec. Frontier Found. v. Personal Audio, LLC*, No. IPR2014-00070 (P.T.A.B. Apr. 18, 2014) (institution decision).

312 See UNIFIED PATENTS, <http://www.unifiedpatents.com/> (last visited Oct. 13, 2015).

313 See Cyr et al., *supra* note 160.

314 See, e.g., *Intellectual Ventures Mgmt. v. Xilinx, Inc.*, Nos. IPR 2012-00018, -00019, -00020, and -00023 (P.T.A.B. Jan. 24, 2013) (decision addressing Xilinx’s real party in interest); Darlene Ghavimi, *NPEs Can Potentially Use Inter Partes Review to Target the Life Sciences Industry*, FDA FLASH! (June 16, 2014), <http://aiplafda.wordpress.com/2014/06/16/npes-can-potentially-use-inter-partes-review-to-target-the-life-sciences-industry/>; Scott A. McKeown, *NPE Attempts to Exact License by Threat of IPR*, PATENTS POST-GRANT (Aug. 8, 2013), <http://www.patentspostgrant.com/npe-attempts-to-exact-license-by-threat-of-ipr>.

is to simultaneously file a petition and short the patent holder's stock in the hope that the PTAB's actions will depress the stock's price.³¹⁵ The procedures may also be encouraging "reverse trolling": soliciting payments from patent holders for the favor of not filing petitions for review or for settling cases that have been filed.³¹⁶ As Greg Dolin describes it, the result is that "the Damocles sword of post-issuance review perpetually hang[s] over the patentee's head."³¹⁷ Furthermore, while the PTO has created procedures that are swift and efficient, they are far from cheap—what with use of experts and discovery, projected costs are in the range of \$150,000 to \$300,000 per party.³¹⁸ This may be an order of magnitude less than a full-blown trial, but if it is multiplied several times, the cost can put a patent holder in a precarious position. Some of these problems may be solved once the concepts mentioned in the estoppel provisions ("reasonably could have raised," "privy," "real party in interest") are better defined. But the effect of that effort is likely to be limited.

As to the first phrase ("reasonably could have raised"), the patent holder would clearly have been much better protected had Congress prevented parties from asserting grounds they "could have raised"—that is, had the legisla-

315 See Michael Loney, *The Fine Line Between Abuse and Fair Use at the PTAB*, MANAGING INTELLECTUAL PROPERTY (May 27, 2015) <http://www.managingip.com/Article/3456658/The-fine-line-between-abuse-and-fair-use-at-the-PTAB.html> (describing how Bass filed fifteen IPR petitions against seven pharmaceutical companies and allegedly shorted the stock of at least some of these firms); Gene Quinn, *Patent Abuse or Genius? Is Kyle Bass Abusing the Patent System?*, IPWATCHDOG (Apr. 8, 2015), <http://www.ipwatchdog.com/2015/04/08/is-kyle-bass-abusing-the-patent-system/id=56613/>. So far, the PTAB has declined to institute these petitions. See, e.g., *Coal. for Affordable Drugs v. Acorda Therapeutics*, No. IPR2015-00720 (P.T.A.B. Aug. 24, 2015) (institution decision). However, the PTAB has not been willing to sanction Bass. See Kelly Knaub, *PTAB Won't Sanction Bass for AIA Reviews of Drug Patents*, LAW360 (Sept. 25, 2015), <http://www.law360.com/articles/707663>.

316 An example may be New Bay Capital, LLC, an entity that appears to make nothing but which filed several IPRs against VirnetX. See *New Bay Capital, LLC v. VirnetX Inc.*, Nos. IPR2013-00375, -00376, -00377, and -00378 (P.T.A.B. June 23, 2013). According to VirnetX, it then received a request from New Bay for ten percent of a verdict that VirnetX had won in a patent infringement action it had brought against Apple. New Bay later filed motions to terminate the IPRs, possibly in response to threatened subpoenas. See Michelle Carniaux & Michael E. Sander, *The Curious Case of New Bay Capital LLC and VirnetX Inc.*, IPR BLOG (Nov. 22, 2013), <http://interpartesreviewblog.com/curious-case-new-bay-capital-llc-virnetx-inc/>. Indeed, NPEs may be using these procedures as well. See, e.g., *Intellectual Ventures Mgmt. v. Xilinx, Inc.*, Nos. IPR 2012-00018, -00019, -00020, and -00023 (P.T.A.B. Jan. 24, 2013) (decision addressing Xilinx's real party in interest); Ghavimi, *supra* note 314; McKeown, *supra* note 314.

317 Dolin, *supra* note 111, at 883; see also Karen A. Lorang, Comment, *The Unintended Consequences of Post-Grant Review of Patents*, 17 UCLA J. L. & TECH. 1, 19 (2013).

318 See Ken Burchfiel, *USPTO Post-Grant Opposition Costs—A Forum Conveniens for Invalidation Disputes*, USPTO PATENT TRIALS (May 20, 2012), <http://ptopatenttrials.com/2012/05/20/uspto-post-grant-opposition-costs-a-forum-conveniens-for-invalidation-disputes/>; Matthew Cutler, *Why Inter Partes and Post-Grant Review Are Game Changers*, LAW360 (Jan. 8, 2013), <http://www.law360.com/articles/402322/why-inter-partes-and-post-grant-review-are-game-changers>.

ture adopted the formulation in the old inter partes reexamination statute.³¹⁹ However, out of caution that courts would interpret the phrase to require a “scorched-earth search around the world” for prior art, the term was softened.³²⁰ The softening leaves open the question whether “reasonably” is to be interpreted in light of what the challenger could have easily uncovered prior to filing, what it actually knew when the petition was filed, or what it thought could be handled in a single petition, given the strict page and time limits imposed by the PTO.³²¹ The more reasonably the challenger is treated, the higher the cost to the patent holder and to the PTAB. But even if “reasonably” is interpreted to provide the strongest possible protection to the patent holder, there would still be considerable vulnerability. The estoppel applies only to the claims that were challenged. And in CBMs, the estoppel extends only to grounds *actually* raised. While the PGR estoppel provision now reads the same as the IPR provision, there is reason to believe that the legislators thought that the short time frame for seeking review militated in favor of a narrow estoppel and that the error will be fixed in future legislation.³²²

Even more important are the limitations inherent in the second and third phrases: the estoppel provisions apply only to the parties, their “privies,” and “real parties in interest.” While the legislative history indicates that these are to be equitable and practical determinations based on the activities of the parties,³²³ a set of IPRs concerning patents held by VirnetX suggests these concepts may not go very far in protecting patent holders’ interests. In that situation, Apple had been successfully sued by VirnetX for infringement. It then brought seven IPRs to challenge VirnetX’s patent claims, but the petitions were dismissed as untimely, given the earlier litigation.³²⁴ RPX Corporation, to which Apple subscribes, then brought seven IPRs of its own to challenge the same claims.³²⁵ As might be expected, these petitions were all dismissed upon a finding that Apple was the real party in interest, with the Board reasoning that if Apple had been out of time, then so was RPX.³²⁶

319 35 U.S.C. § 315(c) (1999) (current version at 35 U.S.C. § 315(c) (2012)).

320 Matal, *supra* note 7, at 618–19 (quoting 157 Cong. Rec. S1375 (daily ed. Mar. 8, 2011) (statement of Senator Kyl)).

321 The PTAB’s first interpretation of the provision was not informative as all the art raised in the second petition had, in fact, been asserted in the first. *See Dell Inc. v. Elecs. & Telecomms. Research Inst.*, No. IPR2015-00549 (P.T.A.B. Mar. 26, 2015) (institution decision).

322 Matal, *supra* note 7, at 617–18.

323 *Id.* at 619–20.

324 35 U.S.C. § 315(a); *Apple Inc. v. VirnetX Inc.*, Nos. IPR2013-00348, -00349, and -00354 (P.T.A.B. Dec. 13, 2013) (institution decision); *Apple Inc. v. VirnetX Inc.*, Nos. IPR2013-00393, -0394, -0397, -0398 (P.T.A.B. Dec. 18, 2013) (same). Apple also tried unsuccessfully to join some IPRs that New Bay Capital had filed. *See, e.g., Apple Inc. v. VirnetX, Inc.*, No. IPR 2013-00354 (P.T.A.B. Dec. 13, 2013).

325 *RPX Corp. v. Virnetx Inc.*, Nos. IPR2014-00171, -00172, -00173, -00174, -00175, -00176, and -00177 (P.T.A.B. June 5, 2014).

326 *Id.* at 10.

Notably however, Apple's mere membership in RPX was not considered enough to bind RPX to the Apple dismissal. Rather, what mattered was the compensation Apple paid to RPX, its suggestion that RPX file against patents of "questionable quality" (which the record showed included the VirnetX patents), the sharing of attorneys and experts, the similarity between Apple's and RPX's petitions, and the fact that Apple was the only RPX subscriber that had a significant interest in the case.³²⁷ Absent these factors—and one must assume that parties will make sure that these factors are absent or, at least not ascertainable, in later cases—industry groups, trade associations, and other patent risk management organizations will likely be able to organize successive attacks on patent portfolios, aimed at debilitating the ability of the patent holder to maintain an effective defense.³²⁸

Now that the Supreme Court has made it clear that decisions of administrative agencies are entitled to preclusive effect on the same standard as court decisions,³²⁹ doctrines of issue preclusion and *stare decisis* could play an important role in protecting patent holders caught in such multiple challenges. However, because of the relative time frame of these procedures and appeals, these doctrines will be helpful only if cases like *Versata*, where the decision to institute was considered reviewable after the PTAB issued a final written decision, and *Proxycorn*, where the Federal Circuit refused to defer to the PTAB on the merits, are rare. Otherwise reversals will wreak havoc on the system.³³⁰ Rehearings are possible, but the regulation requires they be made within thirty days of a final written decision, well before the Federal Circuit is likely to decide an appeal.³³¹ And even if it is assumed that patent holders can rely on PTAB decisions on law and fact, preclusion doctrines raise their own set of problems.

Once again, the thorniest issue is likely to be claim construction. As we have seen, the PTAB is frequently called upon to interpret the same claims in multiple actions brought by the same or different parties.³³² Often the prob-

327 *Id.* at 8.

328 Significantly, the PTO is considering a proposal to increase discovery on real-party-in-interest issues. *Lee*, *supra* note 37.

329 *B & B Hardware, Inc. v. Hargis Indus., Inc.*, 135 S. Ct. 1293, 1307 (2015) (holding that the Trademark Trial and Appeal Board's decisions are entitled to preclusive effect).

330 In cases where the Federal Circuit does reverse the PTAB, the rules of preclusion would require application of the appellate decision. *RESTATEMENT (SECOND) OF JUDGMENTS* § 27 cmt. o (AM. LAW INST. 2015).

331 37 C.F.R. § 42.71(d) (2014).

332 *See, e.g., Kyocera Corp v. Softview LLC*, No. IPR2013-00004 (P.T.A.B. Mar. 27, 2014) (consolidated in single written decision with *Motorola Mobility LLC v. Softview*, No. IPR2013-00257, since both challenged Patent 7,831,926), *aff'd*, *Softview LLC v. Kyocera Corp.*, 592 F. App'x 949 (Fed. Cir. 2015); *see also Apple Inc. v. Sightsound Techs.*, No. CBM2013-00019 (P.T.A.B. Oct. 8, 2013); *Apple Inc. v. Sightsound Techs.*, No. CBM2013-00020 (P.T.A.B. Oct. 7, 2013). In those cases, the Board considered two challenges to the same set of claims, construed them, and declined to institute in No. CBM2013-000019, but did institute in No. CBM2013-00020; ultimately the Board held the claims unpatentable on the construction used upon institution.

lem of whether the same construction should be used within the PTAB is solved by joining the petitions. More informally, sometimes the same panel decides all the related challenges.³³³ Nevertheless, there have been situations where the question of a claim's construction arose after a final written decision on the same claim. In those cases, the PTAB appears to use the same construction, albeit without specifically stating that it is relying on preclusion principles.³³⁴ When the claim construction is used against the patent holder, this outcome is unremarkable: the construction of the patent holder's claim is a core issue in every case and as long as the claim has not expired, the PTAB always uses the BRI. Accordingly, the same issue arising in the second action was actually litigated, decided, and essential to the judgment in a prior adjudication involving that party that reached a final conclusion.³³⁵ Of course, if a new challenger comes along, that party has the right to seek a different interpretation of the claims. However, unless the challenger has a radically different argument, *stare decisis* should lead to the same result (in this way, *stare decisis* promotes uniform interpretation of patent claims).

Much harder is the question whether the construction announced by the PTAB binds the challenger in court. This problem will, of course, not arise if the claim is cancelled. However, if the claim is *upheld* under the BRI, the patent holder may well seek to enforce the patent against the unsuccessful challenger. In that case, can the accused infringer—who previously argued for a broad claim construction in the PTAB—now argue for a different, narrower, construction in court?³³⁶ The estoppel provisions carefully left it open to the unsuccessful challenger to argue it did not infringe, but infringement is more likely if the claim is interpreted broadly (as in the PTAB) than narrowly (as in court).

Under current practice, there should be no preclusion because the issue of what the claim means *to the ordinary artisan* is not the same as the issue of what constitutes *the broadest reasonable interpretation*.³³⁷ In a way, use of a narrower standard protects the public interest because at the margin, it allows for freer use of advanced technologies. At the same time, however, there is something unseemly about allowing a party to argue for a broad construction

333 See *supra* note 332.

334 See *SAP Am., Inc. v. Lakshmi Arunachalam*, No. CBM2013-00013, at 9 (P.T.A.B. Sept. 18, 2014) (“We addressed the construction of [a certain term] in . . . IPR2013-00194. See *SAP Am., Inc. v. Arunachalam* . . . We apply the same construction in this proceeding.”); see also *Apple, Inc.*, No. CBM2013-00020, at 3; *Apple Inc. v. Sightsout Techs. LLC*, No. CBM2013-00023, at 26 (P.T.A.B. Oct. 7, 2014) (involving different patents, which were heard together and decided separately, but appear to have been resolved through various common issues, including some claim construction, in tandem).

335 RESTATEMENT (SECOND) OF JUDGMENTS § 27 (AM. LAW INST. 2015).

336 Chien and Helmers refer to this as the “Angora cat” play: the cat is fluffed up in the validity proceeding so it looks quite large and wetted down in the infringement action so it appears to be very small. Chien & Helmers, *supra* note 35, at 16.

337 See *B & B Hardware, Inc. v. Hargis Indus., Inc.*, 135 S. Ct. 1293, 1309–10 (2015) (noting that the tribunals must be using the same legal standard).

when it suits its interest in invalidating the patent, and then a narrower construction when the issue is its own infringement.³³⁸ While that would argue for barring the challenger (and only the challenger) from rearguing claim construction, allowing strangers to obtain a different construction—one that allows them to evade a patent enforceable against PTAB challengers—would distort competition among rival users of the same technology. Such a result might also chill use of the review mechanisms, for no one would want to be placed at a competitive disadvantage.

The discrepancy could be avoided by limiting use of the BRI to cases where there was no prior construction of the claim by a district court.³³⁹ But that would require the PTAB to use two different approaches, depending on the order in which parallel proceedings are adjudicated. As argued earlier, it would be much better to eliminate the discrepancy by requiring district courts to adopt the PTAB's approach and apply the BRI or, as Congress is considering,³⁴⁰ requiring the PTAB to use the district court standard. Either way, strangers would of course still not be estopped by the prior construction, but *stare decisis* would apply.³⁴¹ Allowing patent holders to rely on prior PTAB claim constructions in enforcement actions would streamline litigation and provide winning patent holders with a degree of repose.

There are many other issues that arise in the course of PTAB review that could also have relevance in later proceedings.³⁴² These include factual matters, such as the priority date accorded the application, the effective date of references, the level of skill of an ordinary artisan, what the prior art teaches and its accessibility, whether the written description is adequate, and legal questions such as whether the invention is anticipated or obvious, whether the claim is drawn to nonpatentable subject matter, or whether it is fully enabled and distinctly claimed. In some instances, these decisions are made at the institution stage—for example, when the PTAB rejects a challenge based on a finding that the written description is adequate or that certain prior art does not render the invention obvious.³⁴³ Such decisions (decisions

338 The patent holder can play this game (or its inverse) as well. *See* *Motorola Mobility LLC v. Arnouse*, No. IPR2013-00010, at 10 (P.T.A.B. Feb. 11, 2014) (attempting to assert a narrower construction in the PTAB than in court).

339 *Cf.* *Kenny and Forman*, *supra* note 209, at 1084 (suggesting that the PTAB use prior district court claim constructions).

340 S. 1137, 114th Cong. § 11 (Manager's Amendment).

341 *See* *Teva Pharms. U.S., Inc. v. Sandoz, Inc.*, 135 S. Ct. 831, 839 (2015) (“[A]ttorneys will no doubt bring cases construing the same claim to the attention of the trial judge; those prior cases will sometimes be binding because of issue preclusion and sometimes will serve as persuasive authority.” (citation omitted)).

342 *See* *Liberty Mutual Ins. Co. v. Progressive Casualty Ins. Co.*, No. CBM2013-00004, at 3 (P.T.A.B. Mar. 13, 2014), *aff'd*, *Progressive Cas. Ins. Co. v. Liberty Mut. Ins. Co.*, No. 2014-1466, 2015 WL 5004949 (Fed. Cir. Aug. 24, 2015). In those cases, the same evidence used in CBM2012-00002 was submitted.

343 There are also situations where there is a decision to institute on some grounds, but not others. *See, e.g.*, *Apple Inc. v. Sightsound Techs.*, No. CBM2013-00023 (Oct. 8, 2013) (institution decision).

not to institute) are, in a sense, final and using them would provide strong protection to the repose interests of patent holders. However, they cannot be accorded preclusive effect. Panels do not regard themselves as bound by decisions such as claim construction made at that stage, even though they give the issues considerable thought and often write long opinions. Furthermore, the decisions lack the safeguards that give rise to administrative estoppel: most glaringly, decisions concerning institution are appealable, if at all, only in connection with a final written decision.³⁴⁴ Nor can they be set aside by suing the PTAB in a district court.³⁴⁵ Notably, the estoppel provisions of the statute turn on whether the review “results in a final written decision,” not a decision to institute.³⁴⁶

In cases where the issues are resolved in a final written decision, different considerations come into play. Because the PTAB and the courts use the same approach to issues other than claim construction,³⁴⁷ there is good reason to give decisions preclusive or *stare decisis* effect. But there are complications. In some cases, the PTAB grapples with more than one distinct ground of invalidity and there may be a question as to which ground led to the cancellation, for only issues *actually* decided and *essential* to the judgment are entitled to preclusive effect.³⁴⁸ In some cases, neither ground may be precluded; in others (novelty and nonobviousness), the relationship between the issues may be such that the decision is preclusive as to both grounds. In addition, courts distinguish between ultimate and penultimate issues: mediate facts may not be entitled to the same preclusive effect.³⁴⁹ For instance, in a novelty determination, there may be several ways to reach the conclusion that the prior art predated the invention; no particular date should be given preclusive effect because the significance of that date in a later case may be different. Thus, neither the parties nor the decisionmaker may have fully appreciated the need to give it the optimal degree of scrutiny.³⁵⁰

The bottom line is that the *approaches* that the PTAB takes to these issues may be extremely valuable later, for they may form the starting points of

344 35 U.S.C. § 314(d) (2012) (regarding IPR); *id.* § 324(e) (regarding PGR); *Versata Dev. Group, Inc. v. Lee*, 793 F.3d 1306, 1315 (Fed. Cir. 2015) (regarding review of a CBM); *In re Cuozzo Speed Techs., LLC*, 793 F.3d 1268, 1273–74 (Fed. Cir. 2015) (regarding review of an IPR). PTAB decisions to vacate an institution are also not appealable. *See* *GTNX, Inc. v. INTTRA, Inc.*, 789 F.3d 1309, 1311 (Fed. Cir. 2015).

345 *Versata*, 793 F.3d at 1315.

346 35 U.S.C. § 315(e)(1) (regarding PGR).

347 The standard for determining definiteness is arguably an exception, see *supra* note 139 and accompanying text.

348 RESTATEMENT (SECOND) OF JUDGMENTS § 27 cmt. g (AM. LAW INST. 2015).

349 Originally, the first determination of mediate effects never received preclusive effect. *See* *Evergreens v. Nunan*, 141 F.2d 927, 928–31 (2d Cir. 1944). Even now, courts inquire into the relationship between the claims and the opportunities the parties had to litigate. RESTATEMENT (SECOND) OF JUDGMENTS § 27 cmt. c (AM. LAW INST. 2015); DAVID L. SHAPIRO, CIVIL PROCEDURE: PRECLUSION IN CIVIL ACTIONS 54–56 (2001).

350 *Cf.* *B & B Hardware, Inc. v. Hargis Indus., Inc.*, 135 S. Ct. 1293, 1309–10 (2015) (inquiring as to whether the stakes in the two proceedings were equivalent).

further analysis of particular issues. More important, if potential challengers realize that they are unlikely to procure different views from different PTAB panels, some of the current filing frenzy may peter out. But like the definition of “reasonably” and “privity,” concepts of preclusion will not make Damocles’ sword disappear.

As the PTO is beginning to recognize,³⁵¹ there are many ways in which it could improve the situation itself. The page, discovery, and other limitations may be forcing challengers to split their arguments into multiple petitions (some of which may later be joined by the PTAB).³⁵² Petitioners may also be dividing challenges among industry groups, lest they run afoul of the estoppel provisions. As suggested earlier, it may make sense to alter some of the limits in order to allow petitioners to challenge a single patent or a family of patents more efficiently. There may also be ways to make better use of the power the AIA provides to stay, transfer, consolidate, or terminate petitions that substantially repeat the arguments in other petitions.³⁵³ In particular, the PTO could institutionalize the process of consolidating cases in ways that benefit the patent holder as well as the PTAB.

The PTO (or an ambitious researcher) might also take a hard look at settlements to get a fuller picture of what is going on. The AIA requires that all settlement agreements and collateral agreements referring to settlements be in writing and filed with the PTO.³⁵⁴ Upon request of the parties, these can be kept confidential, but they are available to government agencies and to any person on a showing of good cause.³⁵⁵ As the number of settlements grows, it becomes increasingly important to learn what is going on. Are multiple proceedings forcing patent holders into improvident settlements? Are reverse trolls extracting nuisance payments? Are patent holders paying off petitioners to drop challenges that would have led to the cancellation of claims? As noted earlier, the PTO does not necessarily terminate review

351 See Lee, *supra* note 37.

352 See *Microsoft Corp. v. Proxyconn, Inc.*, Nos. IPR2012-00026 & -00109 (P.T.A.B. Feb. 19, 2014), *rev'd*, 789 F.3d 1292 (Fed. Cir. 2015) (reversing both decisions in a single opinion). Time pressure on the PTAB also forces the parties to narrow their arguments. Cf. *Nichia Corp v. Emcore Corp.*, No. IPR2012-00005, at 51 (P.T.A.B. Feb. 11, 2014) (rejecting a motion to amend claims because the submission caused unnecessary delay and noting that “[t]he burden should not be placed on the Board to sort through Emcore’s patent claims and proposed claims to determine which limitations are added and which limitations are eliminated”), *aff'd*, 599 F. App’x 959 (Fed. Cir. 2015).

353 35 U.S.C. § 315(d) (2012) (regarding IPR); *id.* § 325(d) (regarding PGR); *Conopco, Inc. DBA Unilever v. Proctor & Gamble Co.*, No. IPR2014-00507 (P.T.A.B. July 7, 2014) (using discretionary power to refuse to institute repetitive challenge); Matal, *supra* note 7, at 614 (quoting 157 Cong. Rec. S1042 (daily ed. Mar. 1, 2011) (statement of Senator Kyl) (asserting that the AIA protects against multiple challenges)).

354 35 U.S.C. § 317(b) (regarding IPR); *id.* § 327(b) (regarding PGR).

355 *Id.* Not all agreements are confidential. See, e.g., *MeridianLink v. DH Holdings, LLC*, No. CBM2013-00008 (P.T.A.B. June 24, 2013) (institution decision). The parties in *MeridianLink* settled after the PTAB instituted on some, but not all claims. *MeridianLink*, No. CBM2013-00008. However, it is difficult to draw conclusions from the agreements that are available because the significance of selection effects is difficult to assess.

upon settlement (*Cuozzo* was such a case),³⁵⁶ but the decision to terminate is discretionary.³⁵⁷ With more information about the terms of past settlements, the PTO might, in the future, choose to ask for more information before agreeing to terminations.

The PTO cannot, however, alter the statutory terms of estoppel. Furthermore, it is unlikely to interpret them in ways that significantly cut down on the number of potential challenges or challengers. A broad rule on access has an important benefit: it provides more opportunity to ensure the quality of issued patents. It opens the system to parties with a variety of perspectives on the impact of patents on the public interest. Moreover, it forces the PTO to engage with the consumers of the patent system and to consider arguments that its ordinary “customers”—the patent community—would be unlikely to raise.

B. Public Interest Considerations

The last observation is significant: it suggests that Damocles’ sword has two edges. Congress enacted these procedures because it was concerned that patents of dubious validity were inhibiting innovation and taxing lawful enterprises. Complaints about NPEs asserting poor-quality patents, bringing bogus infringement actions, and extorting licenses had captured legislative attention. Further, there was concern that the cost of challenging these patents in court was too high, that small firms could not afford it and even large ones were waiting to see, hoping someone else would incur the costs so they could free ride on the result.³⁵⁸ The *Myriad* case³⁵⁹ exposed another flaw: because standing in court largely limits the class of potential challengers to entities within the same industrial sector as the patent holder, no one raises questions that call the entire industry’s holdings into question. By the time someone manages, so many patents may have issued, the judges become reluctant to invalidate them.³⁶⁰

Thus, while Congress could protect patent holders from multiple attacks by revising the AIA to limit standing and the PTO could probably, by regulation, enlarge the scope of privity or the concept of real party in interest, these changes would undermine core rationales for establishing the procedures. To put this another way, organizations like RPX, EFF, the Coalition for

356 See *supra* note 255.

357 *Oracle Corp. v. Cmty. United IP.*, No. CBM2013-00015 (P.T.A.B. July 25, 2013) (termination of proceeding).

358 *Patent Trolls: Fact or Fiction? Hearing Before the Subcomm. on Courts, the Internet & Intellectual Property of the Comm. on the Judiciary*, 109th Cong. 1–3 (2006) (statement of Rep. Lamar Smith, Chairman, H. Subcomm. on Courts, the Internet, and Intellectual Prop.).

359 *Ass’n for Molecular Pathology v. Myriad Genetics, Inc.*, 133 S. Ct. 2107 (2013).

360 See *Ass’n for Molecular Pathology v. U.S. Patent & Trademark Office*, 689 F.3d 1303, 1343 (Fed. Cir. 2012) (“If I were deciding this case on a blank canvas, I might conclude that an isolated DNA sequence that includes most or all of a gene is not patentable subject matter.” (Moore, J., concurring and holding DNA sequences patentable)), *aff’d in part, rev’d in part*, 133 S. Ct. 2107 (2013).

Affordable Drugs, and Unified Patents are, in a sense, the “good guys” in that they solve the collective action problem by pooling the resources of their members. Unified, for example, uses its subscription fees to

monitor troll activity, investigate prior art, challenge troll-owned patents in the U.S. Patent and Trademark Office through ex-parte reexamination and *inter partes* review, and purchase patents before trolls can (but never to purchase patents *from* trolls). When Unified purchases a patent, all . . . members receive an immediate, perpetual license to that patent.³⁶¹

The Electronic Frontier Foundation claims to be saving podcasting;³⁶² the Coalition says it is attacking “pharmaceutical companies sitting on ridiculous patents that are stealing from the American public.”³⁶³ Admittedly, it is important to distinguish between these *defensive* patent aggregators and reverse trolls, who may be using the threat of an IPR for extortionate purposes. One reason to look carefully at what is happening in settlement is to identify criteria that would enable the PTO to sort the cases accurately and in ways that protect the interests of both the public and the patent holder.

If the public value of these procedures is to be maintained, three other matters require attention. First is the question of cost. In most of these cases, the parties rely on several experts, and they often use as much discovery and engage in as much motion practice as the rules and the PTAB permit. As noted earlier, the cost of multiple actions is a heavy imposition on patent holders. But the high cost of pursuing these actions (which also involve filing fees³⁶⁴) may also discourage challengers, especially public interest groups, such as the ones that brought the *Myriad* case (the American Civil Liberties Union and coalitions of scientists interested in conducting fundamental research with the isolated genes *Myriad* had patented).

In very strong cases, these would-be challengers could bypass these procedures and sue in court, with the intent of asking for judgment on the pleadings. Where the grounds for invalidation are based entirely on recent case law (such as *Alice*), an evidentiary record may be unnecessary. Indeed, courts have shown themselves receptive to that approach.³⁶⁵ Litigation has a significant advantage: it avoids having to make anticipatory arguments and

361 MARTA BELCHER & JOHN CASEY, HACKING THE PATENT SYSTEM 4 (May 2014), https://www.eff.org/files/2014/05/29/hacking_the_patent_system.pdf.

362 See Michael Lipkin, *EFF Wins PTAB Attack Against Podcasting Patent*, LAW360 (Apr. 10, 2015), <http://www.law360.com/articles/642071/eff-wins-ptab-attack-against-podcasting-patent> (referencing Elec. Frontier Found. V. Personal Audio, LLC, No. IPR2014-00070 (P.T.A.B. Apr. 18, 2014)).

363 Loney, *supra* note 315, at 4 (quoting Kyle Bass).

364 37 CFR § 42.15 (2014). While the fees start relatively low, they rise with the number of claims challenged. For example, requesting an IPR costs \$9000, with a post institution fee of \$14,000. But requests for IPR review of claims in excess of 20 costs \$200 per claim plus a post-institution fee of \$400 for each claim in excess of 15. CBMs are substantially more expensive. *Id.*

365 See *buySAFE, Inc. v. Google, Inc.*, 765 F.3d 1350, 1355 (Fed. Cir. 2014) (affirming a judgment on the pleadings under Federal Rule of Civil Procedure 12(c) and invalidating claims on the basis of *Alice*).

lining up evidence and witnesses so the process can go forward on a tight time frame. The litigation route will not, however, be effective in cases where the lower burden of proof available in the PTAB is critical. Accordingly, the PTO might consider instituting an analogue to judgment on the pleadings. For example, it could develop a fast track for challenges that do not require the kinds of preparation currently devoted to so many of the cases.

Second is the question of attorney choice. Appearance before the PTAB is limited to practitioners registered to practice before the PTO, even though petitions rarely raise issues that only a patent prosecutor can answer. While the Board may recognize backup (but not lead) counsel *pro hac vice*³⁶⁶ and has done so in many proceedings, the requirement limits the choices both parties can make and increases their costs. In many of these reviews, both sides are already involved in litigation, so the requirement can force them to add a new member to the team and invest in bringing him or her up to speed. Also troubling is that only attorneys with “established familiarity with the subject matter at issue in the proceeding” can be recognized *pro hac vice*,³⁶⁷ for this limitation raises the question whether attorneys for groups like the American Civil Liberties Union, the Association for Molecular Pathology, or university counsel will be allowed to appear on behalf of researchers or the public. If not, then the rule will tend to limit the type of issues raised to ones that the patent system already considers on a regular basis.

Even more important is the question of appellate jurisdiction over PTAB decisions. The AIA contemplates broad authority to appeal. It provides that “[a] party dissatisfied with the final written decision” may appeal and “[a]ny party to the . . . review shall have the right to be a party to the appeal.”³⁶⁸ The Federal Circuit has, however, been extremely skeptical of patent challengers,³⁶⁹ and its decision in *Consumer Watchdog v. Wisconsin Alumni Research Foundation*³⁷⁰ (WARF) could make these procedures profoundly unattractive as a means of protecting the public interest.

In that case, a “not-for-profit public charity dedicated to providing a voice for taxpayers and consumers in special interest-dominated public discourse, government and politics,”³⁷¹ challenged WARF’s stem cell patents, which have historically created a substantial obstacle to important life sciences research. The charity lost before the PTAB; when it sought to appeal,

366 37 CFR § 42.10(c).

367 *Id.*

368 35 U.S.C. § 319 (2012) (regarding IPR); *id.* § 329 (regarding PGR).

369 *See, e.g.,* *Medtronic Inc. v. Bos. Sci. Corp.*, 695 F.3d 1266, 1273 (Fed. Cir. 2012) (shifting the burden of proof in a declaratory judgment action for noninfringement), *rev’d sub nom.,* *Medtronic Inc. v. Mirowski Family Ventures, LLC*, 134 S. Ct. 843 (2014); *MedImmune, Inc. v. Genentech, Inc.*, 427 F.3d 958, 964 (Fed. Cir. 2005) (denying standing to licensees seeking to bring declaratory judgment action for invalidity), *rev’d, MedImmune Inc. v. Genentech, Inc.*, 549 U.S. 118 (2007); *see also generally* Burstein, *supra* note 16.

370 753 F.3d 1258 (Fed. Cir. 2014).

371 *Id.* at 1260.

it was denied the right to do so on the ground it lacked standing.³⁷² The patent was upheld in a *reexamination*, and not in one of the new procedures. However, the reexamination statute likewise gives participants a right to appeal.³⁷³ That provision made no difference to the Federal Circuit. Citing *Lujan v. Defenders of Wildlife*³⁷⁴ for the proposition that Congress cannot evade the constitutional limits set out in Article III and *Hollingsworth v. Perry*³⁷⁵ for the principle that the same “constitutional requirements for standing apply on appeal, just as they do before district courts,”³⁷⁶ Judge Rader reasoned that because Consumer Watchdog is not itself engaged in research or commercial activities involving stem cells, it had not sustained an injury in fact, traceable to the challenged action, that could be redressed by judicial action. Thus, he concluded it did not have standing to appeal.

The Supreme Court denied certiorari in the case.³⁷⁷ However, the outcome certainly bears reconsideration in the context of the new procedures, for the inability to appeal will surely chill their use by parties Congress may have been particularly interested in attracting. Significantly, neither *Lujan* nor *Hollingsworth* is directly on point. *Lujan* involved standing to bring an action in an Article III trial court; *Hollingsworth* concerned the right of a party that had not participated in the trial to appeal the district court’s decision. Thus, neither case addressed the right of a party who had suffered judgment to have the adverse decision reviewed. In contrast, the facts in *ASARCO Inc. v. Kadish*³⁷⁸ (which Judge Rader failed to cite) are much closer to those of *Consumer Watchdog*. In *ASARCO*, the Court found jurisdiction to review a state court judgment that invalidated a mining claim, even though under Article III, the petitioners could not have raised their federal question in a federal court in the first instance. The Court applied the *Lujan* analysis (in that sense, the Federal Circuit was correct). However, the Court analyzed the case from an appellate perspective, taking into account the parties’ position *after* the state court judgment was rendered. According to the Court,

[I]t is undisputed that the decision to be reviewed poses a serious and immediate threat to the continuing validity of [petitioners’ interests] The state proceedings ended in a declaratory judgment adverse to petitioners, an adjudication of legal rights which constitutes the kind of injury cognizable in this Court on review from the state courts.³⁷⁹

372 *Id.* at 1261–62; *see also generally* Karl Bergman & Gregory D. Graff, *The Global Stem Cell Patent Landscape: Implications for Efficient Technology Transfer and Commercial Development*, 25 NATURE BIOTECHNOLOGY 419 (2007).

373 35 U.S.C. § 315(b) (1999) (current version at 35 U.S.C. § 315(b) (2012)).

374 504 U.S. 555, 560 (1992).

375 133 S. Ct. 2652 (2013).

376 *Consumer Watchdog*, 753 F.3d at 1260–61.

377 *Consumer Watchdog v. Wis. Alumni Research Found.*, 135 S. Ct. 1401 (2015).

378 490 U.S. 605 (1989).

379 *Id.* at 618; *see also* Joan Steinman, *Shining a Light in a Dim Corner: Standing to Appeal and the Right to Defend a Judgment in the Federal Courts*, 38 GA. L. REV. 813, 839 (2004) (“Unlike standing to sue, which typically attaches to claims, standing to appeal attaches to discrete rulings and issues.”); *cf.* *United States v. Windsor*, 133 S. Ct. 2675, 2686 (2013)

The Court therefore held the petitioners had standing to appeal.

A challenger who loses in the PTAB is in a very similar position to the parties that sought review in *ASARCO*. As we saw, the estoppel effect of PTAB decisions is triggered by the final written decision. Thus, under the statute, the challenger can no longer seek to invalidate the patent claim on any ground it raised—or for PRGs and IPRs, reasonably could have raised—during the PTAB proceeding. Furthermore, in both PRGs and IPRs, the parties who are in privity with the challenger or are considered its real parties in interest are also estopped. In an RPX-type case, for example, that would include RPX members such as Apple. If the concept of privity were expanded as described in the previous Part to protect patent holders from abuse, it would also include other RPX subscribers, all of whom would have to seek licenses to practice patents that may, in fact, be invalid.

Arguably, a party that does not have the right to appeal ought not be estopped. However, it is far from clear the Federal Circuit would see things that way. There is, after all, no federal right to an appeal. Moreover, *ASARCO* dealt with a very similar argument and rejected it on the ground that removing the preclusive effect of the state court judgment would undercut it and, in effect, impose federal standing requirements on a tribunal that is not subject to Article III.³⁸⁰ Furthermore, even if the challengers were not technically precluded, the PTAB judgment could have effects equally adverse to the interests of the challenger, its privies, and its real parties in interest—indeed, adverse to the interests of all members of the relevant industry. Given the lower burden of proof and broader claim construction used by the PTAB (as well as the win/loss statistics presented above), any patent that survives PTAB review becomes essentially “bullet proof.” No jury, for example, is likely to find a patent invalid after being told that the experts on the PTAB (indeed, a “death squad”) had upheld it.³⁸¹

To be sure, there are important differences between *ASARCO* and *Consumer Watchdog*. While the PTAB, like a state court, is a non-Article III tribunal, the respect that the Supreme Court accords to the decisions of the courts of other sovereigns is unlikely to be conferred on the Board, which is merely an arm of a federal administrative agency. Furthermore, in *ASARCO*, the lower court had *invalidated* the petitioners’ mining claims. Thus, they were directly injured by the decision. Because the lower tribunal had *upheld* the patent claim, the harm to *Consumer Watchdog* is different. Nonetheless, a

(permitting the United States to appeal a decision on the constitutionality of the Defense of Marriage Act even though the Executive agreed with the trial court); *Camreta v. Greene*, 131 S. Ct. 2020, 2030 (2011) (permitting a winning party to appeal a decision on qualified immunity in order to dispositively establish the boundaries of a doctrine that will “have a significant future effect”).

380 *ASARCO*, 490 U.S. at 622.

381 *Cf. Gunn v. Minton*, No. 133 S. Ct. 1059 (2013). In *Gunn*, the Supreme Court was not concerned about the effect of a state court decision on a patent law matter. Unlike the PTAB, which deserves considerable deference on its patentability determinations, state court determinations of patent issues have little influence on how federal courts analyze them. *See id.*

validated patent causes harm that is immediate and concrete. For example, the patents RPX was challenging had already been enforced against Apple successfully.

Significantly, the Supreme Court has long endorsed special rules on justiciability in particular classes of cases,³⁸² and these appear to include patent validity cases. As Justice Brennan pointed out in *Franchise Tax Board v. Construction Laborers Vacation Trust*, federal courts have always adjudicated claims of invalidity brought by *alleged* (not merely proven) patent infringers.³⁸³ In *Cardinal Chemical Co. v. Morton International Inc.*, the Supreme Court, having “identified a strong public interest in the finality of judgments in patent litigation,” prevented the Federal Circuit from vacating a finding of patent invalidity, even though the decision in the case rested on the adequate and independent ground that the patent was not infringed.³⁸⁴ The Court was concerned that if the patent was not invalidated, it would “impose[] ongoing burdens.”³⁸⁵ Similarly, in *Electrical Fittings Corp. v. Thomas & Betts Co.*, the Court permitted the party that had won below on a finding of noninfringement to pursue an appeal in order to have a judgment of validity vacated.³⁸⁶ It is also worth noting that the Federal Circuit’s several attempts to restrict the availability of declaratory judgments of invalidity have been rebuffed by the Supreme Court on the theory that “the public . . . has a paramount interest in seeing that patent monopolies . . . are kept within their legitimate scope.”³⁸⁷

Finally, narrowing standing in these cases would not serve the goals of Article III and could do serious mischief.³⁸⁸ While standing is often thought to have a gatekeeping dimension, fees, coupled with the criteria for institution, effectively filter out frivolous challenges. Article III is also said to play a role in screening out cases raising federalism concerns, but patents are federal rights that preempt state law.³⁸⁹ Nor does a narrow standing rule protect the integrity of the adjudicatory system the way that barring ideological

382 See, e.g., *Flast v. Cohen*, 392 U.S. 83, 105–06 (1968) (recognizing taxpayer standing in a class of Establishment Clause cases); see also generally Richard H. Fallon, Jr., *How to Make Sense of Supreme Court Standing Cases—A Plea for the Right Kind of Realism*, 23 WM. & MARY BILL RTS. J. 105, 116, 120, 125 (2014) (giving examples of suits to enjoin criminal prosecutions, appeals by the government when money is at stake, and suits to remove a cloud over an important industry).

383 *Franchise Tax Bd. v. Constr. Laborers Vacation Tr.*, 463 U.S. 1, 19 n.19 (1983).

384 *Cardinal Chem. Co. v. Morton Int’l, Inc.*, 508 U.S. 83, 100 (1993) (relying on *Blonder-Tongue Laboratories, Inc. v. University of Illinois Foundation*, 402 U.S. 313 (1971), which was also concerned with the effect of invalid patents on third parties).

385 *Cardinal Chem.*, 508 U.S. at 101.

386 *Elec. Fittings Corp. v. Thomas & Betts Co.*, 307 U.S. 241 (1939).

387 *Medtronic Inc. v. Mirowski Family Ventures LLC*, 134 S. Ct. 843, 851 (2014) (alteration in original) (internal quotation marks omitted) (quoting *Precision Instrument Mfg. Co. v. Auto. Maint. Mach. Co.*, 324 U.S. 806, 816 (1945)).

388 See Lea Brilmayer, *The Jurisprudence of Article III: Perspectives on the “Case or Controversy” Requirement*, 93 HARV. L. REV. 297, 306 (1979); Steinman, *supra* note 379, at 829–31.

389 *Bonito Boats, Inc. v. Thunder Craft Boats, Inc.*, 489 U.S. 141, 152 (1989).

litigants sometimes protects the judiciary from manipulation. Quite the contrary: if the participation of these litigants is chilled, the PTO will once again hear only from those it regulates.³⁹⁰ Instead of being exposed to broader, public-interest-based considerations, the PTO will become as subject to capture as it was before these procedures were instituted. Additionally, these proceedings are important in part because they ameliorate the collective-action problem that the Supreme Court created with its decision in *Blonder-Tongue Laboratories, Inc. v. University of Illinois Foundation* to give nonparties the benefit of a judgment invalidating a patent.³⁹¹ It would be ironic if the Court's Article III standing jurisprudence stood in the way of mitigating *Blonder-Tongue's* damaging side effect.

While Congress cannot ignore the requirements of Article III, the question of who has standing to appeal raises very close questions; the court that considers them would do well to take account of the reasons these procedures were crafted as they were.³⁹² At the very least, the Federal Circuit should look behind the interests of the named petitioner. Unlike other cases involving standing to appeal agency actions, where evidence on the party's relationship to the decision is not readily ascertainable,³⁹³ these procedures require the petition to identify the parties and related matters that would be affected by the proceeding.³⁹⁴

CONCLUSION

As a member of the National Academies Committee that brought attention to the need for (what was then called) post-grant opposition, I read these decisions with deep satisfaction. The PTAB is, indeed, the "technologically sophisticated environment" in which questionable claims can be efficiently challenged.³⁹⁵ The judges display considerable familiarity with the technologies at issue and bring to the adjudication a deep understanding of patent jurisprudence. As the statistics suggest, the petitions target patents of genuinely dubious value. The cases also restore a degree of public confidence in the patent system. For example, while the PTAB has instituted a large number of challenges to patents owned by NPEs, the invalidation rate for these patents has not been particularly high, suggesting that the so-called

390 Brilmayer, *supra* note 388, at 316. Brilmayer observes that standing is more likely to be granted when the issue will not otherwise be litigated—precisely the fear sparked by the Federal Circuit's reluctance to find standing in *Myriad*. *Id.*

391 402 U.S. 313 (1971).

392 *Cf. Lujan v. Defs. of Wildlife*, 504 U.S. 555, 580 (1992) (Kennedy, J., concurring in part and concurring in the judgment) ("In my view, Congress has the power to define injuries and articulate chains of causation that will give rise to a case or controversy where none existed before, and I do not read the Court's opinion to suggest a contrary view.").

393 *See* Amy J. Wildermuth & Lincoln L. Davies, *Standing on Appeal*, 2010 U. ILL. L. REV. 957, 965–66.

394 *See* 35 U.S.C. § 312(a)(3) (2012) (regarding IPR); *id.* § 322(a)(3) (regarding PGR); 37 CFR §§ 42.8(b)(1)–(2) (2012).

395 *See supra* note 7 and accompanying text.

trolls may, in fact, be doing more good (by monetizing patent holdings and lowering transaction costs) than harm.

Still, there are many issues that demand further thought. So far, the Federal Circuit has displayed significant reluctance about sharing its authority. Nevertheless, there are both institutional and normative reasons to give the Patent Office a larger role in the development of patent jurisprudence and to allow the PTAB to serve as a true partner in improving patent law and the administration of justice. PTAB decisions are technically superb and offer opportunities for dialogue among courts on open questions, including implementation of Supreme Court cases and the substantive provisions of the AIA. However, the PTAB hews closely to the Federal Circuit tradition of suppressing all discussion of policy. As a result, percolation is not likely to be as effective as it might be. Difficult institutional questions are raised by injecting inter partes adjudication in a specialized agency into a system that also benefits from an expert appellate body.

The multiplicity of procedures creates a great deal of complexity. The rules on estoppel, although fairly detailed, nonetheless expose patent holders to multiple challenges. While there are several straightforward ways to achieve greater repose, the solutions tend to come at the expense of the public interest in weeding out bad patents and the benefits of exposing the PTO to a broader array of concerns. Finding the right balance will therefore be difficult. For both patent holders and challengers, cost is also a significant factor. While the procedures are less costly than litigation, the expense may discourage some challengers and impair the innovation industry's ability to defend—or indeed, to rely on patents to protect business interests. For district courts, multiple proceedings make it difficult to decide when to impose a stay or dissolve it. It may be possible to revise the procedures in ways that promote consolidation, but there are tradeoffs between efficiency and effective process.

While this Article attempted to look beyond the numbers, there is much further work to be done looking at the numbers. Empirical attention to how these challenges proceed could tease out information that might help bring down costs. More analysis of who is using the system would help answer questions about whether the opportunities for harassment outweigh the benefits, especially given the federal courts' current receptivity to judgment on the pleadings. The settlements in particular cry out for investigation. As the numbers rise, the question whether the settlements are abusive, collusive, or improvident becomes increasingly pressing. These procedures also create mixed incentives. Their availability may encourage more careful drafting and due diligence—or they may encourage patent holders to create deeper portfolios of rights in an effort to raise the cost of effectively challenging their exclusivity. Empirical work is necessary to determine which effect dominates.

The PTAB is, indeed, well positioned to give the Federal Circuit a run for its money. It will be interesting to see how the Board tackles the many

substantive questions the AIA raised and how its decisions are received by the Federal Circuit and the Supreme Court.

The Patent Trial and Appeal Board’s Evolving Impact on Claim Construction

Timothy R. Holbrook*

I. Introduction.....	301
II. Claim Construction in the Courts and at the USPTO	303
A. Claim Construction in the Courts and the Phillips Hierarchy	304
B. USPTO’s Claim Construction Methodology.....	309
III. Wither Prosecution Disclaimer?	312
A. Marine Polymer and the Federal Circuit’s Characterization of USPTO Practice	312
B. Unintended Consequences? PTAB Panels Use Marine Polymer to Per Se Reject Disclaimer	317
C. The Potential Impact of PTAB These Dynamics on Broader Claim Construction	320
IV. <i>Cuozzo, B & B Hardware</i> , and the Potential for Issue Preclusion in Claim Construction.....	322
A. <i>Cuozzo</i> – An Administrative, and Not a Patent, Law Decision	323
B. <i>B & B Hardware</i> Opens the Door to Issue Preclusion from Adversarial Administrative Proceedings.....	325
C. Could PTAB Claim Constructions Trigger Issue Preclusion in District Courts, Even Post- <i>Cuozzo</i> ?	328
V. Conclusion	331

I. Introduction

Claim construction – the process by which the meanings of terms in a patent claim are determined – is central to nearly every patent case.¹ Both validity and in-

* Professor of Law, Emory University School of Law.

¹ KIMBERLY A. MOORE, TIMOTHY R. HOLBROOK, & JOHN F. MURPHY, PATENT LITIGATION AND STRATEGY 321 (West, 4th ed. 2013).

fringement hinge on the meaning of the patent claims.² The development of the various doctrines governing claim construction generally has been the province of the courts. Although examiners, formerly the Board of Patent Appeals and Interferences (BPAI), and now the Patent Trial and Appeal Board (PTAB) at the U.S. Patent and Trademark Office (USPTO) often construe claims, they have had little impact on the development of claim construction doctrine more broadly. There are reasons for this lack of impact. Before the advent of quasi-adversarial procedures at the USPTO, examination tended to emphasize explicit claim construction less, focusing more on the give and take between the examiner and the applicant.³ Unlike the district courts, the USPTO also only deals with validity and not infringement, so the agency only confronts part of the claim scope issue. The USPTO also applies a unique claim construction standard for patent applications and extant patents, the “broadest reasonable interpretation” (BRI) standard.⁴ The rationale for this standard is that the USPTO is assessing the outer reaches of a patent claim to determine its validity, and the applicant is free to amend the claim to narrow its scope in response. This standard differs from that used in the district courts during litigation proceedings.

This situation seems poised to change. Because the relatively-new *inter partes* review (IPR) and post grant review (PGR) procedures are designed in ways to act as a cheaper alternative to district court litigation as to validity, these proceedings are garnering more attention and influence. The PTAB engages in far more formal claim construction than examiners had in the past. Recent decisions suggest that it is beginning to resist a key aspect of claim construction: prosecution disclaimer.⁵ If the PTAB begins to reject such disclaimers, then the district courts may come to view the record at the USPTO far differently regarding its claim construction. Moreover, the PTAB’s formal constructions potentially could serve as issue preclusion in related district court litigation, even with the BRI standard.

This Article explores the potential impact the PTAB could have on broader claim construction doctrine. It starts by offering an overview of claim construction in the courts and in the USPTO. It then considers the potential unintended consequence of a particular Federal Circuit decision, *Marine Polymer*. *Marine Polymer* decided a seemingly narrow question: whether the defense of intervening rights could be triggered only by a narrowing amendment at the USPTO or whether a dis-

² *Id.*

³ *In re Cuozzo Speed Techs., LLC*, 793 F.3d 1297, 1300 (Fed. Cir. 2015) (Newman, J., dissenting from rehearing en banc) (“Specifically, we have long explained that the broadest reasonable interpretation standard is a useful tool, prior to patent issuance, for clarifying the metes and bounds of an invention during the back-and-forth between the applicant and examiner when claims are not yet in their final form.”); *In re Buszard*, 504 F.3d 1364, 1368 (Fed. Cir. 2007) (“In other words, unlike a district court in an infringement suit, there is no need for the Board [or this court] to engage in a complicated, in-depth claim construction analysis during patent prosecution.”).

⁴ *Cuozzo Speed Techs., LLC v. Lee*, No. 15-446, 2016 WL 3369425, at *10 (U.S. June 20, 2016).

⁵ See generally Todd R. Miller, *The “Doctrine of Prosecution Disclaimer” in Construing Patent Claims*, 86 J. PAT. & TRADEMARK OFF. SOC’Y 931 (2004).

claimer of claim scope could also create intervening rights. The court decided the former such that disclaimers of claim scope, absent an amendment, do not trigger intervening rights. A number of PTAB decisions have taken this holding more broadly, prohibiting parties in IPR proceedings from arguing for any disclaimer. Patent holders in this position can be in a bit of a bind because the PTAB has also been very reluctant to allow patent claim amendments during IPR proceedings. If the Federal Circuit agrees with the PTAB's approach, it could signal a waning of the use of prosecution disclaimer.

The PTAB's approach presents some interesting issues that the next part of the Article explores. It examines the difference between a formal claim construction by an examiner or the PTAB versus the seemingly implicit construction that is reflected in prosecution disclaimer doctrine. At times the Federal Circuit has noted it is not bound by USPTO constructions yet, in estoppel-like fashion, it does bind the patent holder to potentially narrowing arguments made during a USPTO proceeding. What really is the difference? And if the USPTO is increasingly performing formal claim construction, what role, if any, remains for prosecution disclaimer? The estoppel provisions, and collateral estoppel, may step in to eliminate the use of prosecution disclaimer, as we have previously seen in claim construction, at least for those patents that go through IPR proceedings.⁶

Finally, this Article explores the potential for issue preclusion to arise from PTAB claim constructions. The Supreme Court recently affirmed the use of BRI in IPR proceedings, which means the claim construction standard between PTAB post-issuance proceedings and district courts will continue to differ.⁷ Nevertheless, the potential for issue preclusion remains. The Supreme Court held, in *B & B Hardware, Inc. v. Hargis Industries, Inc.*, that a decision by the Trademark Trial and Appeal Board (TTAB) can preclude relitigation of the issue of likelihood of consumer confusion, even though that standard varies widely across the country.⁸ This Article considers the parallel situation of PTAB claim construction determinations in light of that Supreme Court precedent, concluding that issue preclusion very well may arise from PTAB claim construction determinations.

II. Claim Construction in the Courts and at the USPTO

Claim construction is the means by which a decision-maker— a court, examiner, or the PTAB—assesses the meaning and scope of the claims in a patent. This section explores the methodology and standards used by the courts and the USPTO in construing patent claims.

⁶ An interesting empirical question is whether examiners in regular examination, reexamination, or reissuance proceedings are beginning to be more formal about their claim constructions in reaction to the more formal procedures used by the PTAB.

⁷ *Cuozzo*, 2016 WL 3369425, at *10.

⁸ 135 S.Ct. 1293 (2015); see *infra* notes 117-156 and accompanying text.

A. *Claim Construction in the Courts and the Phillips Hierarchy*

Claim construction is perhaps the single most important issue in patent litigation.⁹ It drives much of the argument in what have become known as *Markman* hearings in homage to the Supreme Court's decision giving judges, not juries, responsibility for interpreting a patent's claims.¹⁰ Claim construction, in theory, is relevant for both infringement and validity, and a court must interpret the claims as having the same scope for both inquiries. It is legal error to construe a claim one way for validity purposes and in a different way for infringement.

Unsurprisingly, the courts have produced a voluminous paper trail of judicial opinions interpreting patent claims. Commentators have also created a cottage industry of empirical and theoretical investigations into claim construction.¹¹ While one can question the consistency and predictability of claim construction within the courts, the methodology is well-established.

Patent claims are generally given their customary and ordinary meaning from the perspective of a person having ordinary skill in the art (PHOSITA) at issue.¹² When courts are construing the claims, in contrast to the USPTO, the goal is to —~~o~~ck out the correct construction—the construction that most accurately delineates the scope of the claimed invention."¹³ The primary evidence used to construe a patent claim is the public record, known as the intrinsic evidence. This includes the patent claims, the patent specification, and the record before the USPTO of the prosecution of the patent application (known as the —~~p~~rosecution history"). Intrinsic evidence is viewed as part of the purely legal aspect of claim construction, such that no deference is due a district court's evaluation of this record on appeal.¹⁴ A court

⁹ See Dan L. Burk & Mark A. Lemley, *Fence Posts or Sign Posts? Rethinking Patent Claim Construction*, 157 U. PA. L. REV. 1743, 1751 (2009) (“there is essentially always a dispute over the meaning of the patent claims.”).

¹⁰ See *Markman v. Westview Instruments*, 517 U.S. 370 (1996).

¹¹ A very small sample includes: J. Jonas Anderson & Peter S. Menell, *Informal Deference: A Historical, Empirical, and Normative Analysis of Patent Claim Construction*, 108 Nw. U. L. REV. 1 (2013); Burk & Lemley, *supra* note 9; Richard S. Gruner, *How High Is Too High?: Reflections on the Sources and Meaning of Claim Construction Reversal Rates at the Federal Circuit*, 43 LOY. L.A. L. REV. 981, 984 (2010); Jeffrey A. Lefstin, *Claim Construction, Appeal, and the Predictability of Interpretive Regimes*, 61 U. MIAMI L. REV. 1033 (2007); Kimberly A. Moore, *Markman Eight Years Later: Is Claim Construction More Predictable?*, 9 LEWIS & CLARK L. REV. 231 (2005); Kristen Osenga, *Linguistics and Patent Claim Construction*, 38 RUTGERS L.J. 61 (2006); David L. Schwartz, *Practice Makes Perfect? An Empirical Study of Claim Construction Reversal Rates in Patent Cases*, 107 MICH. L. REV. 223 (2008).

¹² See *Phillips v. AWH Corp.*, 415 F.3d 1303, 1312-13 (Fed. Cir. 2005) (“We have frequently stated that the words of a claim are generally given their ordinary and customary meaning.” We have made clear, moreover, that the ordinary and customary meaning of a claim term is the meaning that the term would have to a person of ordinary skill in the art. . . .”) (citations omitted).

¹³ *PPC Broadband, Inc. v. Corning Optical Commc'ns RF, LLC*, 815 F.3d 734, 740 (Fed. Cir. 2016).

¹⁴ See *Teva Pharm. USA, Inc. v. Sandoz, Inc.*, 135 S. Ct. 831, 841 (2015) (“As all parties agree, when the district court reviews only evidence intrinsic to the patent (the patent claims and specifications, along with the patent's prosecution history), the judge's determination will amount solely

may also rely on factual, extrinsic evidence such as treatises, other patents, dictionaries, and expert testimony.¹⁵

The starting point is, of course, the patent document itself. Most important are the claims in the patent, which serve to demarcate the scope of the patent holder's exclusive rights.¹⁶ The Federal Circuit has noted that a court should consider both the claims asserted in the case along with unasserted ones,¹⁷ as the language differences between them may shed light on the scope of the claims.¹⁸

In addition to the claims, the patent document also includes a description of the invention, known as the specification.¹⁹ The specification discloses and explains the claimed invention.²⁰ Because the patent is ~~a~~ fully integrated written instrument,²¹ a patent's claims, ~~must~~ be read in view of the specification.²² Thus, the specification is always highly relevant to the claim construction analysis. Usually, it is dispositive; it is the single best guide to the meaning of a disputed term.²³ The patent applicant can act as her own lexicographer, using the specification to afford a term a unique, particular meaning.²⁴ A patent applicant can also disavow claim scope through representations made in the specification.²⁵ Such surrender can operate in a manner akin to the way the prosecution history is used to narrow claim

to a determination of law, and the Court of Appeals will review that construction *de novo*.”).

¹⁵ *Id.*

¹⁶ See 35 U.S.C. § 112(b) (2013). See also Timothy R. Holbrook, *Patents, Presumptions, and Public Notice*, 86 IND. L.J. 779, 785 (2011) (“A claim acts as the metaphorical ‘fence’ that determines the scope of the patentee right.”).

¹⁷ See *Phillips v. AWH Corp.*, 415 F.3d 1303, 1314 (Fed. Cir. 2005) (en banc) (“Other claims of the patent in question, both asserted and unasserted, can also be valuable sources of enlightenment as to the meaning of a claim term.”).

¹⁸ See *id.* (“Differences among claims can also be a useful guide in understanding the meaning of particular claim terms.”).

¹⁹ See 35 U.S.C. § 112(b). Technically, the claims are part of the specification. The convention is to discuss the specification as if it is different from the claims, even though this is inaccurate.

²⁰ 35 U.S.C. § 112(a) (requiring a written description of the invention and of how to make and use it).

²¹ *Markman v. Westview Instruments, Inc.*, 52 F.3d 967, 978 (Fed. Cir. 1995) (en banc) *aff'd*, 517 U.S. 370 (1996).

²² *Id.* at 979.

²³ *Vitronics Corp. v. Conceptor, Inc.*, 90 F.3d 1576, 1582 (Fed. Cir. 1996).

²⁴ See *id.* (“Although words in a claim are generally given their ordinary and customary meaning, a patentee may choose to be his own lexicographer and use terms in a manner other than their ordinary meaning, as long as the special definition of the term is clearly stated in the patent specification or file history.”).

²⁵ See *Hill-Rom Servs., Inc. v. Stryker Corp.*, 755 F.3d 1367, 1371 (Fed. Cir. 2014) (“We depart from the plain and ordinary meaning of claim terms based on the specification in only two instances: lexicography and disavowal.”); *SciMed Life Sys., Inc. v. Advanced Cardiovascular Sys., Inc.*, 242 F.3d 1337, 1341 (Fed. Cir. 2001) (“Where the specification makes clear that the invention does not include a particular feature, that feature is deemed to be outside the reach of the claims of the patent, even though the language of the claims, read without reference to the specification, might be considered broad enough to encompass the feature in question.”). For a discussion of the evolution of this doctrine, see Timothy R. Holbrook, *Substantive Versus Process-Based Formalism in Claim Construction*, 9 LEWIS & CLARK L. REV. 123, 139-43 (2005).

scope, although such surrender is not volitional and may arise for reasons unrelated to patentability.²⁶

Turning to the role of the prosecution history in claim construction, a court may also consider the prosecution history of the patent to inform its analysis.²⁷ The prosecution history, while important, is viewed as secondary to the specification and claims.²⁸ Nevertheless, it is part of the intrinsic evidence and is to be considered if available and in evidence.²⁹ Anything within the prosecution record is considered part of the intrinsic record, including other patents and prior art cited during the prosecution.³⁰ The prosecution history of patents related to the patent-at-issue may also be considered.³¹

Generally, the use of the prosecution history is uncontroversial. The Supreme Court has long used the prosecution history to limit the scope of a patent,³² particu-

²⁶ See Holbrook, *supra* note 25, at 142-44. Cf. Warner-Jenkinson Co. v. Hilton Davis Chem. Co., 520 U.S. 17, 30-31 (1997) (“In each of our cases cited by petitioner and by the dissent below, prosecution history estoppel was tied to amendments made to avoid the prior art, or otherwise to address a specific concern—such as obviousness—that arguably would have rendered the claimed subject matter unpatentable.”).

²⁷ See *Markman*, 52 F.3d at 980 (“[T]he court should also consider the patent’s prosecution history, if it is in evidence.”).

²⁸ See *Phillips*, 415 F.3d at 1317 (“[B]ecause the prosecution history represents an ongoing negotiation between the PTO and the applicant, rather than the final product of that negotiation, it often lacks the clarity of the specification and thus is less useful for claim construction purposes.”).

²⁹ *Id.* (“Nonetheless, the prosecution history can often inform the meaning of the claim language by demonstrating how the inventor understood the invention and whether the inventor limited the invention in the course of prosecution, making the claim scope narrower than it would otherwise be.”).

³⁰ See *Vitronics Corp.*, 90 F.3d at 1583 (“Included within an analysis of the file history may be an examination of the prior art cited therein.”).

³¹ See, e.g., *Regents of U. of Minnesota v. AGA Med. Corp.*, 717 F.3d 929, 942 (Fed. Cir. 2013) (“We have also held that a disclaimer made during the prosecution of a patent application may operate as a disclaimer with respect to later patents of the same family.”); *Netcraft Corp. v. eBay, Inc.*, 549 F.3d 1394, 1401-02 (Fed. Cir. 2008). The claim language in the related applications must be similar to trigger disclaimer. *Regents of U. of Minnesota*, F.3d 929 at 943 (“Thus, our cases establish that the two patents must have the same or closely related claim limitation language. If the language of the later limitation is significantly different, the disclaimer will not apply.”). Courts have also relied upon the prosecution histories of related patent applications from foreign patent offices, though such records would be extrinsic evidence. See, e.g., *Tanabe Seiyaku Co. v. U.S. Int’l Trade Comm’n*, 109 F.3d 726, 733 (Fed. Cir. 1997) (“In the present case, the representations made to foreign patent offices are relevant to determine whether a person skilled in the art would consider butanone or other ketones to be interchangeable with acetone in Tanabe’s claimed N-alkylation reaction.”); *Caterpillar Tractor Co. v. Berco, S.P.A.*, 714 F.2d 1110, 1116 (Fed. Cir. 1983). See generally Timothy R. Holbrook, *Territoriality Waning? Patent Infringement for Offering in the United States to Sell an Invention Abroad*, 37 U.C. DAVIS L. REV. 701, 714-17 (2004) (discussing examples of use of foreign prosecution histories). But see, *Pfizer, Inc. v. Ranbaxy Labs. Ltd.*, 457 F.3d 1284, 1290 (Fed. Cir. 2006) (“[T]he statements made during prosecution of foreign counterparts to the ‘893 patent are irrelevant to claim construction because they were made in response to patentability requirements unique to Danish and European law.”).

³² See *Schreiber-Schroth Co. v. Cleveland Trust Co.*, 311 U.S. 211, 220-221 (1940); *Goodyear Dental Vulcanite Co. v. Davis*, 102 U.S. 222, 227 (1880) (“We do not mean to be understood as asserting

larly with respect to equivalents available to a patent holder under the doctrine of prosecution history estoppel.³³ The Supreme Court has only applied the prosecution history in this limiting fashion in the presence of actual claim amendments.

The Federal Circuit takes a more capacious view of the use of prosecution history and has extended its relevance beyond the Supreme Court's applications. Under the Federal Circuit's jurisprudence, arguments made during the prosecution history alone can result in the surrender of certain equivalents.³⁴ Such argument-based surrender differs from the Supreme Court's approach in terms of prosecution history estoppel because courts —d not presume a patentee's arguments to surrender an entire field of equivalents through simple arguments and explanations to the patent examiner."³⁵ The Federal Circuit justifies the use of the prosecution history in this way on the basis of public notice: —p prosecution disclaimer promotes the public notice function of the intrinsic evidence and protects the public's reliance on definitive statements made during prosecution."³⁶

The Federal Circuit has dubbed the use of the prosecution history in this estoppel-like function —p prosecution disclaimer."³⁷ The court has expressly drawn comparisons between prosecution history estoppel as a limit on the doctrine of equiva-

that any correspondence between the applicant for a patent and the Commissioner of Patents can be allowed to enlarge, diminish, or vary the language of a patent afterwards issued. Undoubtedly a patent, like any other written instrument, is to be interpreted by its own terms. But when a patent bears on its face a particular construction, inasmuch as the specification and claim are in the words of the patentee, it is reasonable to hold that such a construction may be confirmed by what the patentee said when he was making his application."

³³ See, e.g., *Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co.*, 535 U.S. 722, 733 (2002) ("Es-toppel is a rule of patent construction that ensures that claims are interpreted by reference to those that have been cancelled or rejected.") (quoting *Schriber-Schroth Co. v. Cleveland Trust Co.*, 311 U.S. 211, 220–221 (1940)); *Warner-Jenkinson*, 520 U.S. at 30 ("We can readily agree with petitioner that *Graver Tank* did not dispose of prosecution history estoppel as a legal limitation on the doctrine of equivalents."); see also *Omega Eng'g, Inc. v. Raytek Corp.*, 334 F.3d 1314, 1323 (Fed. Cir. 2003) ("The doctrine of prosecution disclaimer is well established in Supreme Court precedent, precluding patentees from recapturing through claim interpretation specific meanings disclaimed during prosecution."). The doctrine of equivalents affords protection to a patent that does not literally cover a particular device but nevertheless is viewed as insubstantially different. See *Warner-Jenkinson*, 520 U.S. at 1054 ("An analysis of the role played by each element in the context of the specific patent claim will thus inform the inquiry as to whether a substitute element matches the function, way, and result of the claimed element, or whether the substitute element plays a role substantially different from the claimed element."). See generally Timothy R. Holbrook, *Equivalency and Patent Law's Possession Paradox*, 23 HARV. J.L. & TECH. 1, 16 (2009) ("Specifically, if a limitation of the claim is not literally present in the accused device, there may yet be infringement if that component is considered equivalent to what was claimed.").

³⁴ See *Deering Precision Instruments, L.L.C. v. Vector Distribution Sys., Inc.*, 347 F.3d 1314, 1326 (Fed. Cir. 2003) ("To invoke argument-based estoppel, the prosecution history must evince a clear and unmistakable surrender of subject matter.") (quoting *Eagle Comtronics, Inc. v. Arrow Comm'n. Labs., Inc.*, 305 F.3d 1303, 1316 (Fed. Cir. 2002)).

³⁵ *Conoco, Inc. v. Energy & Env'tl. Int'l, L.C.*, 460 F.3d 1349, 1364 (Fed. Cir. 2006).

³⁶ *Omega Eng'g, Inc. v. Raytek Corp.*, 334 F.3d 1314, 1324 (Fed. Cir. 2003).

³⁷ See Holbrook, *supra* note 16, at 137–39 (exploring the evolution of prosecution disclaimer doctrine).

lents and prosecution disclaimer as a limit on literal claim scope.³⁸ The disclaimer can arise even if the USPTO did not rely upon the representations.³⁹ The standard for surrender, though, is exacting.⁴⁰ Claim scope is only lost if there is a clear and unmistakable surrender.⁴¹ If there is some ambiguity in the statement, then there will be no disclaimer.⁴² Any statements must be quite clear to trigger any sort of surrender.⁴³

The use of the prosecution history is not limited to the original prosecution before the USPTO. The Federal Circuit has held that such disclaimer can arise in subsequent proceedings at the USPTO, including reissuance,⁴⁴ *ex parte* reexamination,⁴⁵ *inter partes* reexamination,⁴⁶ and, seemingly, IPR⁴⁷ and PGR.⁴⁸

³⁸ See *Trivascular, Inc. v. Samuels*, No. 2015-1631, 2016 WL 463539, at *4 (Fed. Cir. Feb. 5, 2016) (“The same general tenets that apply to prosecution history estoppel apply to prosecution history disclaimer.”); *Alpex Computer Corp. v. Nintendo Co.*, 102 F.3d 1214, 1221 (Fed. Cir. 1996) (“Just as prosecution history estoppel may act to estop an equivalence argument under the doctrine of equivalents, positions taken before the PTO may bar an inconsistent position on claim construction under § 112, ¶ 6.”).

³⁹ See *Fenner Inv., Ltd. v. Cellco P’ship*, 778 F.3d 1320, 1325 (Fed. Cir. 2015) (“However, the interested public has the right to rely on the inventor’s statements made during prosecution, without attempting to decipher whether the examiner relied on them, or how much weight they were given.”).

⁴⁰ See *Avid Tech., Inc. v. Harmonic, Inc.*, 812 F.3d 1040, 1045 (Fed. Cir. 2016) (“When the prosecution history is used solely to support a conclusion of patentee disclaimer, the standard for justifying the conclusion is a high one.”).

⁴¹ *Omega Eng’g, Inc.*, 334 F.3d at 1323 (disclaimer if “the patentee unequivocally imparted a novel meaning to those terms or expressly relinquished claim scope during prosecution.”).

⁴² See *Cordis Corp. v. Medtronic AVE, Inc.*, 339 F.3d 1352, 1359 (Fed. Cir. 2003) (“The statement is amenable to multiple reasonable interpretations and it therefore does not constitute a clear and unmistakable surrender.”).

⁴³ See *Gammino v. Sprint Comm’ns Co., L.P.*, 577 F. App’x 982, 989 (Fed. Cir. 2014) (“Gammino’s repeated and unqualified statements that his claimed invention will block all international calls extend beyond merely illuminating how the inventor understood the invention, Phillips, 415 F.3d at 1317, and provide an affirmative definition for the disputed claim terms.”); *Golden Bridge Tech., Inc. v. Apple Inc.*, 758 F.3d 1362, 1366 (Fed. Cir. 2014) (“However, this is not a typical IDS, and GBT did more than simply disclose potentially material prior art. It submitted its own stipulated construction of a claim term in the context of the particular patents being reexamined (267 patent) and prosecuted (427 patent). This is a clear and unmistakable assertion by the patentee to the PTO of the meaning and scope of the term preamble.”).

⁴⁴ See *AstraZeneca UK Ltd. v. Watson Labs., Inc.*, 905 F. Supp. 2d 589, 594 (D. Del. 2012) (exploring and rejecting disclaimer from reissuance); *Paradox Sec. Sys. Ltd. v. ADT Sec. Servs., Inc.*, 710 F. Supp. 2d 590, 602 (E.D. Tex. 2008) (disclaimer during reissuance proceeding).

⁴⁵ See *Golden Bridge Tech.*, 758 F.3d at 1366 (Fed. Cir. 2014) (disclaimer triggered by reexamination).

⁴⁶ See *Grober v. Mako Prods., Inc.*, 686 F.3d 1335, 1341 (Fed. Cir. 2012) (“Statements made during reexamination can also be considered in accordance with this doctrine.”).

⁴⁷ *Samuels v. Trivascular Corp.*, No. 13-CV-02261-EMC, 2015 WL 7015330, at *6 n.3 (N.D. Cal. Nov. 12, 2015) (“At least two judges in this District have noted that prosecution disclaimer has viability in IPR proceedings, even though an IPR is technically an adjudicative proceeding rather than an examination.”); *Evolutionary Intelligence, LLC v. Sprint Nextel Corp.*, No. C-13-03587, 2014 WL 4802426, at *4 (N.D. Cal. Sept. 26, 2014) (“Statements made by Evolutionary Intelli-

With IPRs and potentially PGRs more closely paralleling district court litigation, the role of claim construction at the USPTO is becoming more formal. The administrative judges of the PTAB generally offer specific claim construction determinations in response to the briefing of the parties in a manner very similar to the results of *Markman* hearings in district court litigation. The next section explores the rules of claim construction at the USPTO.

B. USPTO's Claim Construction Methodology

In construing a patent, the USPTO generally looks to the claim language and the specification, the two most important considerations per *Phillips*. During the initial examination, there is no prosecution history, of course, but even in post-grant settings for unexpired patents, however, the USPTO typically does not rely on earlier prosecution history in performing claim construction.⁴⁹ There is no formal rule against consulting earlier prosecution histories, and the Federal Circuit has suggested such consideration may be appropriate.⁵⁰ The PTAB has occasionally used earlier prosecution records in claim construction.⁵¹ But, for the most part, the PTAB does not rely upon prosecution records in the same way that district courts do, and it

gence during the IPR could disclaim claim scope, aid the court in understanding the meaning of the terms, or otherwise affect the interpretation of key terms.”). Comments made by a patent holder during inter partes reexamination proceedings can limit claim scope. *See Grober v. Mako Prods.*, 686 F.3d 1335, 1341 (Fed.Cir.2012) (“When a patentee makes a clear and unmistakable disavowal of scope during prosecution, a claim’s scope may be narrowed under the doctrine of prosecution disclaimer. Statements made during reexamination can also be considered in accordance with this doctrine. . . . [T]he doctrine of prosecution disclaimer only applies to unambiguous disavowals.”); *Pragmatus AV, LLC v. Yahoo! Inc.*, No. C-13-1176 EMC, 2014 WL 1922081, at *5 (N.D. Cal. May 13, 2014) (“The same should be true now that inter partes review, rather than inter partes reexamination, is in effect.”).

⁴⁸ There have been very few PGR proceedings, so there has yet to be occasion to assess whether disclaimer will arise. Given the similarity to IPR, however, one would expect it to apply to those proceedings as well.

⁴⁹ *See* 37 C.F.R. § 42.100(b) (2015) (“A claim in an unexpired patent shall be given its broadest reasonable construction in light of the specification of the patent in which it appears.”). Note the conspicuous failure to mention earlier prosecution records. *See, e.g., Corning Optical Comms. RF, LLC v. PPC Broadband, Inc.*, IPR2013-00342, 2014 WL 6680906, at *4 (Patent Tr. & App. Bd. Nov. 21, 2014) (discussing only claims and specification), *aff’d-in-part, vacated-in-part, and remanded* Nos. 2015-1361, 2015-1366, 2015-1368, 2015-1369, slip op. at 2 (Fed. Cir. Feb. 22, 2016).

⁵⁰ *See Tempo Lighting, Inc. v. Tivoli, LLC*, 742 F.3d 973, 978 (Fed. Cir. 2014) (“This court also observes that the PTO is under no obligation to accept a claim construction proffered as a prosecution history disclaimer, which generally only binds the patent owner. However, in this instance, the PTO itself requested Tivoli rewrite the ‘non-photoluminescent’ limitation in positive terms. Tivoli complied, and then supplied clarification about the meaning of the ‘inert to light’ limitation.”); *see also Microsoft Corp. v. Proxyconn, Inc.*, 789 F.3d 1292, 1298 (Fed. Cir. 2015) (“The PTO should also consult the patent’s prosecution history in proceedings in which the patent has been brought back to the agency for a second review.”).

⁵¹ *See, e.g., Apple, Inc. v. VirnetX Inc.*, IPR2014-00481, 2015 WL 5047986, at *6 (Patent Tr. & App. Bd. Aug. 24, 2015) (discussing, though rejecting, disclaimer arguments made by patent owner); *Hulu, LLC v. Intertainer, Inc.*, Appeal 2015-005565, 2015 WL 5734596, at *7 (Patent Tr. & App. Bd. September 29, 2015) (considering and rejecting prosecution disclaimer).

has made clear that they are not obligated in any way to follow such disclaimers.⁵² This failure to consider routinely earlier prosecution files further distances the USPTO claim construction from that of the courts.

Another key difference between the way the courts and the USPTO perform claim construction is the USPTO's application of the BRI for patent applications and unexpired issued patents.⁵³ It uses this standard not only in the initial examination but also in various post-issuance proceedings.⁵⁴ This has been the governing standard at the USPTO for over a century.⁵⁵ The USPTO uses this approach because the agency's role is to explore the outer boundaries of a patent or patent application to see where it may transgress the prior art.⁵⁶ Giving it the broadest, yet importantly reasonable, interpretation means that it will run afoul of more prior art, and the applicant can then amend the claims to narrow its scope and avoid that prior art.⁵⁷

⁵² See *Apple*, 2015 WL 5047986 at *3 (noting “the PTO is under no obligation to accept a claim construction proffered as a prosecution history disclaimer, which generally only binds the patent owner.”) (quoting *Tempo Lighting*, 742 F.3d at 978); *Hulu*, 2015 WL 5734596 at *7 (“Although the Office is under no obligation to accept a claim construction proffered as a prosecution history disclaimer, the prosecution history of the ‘592 patent does not limit the construction of the link program to a single link program.”) (citation omitted).

⁵³ See 37 C.F.R. § 42.100(b); MPEP § 2111. It is possible for expired patents to be reviewed at the USPTO given that it could impact pre-expiration damages. If the patent has expired, the USPTO applies the *Phillips* standard, including any prosecution history, in large part because the patent holder no longer has the ability to amend the claims of an expired patent. See *In re Rambus, Inc.*, 753 F.3d 1253, 1256 (Fed. Cir. 2014) (“As is the case here, a reexamination involves claims of an expired patent, a patentee is unable to make claim amendments and the PTO applies the claim construction principles outlined by this court in *Phillips v. AWH Corp.*, 415 F.3d 1303 (Fed. Cir. 2005).”); MPEP § 2258(g).

⁵⁴ See *In re Yamamoto*, 740 F.2d 1569, 1572 (Fed. Cir. 1984) (“The same policies warranting the PTO's approach to claim interpretation when an original application is involved have been held applicable to reissue proceedings because the reissue provision, 35 U.S.C. § 251, permits amendment of the claims to avoid prior art. The reexamination law, set forth below, gives patent owners the same right.”) (citations omitted); see also *Cuozzo Speed Techs., LLC v. Lee*, No. 15-446, 2016 WL 3369425, at *12 (U.S. June 20, 2016) (affirming use of BRI standard for IPRs). For a discussion of the implications of *Cuozzo*, see *infra* Section IV.

⁵⁵ See *In re Cuozzo Speed Techs., LLC*, 793 F.3d 1268, 1276 (Fed. Cir. 2015) (“The broadest reasonable interpretation standard has been applied by the PTO and its predecessor for more than 100 years in various types of PTO proceedings. . . For more than a century, courts have approved that standard.”), *aff'd sub nom.*, *Cuozzo Speed Techs.*, 2016 WL 3369425.

⁵⁶ See *In re Morris*, 127 F.3d 1048, 1054 (Fed. Cir. 1997).

⁵⁷ See *PPC Broadband, Inc. v. Corning Optical Comm'n. RF, LLC*, 815 F.3d 734, 740 (Fed. Cir. 2016) (“While broadly construing claim language increases the likelihood that otherwise distinguishable prior art will render the claimed invention anticipated or obvious, the patentee can amend the claim language during prosecution—and narrow it if necessary—to clarify the scope of the invention and avoid rejection or cancellation of the claims.”); *In re Prater*, 415 F.2d 1393, 1404-05 (C.C.P.A. 1969) (“claims yet unpatented are to be given the broadest reasonable interpretation consistent with the specification during the examination of a patent application since the applicant may then amend his claims, the thought being to reduce the possibility that, after the patent is granted, the claims may be interpreted as giving broader coverage than is justified.”).

The BRI standard has been criticized, particularly as it is used in the post-grant procedures.⁵⁸ Moreover, one may question whether the difference in standard actually makes much difference.⁵⁹ Nevertheless, both the Supreme Court and the Federal Circuit blessed this standard for IPRs in the *Cuozzo* litigation.⁶⁰

Litigation at the USPTO, particularly in IPRs and PGRs, places a patent holder in a different posture than litigation in the courts. When asserting the patent against a potential infringer, often the patentee will argue for a broader construction so as to ensnare the accused device.⁶¹ Patentees at times have encountered a catch-22 in this regard, however. By advocating a broad construction, they open themselves up to invalidity challenges, to which the courts have been receptive.⁶² At the USPTO,

⁵⁸ *In re Cuozzo Speed Techs., LLC*, 793 F.3d at 1290-91 (Newman, J., dissenting) (“The new PTO regulation authorizing ‘broadest reasonable interpretation’ in these post-grant proceedings defeats ‘the will of Congress as expressed in the statute’ for it defeats the purpose of substituting administrative adjudication for district court adjudication.” (citation omitted)), *cert. granted sub nom. Cuozzo Speed Techs., LLC v. Lee*, No. 15-446, 2016 WL 205946 (U.S. Jan. 15, 2016). Dawn-Marie Bey & Christopher A. Cotropia, *The Unreasonableness of the Patent Office’s “Broadest Reasonable Interpretation” Standard*, 37 AIPLA Q.J. 285, 288 (2009) (“Not only does the BRI standard fail to provide the advantages touted by the courts that created the standard, the standard is contrary to both the patent statutes and the concept of a unitary patent system.”); Lauren Drake, Note, *Preventing Inequity: Extending Issue Preclusion to Claim Construction During Reexamination of Previously Litigated Patents*, 44 LOY. L.A. L. REV. 749, 762-63 (2011).

⁵⁹ *But see PPC Broadband*, 2016 WL 692368, at *4 (“This case hinges on the claim construction standard applied—a scenario likely to arise with frequency. And in this case, the claim construction standard is outcome determinative.”). As a formal matter, the BRI standard makes application of collateral estoppel based on PTAB claim constructions problematic given the differing legal standard. See Drake, *supra* note 51, at 759-60 (“To implement a form of issue preclusion in patent claim interpretation, the PTO must abandon the broadest reasonable interpretation standard in the limited context of reexamination proceedings of patents that have previously been interpreted during a *Markman* hearing.”); Michael Risch, *The Failure of Public Notice in Patent Prosecution*, 21 HARV. J.L. & TECH. 179, 192 (2007) (“This Article concludes that, while application of the rule does produce an iterative process that corrects some vague claims, the process fails to eliminate many types of ambiguous claims.”).

⁶⁰ *In re Cuozzo Speed Techs., LLC*, 793 F.3d 1268, 1275-81 (Fed. Cir. 2015), *aff’d sub nom Cuozzo Speed Techs., LLC v. Lee*, . 15-446, 2016 WL 3369425, at *9, *12 (U.S. June 20, 2016).

⁶¹ There may be cases where the patentee argues for a narrower claim construction if the primary issue is invalidity and there is no question that the claim covers the accused device, even under the narrower construction. The patentee may also want a narrower construction in the face of a declaratory judgment action challenging the patent’s validity, particularly as a counterclaim, if infringement is not truly at issue.

⁶² See *Liebel-Flarsheim Co. v. Medrad, Inc.*, 481 F.3d 1371, 1380 (Fed. Cir. 2007) (“The irony of this situation is that Liebel successfully pressed to have its claims include a jacketless system, but, having won that battle, it then had to show that such a claim was fully enabled, a challenge it could not meet. The motto, ‘beware of what one asks for,’ might be applicable here.”); *Auto. Techs. Int’l, Inc. v. BMW of N. Am., Inc.*, 501 F.3d 1274, 1285 (Fed. Cir. 2007) (quoting *Liebel-Flarsheim* and noting “ATI sought to have the scope of the claims of the ‘253 patent include both mechanical and electronic side impact sensors. It succeeded, but then was unable to demonstrate that the claim was fully enabled. Claims must be enabled to correspond to their scope.”); *Sitrick v. Dreamworks, LLC*, 516 F.3d 993, 1000 (Fed. Cir. 2008) (“Because the asserted claims are broad enough to cover both movies and video games, the patents must enable both embodiments.”). For an argument that instead of invalidating these claims, the courts should use the narrower interpretation that preserves the claim’s validity, see Holbrook, *supra* note 19, at 802-03.

however, only the validity of the patent is at issue. Patent holders therefore may want narrower constructions of claims to avoid the prior art and preserve the patent's validity. In IPRs and seemingly PGRs, the USPTO has significantly limited the ability of patent owners to amend the challenged claims.⁶³ Consequently, patentees may prefer to narrow the scope of their claims through arguments and disclaimer.

The USPTO is aware of the role prosecution disclaimer plays in claim construction. Recent cases, however, show that the USPTO, at least in IPRs and potentially PGRs, is stepping away from allowing such disclaimers, or at least away from allowing patent owners to argue for such disclaimers. The source for this shift, however, is a bit surprising as its genesis is in a case that generally is unrelated to claim construction and instead involves a defense to patent infringement.

III. Wither Prosecution Disclaimer?

A number of recent, albeit related, decisions by the PTAB have stated that patent owners will not be able to disclaim subject matter during the proceeding, effectively eviscerating the idea of prosecution disclaimer in IPRs and potentially PGRs. This holding seems at odds with *Phillips* and prior law that notes prosecution disclaimer applies to various proceedings. How did this PTAB panel get to this state of affairs? By interpreting an *en banc* Federal Circuit decision that had nothing to do with claim construction.

A. *Marine Polymer and the Federal Circuit's Characterization of USPTO Practice*

If there is a single *en banc* Federal Circuit patent decision that has generated little conversation in the literature, it has to be *Marine Polymer Technologies, Inc. v. HemCon, Inc.*⁶⁴ The *en banc* court considered a number of issues, but the decision was rather fractured. The district court's judgment on damages was affirmed because the court was evenly split.⁶⁵ Importantly for this Article, however, a slim majority of the court did reach a decision on when the defense of intervening rights is available to an accused infringer.⁶⁶

⁶³ *In re Cuozzo Speed Techs.*, 793 F.3d at 1287-88 (Newman, J., dissenting) (“patent owners are limited to one motion to amend, and are presumptively limited to substituting one issued claim for one amended claim. 37 C.F.R. § 42.221(a)(3). There is no right of amendment in these new post-grant proceedings, and motions to amend are rarely granted.”), *cert. granted sub nom.* *Cuozzo Speed Techs., LLC v. Lee*, 136 S. Ct. 890 (2016).

⁶⁴ *See Marine Polymer Technologies, Inc. v. Hemcon, Inc.*, 672 F.3d 1350 (Fed. Cir. 2012) (*en banc*). As of February 15, 2016, the Westlaw database on law reviews and journals lists only sixteen articles that cite the decision.

⁶⁵ *Id.* at 1360 (“The damages award is therefore affirmed by an equally divided court.”).

⁶⁶ *Id.* at 1362-63.

Intervening rights are a statutory defense to patent infringement.⁶⁷ The courts, however, originally created the doctrine to protect infringers from a potential inequity arising from reissuance proceedings.⁶⁸ In reissuance, a patent holder can request that the USPTO reconsider the validity of the claims of a patent — patent is, through error, deemed wholly or partly inoperative or invalid, by reason of a defective specification or drawing, or by reason of the patentee claiming more or less than he had a right to claim in the patent.”⁶⁹ Because the scope of the claims can change, someone relying on the original patent might think they do not infringe or that the original patent was invalid. Such concern is particularly true in the context of reissuance, where a patent holder can *expand* the scope of the patent if they file within two years of the patent issuing.⁷⁰ Imagine being a competitor, thinking you have successfully navigated around a patent, only to discover that you now infringe after it reissues.⁷¹ Courts recognized this potential inequity and created a defense as a result.⁷²

Congress codified this defense in the 1952 Patent Act⁷³ by adopting 35 U.S.C. § 252, the second paragraph of which created intervening rights. With the advent of

⁶⁷ See 35 U.S.C. § 252, ¶ 2.

⁶⁸ See *Marine Polymer*, 672 F.3d at 1361 (“The doctrine of intervening rights first developed as courts recognized that permitting substantive changes to the scope of patent claims through post-issuance procedures left ‘the door . . . open for gross injustice’ where a third party, having already begun to make, use, or sell a given article, finds its previously lawful activities rendered newly infringing under a modified patent.”) (quoting *Sontag Chain Stores Co. v. Nat’l. Nut Co.*, 310 U.S. 281, 293–95 (1940)).

⁶⁹ 35 U.S.C. § 251 (2011). Before the AIA, any such error had to be made without deceptive intent; the AIA removed that requirement. See AIA, PL 112-29, September 16, 2011, 125 Stat 284 § 20(d)(1)(B) (striking “and without deceptive intent”).

⁷⁰ See *Sontag Chain Stores Co. Ltd. v. Nat’l Nut Co. of California*, 310 U.S. 281, 293-94 (1940) (“Recapture within two years of what a patentee dedicates to the public through omission is permissible under specified conditions, but not, we think, at the expense of innocent parties.”); see also *Ashland Fire Brick Co. v. Gen. Refractories Co.*, 27 F.2d 744, 746 (6th Cir. 1928) (“because the claims of the original patent were limited as to the form of conveyor, and because after the issue of the original patent and with knowledge of it and expressly appreciating its limited character, indeed, being governed therein by the advice of patent counsel, the defendant built a noninfringing brick machine, and still before the reissue application another one, at a substantial expense, and put them into commercial use on a large scale by extensively selling their product, and thus made them substantially material to its manufacturing business, the defendant thereby acquired at least a right to continue to use these two machines as if it held a license therefor under the reissued patent.”). The Supreme Court cited *Ashland Fire Brick* approvingly in *Sontag*. See *Sontag*, 310 U.S. at 294-95.

⁷¹ See Timothy R. Holbrook, *Liability for the “Threat of A Sale”: Assessing Patent Infringement for Offering to Sell an Invention and Implications for the on-Sale Patentability Bar and Other Forms of Infringement*, 43 SANTA CLARA L. REV. 751, 769 (2003) (“Because the scope of a patent’s claims can change as a result of reissue, competitors who may have relied upon the original patent in order to design around or otherwise compete with the patentee may have concerns as to the scope of the patent and their potential liability. The reissued patent could now cover activities that the original patent did not, which could unfairly ensnare a competitor who was not infringing the original patent, but who may now infringe the reissued patent.”).

⁷² See *supra* note 70.

⁷³ Patent Act of 1952, ch. 950, 66 Stat. 792, 808 (1952).

ex parte reexamination proceedings in 1980,⁷⁴ Congress expanded intervening rights to those proceedings as well.⁷⁵ When Congress created IPRs, it also extended intervening rights as a defense to amended and new claims arising from those proceedings.⁷⁶ Congress did the same with IPRs, PGRs, and covered business method proceedings.⁷⁷

There are two types of intervening rights: absolute and equitable.⁷⁸ The former is an absolute defense to patent infringement, and courts have no discretion whether to apply it.⁷⁹ Equitable intervening rights may ~~ap~~ply as a matter of judicial discretion to mitigate liability for infringing such claims even as to products made or used after the reissue if the accused infringer made substantial preparations for the infringing activities prior to reissue.⁸⁰

In *Marine Polymer*, the court confronted a particular aspect of intervening rights: whether intervening rights are triggered when a patent holder surrenders

⁷⁴ See Act of Dec. 1, 1980, Pub. L. No. 96-517, 94 Stat. 3015 (1980).

⁷⁵ See 35 U.S.C. § 307(b) (2011) (“Any proposed amended or new claim determined to be patentable and incorporated into a patent following a reexamination proceeding will have the same effect as that specified in section 252 for reissued patents on the right of any person who made, purchased, or used within the United States, or imported into the United States, anything patented by such proposed amended or new claim, or who made substantial preparation for the same, prior to issuance of a certificate under the provisions of subsection (a) of this section.”); see also *Marine Polymer*, 672 F.3d at 1362 (“Although intervening rights originated as a defense against patents modified through reissue procedures, the doctrine has since been extended to the context of patent reexamination.”).

⁷⁶ See 35 U.S.C. § 316(b) (2011) (“Any proposed amended or new claim determined to be patentable and incorporated into a patent following an inter partes reexamination proceeding shall have the same effect as that specified in section 252 of this title for reissued patents on the right of any person who made, purchased, or used within the United States, or imported into the United States, anything patented by such proposed amended or new claim, or who made substantial preparation therefor, prior to issuance of a certificate under the provisions of subsection (a) of this section.”); see also *Marine Polymer*, 672 F.3d at 1362 (“Pursuant to 35 U.S.C. §§ 307(b) and 316(b), respectively, both *ex parte* and *inter partes* reexaminations can give rise to intervening rights.”).

⁷⁷ See 35 U.S.C. § 318(c) (2013) (inter partes review); 35 U.S.C. § 328(c) (2013) (post-grant review),

⁷⁸ See Holbrook, *supra* note 71, at 769-70 (“To combat this inequity, 35 U.S.C. § 252, ¶ 2 provides for ‘intervening rights,’ which act as a limited defense to patent infringement. There are two forms of intervening rights: absolute and equitable.”).

⁷⁹ See *Marine Polymer*, 672 F.3d at 1361-62 (discussing ~~in~~tervening rights that abrogate liability for infringing claims added to or modified from the original patent if the accused products were made or used before the reissue, often referred to as absolute intervening rights”); see also *BIC Leisure Prods., Inc. v. Windsurfing Int’l, Inc.*, 1 F.3d 1214, 1220-21 (Fed. Cir. 1993) (“The first sentence defines ‘absolute’ intervening rights. This sentence provides an accused infringer with the absolute right to use or sell a product that was made, used, or purchased before the grant of the reissue patent as long as this activity does not infringe a claim of the reissue patent that was in the original patent.”).

⁸⁰ *Marine Polymer*, 672 F.3d at 1362; *BIC*, 1 F.3d at 1221 (“The second sentence permits the continued manufacture, use, or sale of additional products covered by the reissue patent when the defendant made, purchased, or used identical products, or made substantial preparations to make, use, or sell identical products, before the reissue date. This equitable right is not absolute. . . . [T]he trial court may, as dictated by the equities, protect investments made before reissue.”).

claim scope by argument alone and not through a claim amendment or the addition of a new claim. In other words, could intervening rights arise through prosecution disclaimer? The *en banc* court, through a 6-5 vote, concluded that intervening rights arise only when a new claim is added or a claim has been amended.⁸¹ Mere argumentation, even if it results in a narrowing of the claim scope, is insufficient.⁸²

Because intervening rights are governed by statute, the court started with the statutory language. That statutory language notes that intervening rights are available ~~with~~ respect to amended or new claims in the reexamined patent.⁸³ According to the court, an argument alone cannot trigger intervening rights ~~because~~ it disregards the plain and unambiguous language⁸⁴ of the statute.⁸⁴ The court viewed the requirement of an amendment or a new claim to be a threshold requirement that must be addressed before any assessment of whether there has been a substantive change in the claim.⁸⁵ Given this clear language and the particularized definitions the statutory language has in patent law, the court rejected the argument that the patentee's ~~actions~~ in reexamination rendered the asserted claims effectively amended by disavowal or estoppel, even though the language of the claims was not formally changed.⁸⁶

The court recognized that limiting intervening rights to amended or new claims could result in patent holders trying to game the system. Patentees could now argue for narrower claim scope in reexamination to preserve a patent's validity while avoiding triggering intervening rights for third parties.⁸⁷ The court rejected this policy concern by speculating that examiners would not permit it to happen: ~~if~~ in reexamination, an examiner determines that particular claims are invalid and need amendment to be allowable, one would expect an examiner to require amendment rather than accept argument alone.⁸⁸ If argument alone would suffice, then ~~it~~ is probably because the claims at issue are not unallowable.⁸⁹

Indeed, the court noted that any such gamesmanship could work against the patentee if argument alone could trigger intervening rights: ~~the~~ patent owner will necessarily make substantive arguments in defending the claims, thereby allowing

⁸¹ See *Marine Polymer*, 672 F.3d at 1362.

⁸² See *id.*

⁸³ *Id.*

⁸⁴ *Id.* at 1363.

⁸⁵ See *id.* at 1363 (~~But~~ under § 307(b), the first question when assessing whether intervening rights arose from a reexamination is whether the asserted claim is ~~amended or new~~; if the answer is no, that ends the inquiry. Only if the claim at issue is new or has been amended may the court proceed to the second step in the analysis and assess the substantive effect of any such change pursuant to § 252.”).

⁸⁶ *Marine Polymer*, 672 F.3d at 1363.

⁸⁷ See *id.* at 1364 (~~[S]hrewd~~ patentees would simply opt to rely on arguments rather than amendments to effectively change, and thereby preserve, otherwise invalid claims during reexamination without engendering intervening rights against those claims.”).

⁸⁸ *Id.*

⁸⁹ *Id.*

the requestor to allege intervening rights based on those arguments.”⁹⁰ The court refused to speculate about possible consequences with respect to situations not before us and which we cannot foresee.”⁹¹ Ultimately the court viewed this case as simply a matter of statutory interpretation:

To be sure, patent applicants’ actions and arguments during prosecution, including prosecution in a reexamination proceeding, can affect the proper interpretation and effective scope of their claims. But in rejecting HemCon’s request for intervening rights, we are not here interpreting claims. Rather, we are interpreting a statute that provides for intervening rights following reexamination only as to “amended or new” claims.⁹²

The dissent rejected the majority’s viewpoint. As a threshold matter, the dissent viewed the holding to be dicta. Because the equally divided court affirmed the district court, the claim scope was not narrowed and intervening rights would not be triggered, regardless of the outcome.⁹³ Regardless, the dissent rejected the majority’s interpretation of the statute. The dissent noted that “[t]he effect [of the argument] was to narrow the claims and protect them from a finding of invalidity.”⁹⁴ As such, “[a]lthough identical in language, the claims of the patent after reexamination were not identical in scope for purposes of intervening rights because they were ‘substantively changed’ during reexamination” and thus triggered intervening rights.⁹⁵ The dissent took the fear of gaming the system far more seriously:

Tellingly, the amici who support the court’s interpretation of the statute recognize that formal amendments to claim language during the course of reexamination are unusual. *See* Amicus Br. of Sovereign et al. at 10. Telling too they admit that formal amendments are now, and will be, avoided for the very purpose of avoiding the creation of intervening rights. *Id.* at 4 (arguing that patent owners often “follow a course of not seeking to amend their asserted claims, with the settled understanding that if they could avoid claim amendments, they could also avoid intervening rights”). In other words, applicants will amend claims by argument rather than formal methods for the very purpose of avoiding intervening rights.⁹⁶

The law now is clear, however. Prosecution disclaimer cannot trigger intervening rights. Only amended claims or new claims are sufficient.

⁹⁰ *Id.* at 1365.

⁹¹ *Id.*

⁹² *Marine Polymer*, 672 F.3d at 1365.

⁹³ *See id.* at 1371 (Dyk, J., dissenting) (“In other words, under the district court’s incorrect claim construction, now binding on the parties as a result of the affirmance of the district court’s judgment, the original and reexamined claims are identical in scope, and there is thus no issue of intervening rights and no need for the majority to offer an alternative ground for decision.”).

⁹⁴ *Id.* at 1373 (Dyk, J., dissenting).

⁹⁵ *Id.*

⁹⁶ *Id.* at 1377 (Dyk, J., dissenting) (“the majority’s interpretation of intervening rights will create the very opportunities for mischief and ‘foster gamesmanship’ that the statute was designed to avoid.”).

B. Unintended Consequences? PTAB Panels Use Marine Polymer to Per Se Reject Disclaimer

The issue decided in *Marine Polymer* was rather narrow. Because the decision was 6-5, its precedential effect is arguably suspect. Most importantly, as the dissent noted, the holding on intervening rights seemingly is dicta.⁹⁷ Because the district court's construction was affirmed by an equally divided court, the claim scope did not change. There was no narrowing of the claim scope by argument, so there should be no intervening rights at stake. As such, one may be skeptical about reading the decision to have broad impact.

A number of related decisions at the PTAB, however, have done just that, affording *Marine Polymer* broad play by refusing to permit prosecution disclaimer in IPRs. The gamesmanship dynamic discussed by both the majority and dissent in *Marine Polymer* appeared to be arising in IPRs, with parties using arguments to disclaim subject matter without an amendment. This may not be pure gamesmanship, however. The PTAB has been very reluctant to permit amendments in IPRs, so arguing for a narrower construction of the claim may be a patent holder's only avenue for avoiding prior art in the patent's extant claims.

Nevertheless, efforts by patentees to surrender scope by disclaimer have been rebuffed by some panels at the PTAB. In *eBay, Inc. v. Xprt Ventures, LLC*, an IPR, the PTAB affirmed the examiner's conclusion that the claims at issue were invalid.⁹⁸ Importantly, the PTAB rejected the patent holder's efforts to disclaim subject matter by argument. The patentee argued that it disavowed the full scope of the terms "payment account" and "payment accounts."⁹⁹ The PTAB noted that "[u]nderlying these arguments though, is the erroneous premise that claim scope can be altered during prosecution, such as in a reexamination, by clearly and unambiguously disavowing particular features, instead of amending the claim."¹⁰⁰ Relying on *Marine Polymer*, the PTAB succinctly noted "it is well established that the appropriate method for changing the scope of a claim during prosecution is claim amendment."¹⁰¹ The PTAB thus rejected the patentee's disavowal efforts:

Where, as here, the Examiner has rejected the claims as unpatentable over the cited prior art, amendment may be needed to distinguish the claims. The Patent Owner cannot circumvent this method by affirmatively stating "a clear and unambiguous" disavowal. Accordingly, we agree with the Requester's position that the Patent Owner cannot change the scope of the claim terms through disavowal and find

⁹⁷ See *Marine Polymer*, 672 F.3d at 1362-63 ("Although we reject the premise of HemCon's argument regarding intervening rights—that the district court's claim construction prior to reexamination of the '245 patent was erroneous—we conclude, as an alternative ground for decision, that even if the district court's claim construction was erroneous, HemCon's intervening rights argument must fail because it disregards the plain and unambiguous language of § 307(b).").

⁹⁸ 2014 WL 1311749 (Patent Tr. & App. Bd. March 21, 2014).

⁹⁹ *Id.* at *3-4.

¹⁰⁰ *Id.* at *4.

¹⁰¹ *Id.* at *4.

each of the arguments presented based on disavowal of claim scope . . . unpersuasive.¹⁰²

As such, the PTAB simply refused to permit the patent holder to narrow the scope of the claim through disclaimer alone. The court took the Federal Circuit's language in *Marine Polymer* to heart, even though the case was about intervening rights and not claim construction at the USPTO.

The scope of this holding is unclear, though four other PTAB decisions have held the same. The opinions, however, are in related cases, all involving eBay's challenges to Xprt Ventures' related patents.¹⁰³ The panel of PTAB judges is exactly the same: Judges Turner, Saindon, and McKeown. The authoring judge in all is also Judge McKeown. Although the claim terms at issue in the cases do differ, all of the decisions reject the disclaimer argument on legal grounds, using verbatim language from the first case.¹⁰⁴ With the same judges, the same author, the same language, and the same parties in related cases, this approach may not be widely embraced by other PTAB judges.

Additionally, the Federal Circuit has yet to address the PTAB's approach in these cases. The refusal to allow disclaimers by patent holders presents an interesting question of appellate review, however. The USPTO has no substantive rule-making authority.¹⁰⁵ The Article III courts – and the Federal Circuit and Supreme Court in particular – control the substantive development of patent law. The USPTO does have authority over the procedures before its various tribunals, and generally the Federal Circuit affords some level of deference to such procedures.¹⁰⁶ It is unclear whether the PTAB's prosecution disclaimer prohibition is substantive

¹⁰² *Id.* at *4 (citation omitted).

¹⁰³ eBay, Inc. v. Xprt Ventures, LLC, 2015 WL 3506036 (Patent Tr. & App. Bd. May 29, 2015); eBay, Inc. v. Xprt Ventures, LLC, 2014 WL 1331053 (Patent Tr. & App. Bd. March 31, 2014); eBay, Inc. v. Xprt Ventures, LLC, 2014 WL 1311754 (Patent Tr. & App. Bd. March 31, 2014); eBay, Inc. v. Xprt Ventures, LLC, 2014 WL 1311748 (Patent Tr. & App. Bd. March 31, 2014).

¹⁰⁴ See eBay, Inc. Requester, Respt., and Cross-Appellant, APPEAL 2015-004981, 2015 WL 3506036, at *4 (Patent Tr. & App. Bd. May 29, 2015); eBay, Inc. Requester and Respt., APPEAL 2014-002130, 2014 WL 1331053, at *4 (Patent Tr. & App. Bd. Mar. 31, 2014); eBay, Inc. Requester and Respt., APPEAL 2014-002490, 2014 WL 1311754, at *4 (Patent Tr. & App. Bd. Mar. 31, 2014); eBay, Inc. Requester and Respt., APPEAL 2013-009578, 2014 WL 1311748, at *4 (Patent Tr. & App. Bd. Mar. 31, 2014).

¹⁰⁵ See Ass'n for Molecular Pathology v. U.S. Patent and Trademark Office, 689 F.3d 1303, 1343–44 (Fed. Cir. 2012) (Moore, J., concurring) (reviewing longstanding practice of USPTO to issue gene patents even though not binding on courts), aff'd-in-part, rev'd-in-part by Association Ass'n for Molecular Pathology v. Myriad Genetics, Inc., 133 S. Ct. 2107 (2013); Sapna Kumar, *The Accidental Agency?*, 65 FLA. L. REV. 229, 237 (2013) (“The PTO notably lacks substantive rulemaking authority over the Patent Act.”); David Orozco, *Administrative Patent Levers*, 117 PENN. ST. L. REV. 1, 7 (2012) (noting that USPTO “lacks substantive rule-making authority, and its foray into substantive rulemaking will likely be reviewed by the federal courts.”).

¹⁰⁶ Kumar, *supra* note 105 at 237-38 (“[T]he Federal Circuit has granted Chevron deference to the PTO only when it has interpreted statutory provisions relating to the conduct of proceedings in the Patent Office.”) (quoting *Cooper Techs. Co. v. Dudas*, 536 F.3d 1330, 1335-37 (Fed. Cir. 2008)).

or procedural.¹⁰⁷ It appears to be stuck squarely in the middle. The rule is procedural in the sense that it is merely limiting the arguments that a patent holder can make at the PTAB; it does not directly govern the outcome of the case. In practice, however, it can have significant substantive impact: if the patent holder is unable to disclaim subject matter, the patent is far more likely to be struck down. This rule epitomizes why the procedure versus substance line has always been viewed as fuzzy if not entirely artificial.¹⁰⁸

From a reviewability viewpoint, though, it may matter. If the Federal Circuit views it as a substantive one related directly to claim construction doctrine, then it will be free to discard the rule if it feels it is inappropriate. If the rule is viewed as procedural, though, the court will need to explain why it should not defer to the rule adopted by the PTAB panel. Thus, whether the *eBay* rule survives on appeal remains an open question.

Nevertheless, sophisticated patent counsel, eBay's lawyers, advanced the argument. With the success at the PTAB, one would think these decisions could be the narrow edge of a wedge to advance this argument more widely. Moreover, another PTAB panel has expressed discomfort with permitting patent owners to disclaim scope via argument. Although it did not rely upon *Marine Polymer*, it did note that:

In this reexamination proceeding, Owner attempts to narrow the scope of the claim by *argument* before the USPTO, instead of by *amendment*.

As guided by *Tempo Lighting, Inc.*, the PTO is under no obligation to accept a claim construction proffered as a prosecution history disclaimer However, to the extent our reviewing court may agree with Owner that we have not sufficiently considered the prosecution history in this reexamination proceeding, and consistent with the cited portion *Microsoft Corp. v. Proxycorr, Inc.*, we have reconsidered our claim construction, as urged in the Request (3), and we give the most weight to Owner's statement made during the prosecution history that there is no specific definition in the _508 patent under reexamination for the contested "stored data" claim term.¹⁰⁹

Although this panel allowed the patent owner to make the disclaimer argument (and ultimately rejected it), the language of the decision shows a discomfort with allowing patent owners to surrender claim scope by argument instead of amendment. There appears to be, therefore, a broader concern with prosecution disclaimer within the PTAB.

¹⁰⁷ The *Cuozzo* decision, though, suggests that claim construction is substantive and the USPTO has substantive rulemaking authority in the IPR context. See *infra* note 131 and accompanying text.

¹⁰⁸ See, e.g., Martin H. Redish & Dennis Murashko, *The Rules Enabling Act and the Procedural-Substantive Tension: A Lesson in Statutory Interpretation*, 93 MINN. L. REV. 26, 31 (2008) ("the last seventy years of doctrine and scholarship have failed to produce a generally accepted construction of the procedural-substantive interplay in the [Rules Enabling] Act's two key provisions.").

¹⁰⁹ *Ex Parte* Lawrence B. Lockwood, APPEAL 2015-000143, 2015 WL 5469618, at *4-5 (Sept. 15, 2015).

C. The Potential Impact of PTAB These Dynamics on Broader Claim Construction

How much impact these cases will have remains to be seen. They do show, however, an inclination on the part of the PTAB to step away from allowing argument-based disclaimers. If this perspective takes hold, particularly in the examination corps, then the USPTO may indirectly impact the way that claim construction takes place in the courts.

The most direct way that this approach could affect claim construction is by effectively precluding prosecution disclaimer. If the USPTO refuses to allow applicants to make such disclaimers, then one tool of claim construction may be removed from the courts. While the prosecution history would remain relevant, the patent holder in post-issuance proceedings would be without recourse to disclaimers. This dynamic could be particularly problematic in IPRs and PGRs, where the opportunity to amend any claims is rather minimal. It is also troubling given the failure of the USPTO, under the guise of the BRI standard, to consider earlier prosecution histories that may demonstrate a narrower claim construction. By eliminating disclaimer, the USPTO creates a one-way ratchet towards expansive claim constructions and potentially greater invalidity determinations.

This dynamic raises an even more fundamental issue, however. It poses an interesting question: What exactly is the difference between claim construction at the USPTO and prosecution disclaimer? Historically, in examination, the examiner may not offer a formal claim construction. Instead, the examiner would reject the claim in light of the prior art or a section 112 rejection, leaving it to the prosecutor to amend the claim or to traverse the rejection via argument. That traversal is often what would trigger a disclaimer, and the iterative process would yield generally narrower claims.¹¹⁰ The Federal Circuit has noted that it is the applicant, not the examiner, who triggers prosecution disclaimer.¹¹¹ The focus on the applicant makes sense if we view prosecution disclaimer as a form of estoppel. The representations are being held against the applicant, and thus it is the applicant's behavior that results in the loss of claim scope, just as it is a particular actor's behavior in other contexts that trigger various other estoppels.¹¹² Of course, holding such representa-

¹¹⁰ See *PPC Broadband, Inc. v. Corning Optical Commc'ns. RF, LLC*, Nos. 2015-1361, 2015-1369, 2015-1366, 2015-1368, 2016 WL 692368 at *3 (Fed. Cir. Feb. 22, 2016).

¹¹¹ See *Innova/Pure Water, Inc. v. Safari Water Filtration Sys., Inc.*, 381 F.3d 1111, 1124 (Fed. Cir. 2004) (“It is the applicant, not the examiner, who must give up or disclaim subject matter that would otherwise fall within the scope of the claims.”).

¹¹² For example, it is the promisor whose acts are held against her in promissory estoppel, assuming there is reliance and material detriment. See, e.g., *Cyberchron Corp. v. Calldata Sys. Dev., Inc.*, 47 F.3d 39, 44 (2d Cir. 1995). Similarly, it is the party making representations to a court that faces judicial estoppel if she changes her position elsewhere. See, e.g., *Konstantinidis v. Chen*, 626 F.2d 933, 937 (D.C. Cir. 1980) (“In contrast to equitable estoppel's concentration on the integrity of the parties' relationship to each other, judicial estoppel focuses on the integrity of the judicial process.”).

tions against the patent applicant or owner has its roots in ideas of estoppel. At one level, prosecution disclaimer is akin to judicial estoppel because the applicant or patentee has made representations to a tribunal – the USPTO – and will now be held to them elsewhere, such as in court. Similarly, with its close tie to prosecution history estoppel, prosecution disclaimer is also viewed as a type of estoppel vis-à-vis the public. The public has the right to rely on the representations made to the USPTO in assessing the scope of the patent. Although prosecution disclaimer could be justified on either ground, the Federal Circuit has rooted the doctrine in the latter.¹¹³ Indeed, the Federal Circuit has noted that prosecution disclaimer applies even if the examiner or PTAB did not rely on the representation in deciding to issue the patent.

The court has only obliquely linked prosecution disclaimer to ideas of prosecution history estoppel, and prosecution history estoppel itself is only loosely an estoppel, given the lack of a requirement for detrimental reliance. Moreover, if the applicant's argument is successful and the examiner yields, hasn't the examiner implicitly adopted the position of the applicant, resulting in an implicit claim construction on the part of the USPTO?

This distinction is important at a formal level. The Federal Circuit has made clear that it is not bound by USPTO claim constructions offered in administrative proceedings that parallel litigation.¹¹⁴ Yet, in some sense, the court is deferring to the implied claim construction of an examiner through the public disclaimer doctrine. This blurry distinction will become increasingly important as more patents go through parallel proceedings in the district courts and USPTO. The line will become increasingly unclear as the PTAB consistently performs its own, formal claim construction. Even if the PTAB steps back from the prohibition on disclaimers articulated in the *eBay* collection of cases, it becomes difficult to see how disclaimer could apply in the context of a formal construction by the USPTO. There will no longer be an implicit surrender due to the iterative nature of an applicant and examiner and, instead, there will be a discussion of the particular claim limitation at issue. According to the Federal Circuit, it needs not defer to these constructions, but such constructions would appear to preclude any form of disclaimer on the part of the applicant.

¹¹³ See *Omega Eng'g, Inc. v. Raytek Corp.*, 334 F.3d 1314, 1324 (Fed. Cir. 2003) (“As a basic principle of claim interpretation, prosecution disclaimer promotes the public notice function of the intrinsic evidence and protects the public's reliance on definitive statements made during prosecution.”).

¹¹⁴ *SRAM Corp. v. AD-II Eng'g, Inc.*, 465 F.3d 1351, 1359 (Fed. Cir. 2006) (“Furthermore, this court is not bound by the PTO's claim interpretation [during reexamination] because we review claim construction de novo.”). Of course, this statement must now be qualified by potential extrinsic factual evidence under *Teva*. But, as in this case, the Federal Circuit was not reviewing a USPTO claim construction directly; instead it was rejecting the construction by the USPTO in a reexamination on a patent at issue in the litigation.

The use of formal construction by the PTAB could reach beyond the IPR, CBM, and PGR contexts. One could reasonably believe that, as PTAB judges acclimate to their adversarial docket, they would be increasingly likely to adopt the same claim construction methodologies in the examination, reissuance, and reexamination contexts. It would be an odd exercise of mental compartmentalization for the PTAB judges to rigorously perform claim construction in one context while ignoring the importance of claim construction in another. If the PTAB judges begin to use formal claim construction in these other, *ex parte* contexts – either through formally rejecting surrender per *eBay* or by offering claim constructions themselves – it would appear that prosecution disclaimer could simply wither away. Consequently, the courts could lose a source of claim construction.

The problem could be further compounded if, after being reviewed by PTAB judges, the examination corps also begins to think about claim construction more rigorously. As examiners begin to construe claims, there may no longer be implicit surrenders by the applicant, particularly if the examiners simply refuse to allow applicants to narrow claims effectively by argumentation. Whether the PTAB judges and examiners will begin to more formally utilize claim construction in non-adversarial contexts is an empirical question, one that has yet to be explored.¹¹⁵

IV. *Cuozzo, B & B Hardware*, and the Potential for Issue Preclusion in Claim Construction

No discussion of the impact of claim construction at the PTAB is complete without considering the Supreme Court's recent decision in *Cuozzo Speed Technologies, LLC v. Lee*, where the Court addressed IPRs for the first time.¹¹⁶ Additionally, the PTAB's use of formal claim construction methodology in IPRs raises another issue, that of whether issue preclusion (also known as claim construction) can arise from the PTAB's construction after a final decision. The Supreme Court has held that issue preclusion can arise from decisions by the Trademark Trial and Appeal Board (TTAB), the sister tribunal to the PTAB at the USPTO.¹¹⁷ Could PTAB claim construction determinations also trigger such preclusion? If so, the PTAB's impact on claim construction in the district courts could be a far more direct. This Section explores these dynamics by first evaluating *Cuozzo's* retention of the BRI standard, the Supreme Court's decision applying issue preclusion to TTAB decisions, and then the potential applicability of issue preclusion to PTAB claim construction determinations.

¹¹⁵ A question that I intend to pursue in future work.

¹¹⁶ *Cuozzo Speed Techs., LLC v. Lee*, No. 15-446, 2016 WL 3369425 (U.S. June 20, 2016).

¹¹⁷ *B & B Hardware, Inc. v. Hargis Industries, Inc.*, 135 S.Ct. 1293 (2015).

A. *Cuozzo – An Administrative, and Not a Patent, Law Decision*

In *Cuozzo*, the Supreme Court addressed two issues: whether the AIA precluded challenges on appeal to the PTAB's decision to institute an IPR proceeding and whether BRI was the appropriate standard for claim construction in IPRs.¹¹⁸ The Court agreed with the Federal Circuit on both issues. As to the former, the Court agreed, 6-2, that the USPTO's decision to initiate IPR proceedings is not subject to review on appeal. As to the latter, and germane to this paper, the Supreme Court unanimously endorsed the USPTO's decision to adopt BRI as the appropriate claim construction standard.¹¹⁹

The Court's reasoning on both of these points was rooted in administrative law principles rather than patent theory or doctrine. As to the review of institution decisions, the Court looked at the statutory language that states —~~de~~termination by the [Patent Office] whether to institute an inter partes review under this section shall be *final and nonappealable*.¹²⁰ The Court found the statutory language to be clear enough to rebut the strong presumption in favor of judicial review of administrative determinations.¹²¹ In contrast, the Justice Alito in dissent felt that statute only precluded *interlocutory* appeals; after a final decision, a party would be able to challenge the institution decision as well.¹²²

As to the BRI standard, the Court failed to engage with claim construction doctrine at all. Instead, it drew on administrative law principles to justify deference to the USPTO on the issue. The Court looked at the AIA and concluded that it contained a legal gap: it does not articulate the appropriate claim construction standard.¹²³ Given the gap, the USPTO had the authority via rulemaking to fill that gap, and the courts are required to defer to that interpretation so long as it is reasonable pursuant to *Chevron*.¹²⁴ The BRI standard is a reasonable standard to use. The Court went on to reject the various policy considerations that the petitioner raised. The Court rejected the first – that IPRs are supposed to be like litigation – because there are significant differences between the two.¹²⁵ The Court also rejected the ar-

¹¹⁸ *Cuozzo*, 2016 WL 3369425 at *3-4.

¹¹⁹ *Id.* at *4.

¹²⁰ *Id.* at *7 (quoting 35 U.S.C. § 314(d) with emphasis added).

¹²¹ *Id.* at 8.

¹²² *Id.* at *15 (Alito, J., dissenting in relevant part) (—[C]onsistent with the strong presumption favoring judicial review, Congress required only that judicial review, including of issues bearing on the institution of patent review proceedings, be channeled through an appeal from the agency's final decision.”).

¹²³ *Id.* at *10 (—The statute contains such a gap: No statutory provision unambiguously directs the agency to use one standard or the other.”).

¹²⁴ *Id.*

¹²⁵ *Id.* at *11 (—The problem with *Cuozzo*'s argument, however, is that, in other significant respects, inter partes review is less like a judicial proceeding and more like a specialized agency proceeding.”) It remains to be seen whether this language will make Judge Newman of the Federal Circuit cease dissenting from various IPR decisions precisely on these grounds. *See, e.g., SAS Inst., Inc. v. Complementsoft, LLC.*, No. 2015-1346, 2016 WL 3213103, at *9 (Fed. Cir. June 10, 2016)

gument that BRI is inappropriate because of the limited ability of patent holders to amend claims in IPR proceedings.¹²⁶

The *Cuozzo* decision is interesting on a number of levels. Even though the Court agreed with the Federal Circuit, there are some important differences in the reasoning. On the issue of the reviewability of institution decisions, the Supreme Court did not seem to take as strict a view of the statutory prohibition as the Federal Circuit. Instead, it left the door open to some judicial review of initiation decisions. The Court noted it was not deciding “the precise effect” of the statute “on appeals that implicate constitutional questions, that depend on other less closely related statutes, or that present other questions of interpretation that reach” beyond this particular provision.¹²⁷ The dissent, of course, believed that far more robust review should be available at the Federal Circuit.¹²⁸ There is some overlap between the majority and dissent on what issues may be reviewable regarding the institution decision,¹²⁹ which suggests that, unlike the Federal Circuit’s decision, there is greater flexibility to challenge these decisions. The extent of such ability, though, will have to be sorted out in future cases.

As to the BRI standard, the Court undermined what had been viewed as sacrosanct in patent law: that the USPTO has no substantive rulemaking authority.¹³⁰ The Court, at least as to IPR proceedings, rejected that rule, concluding that the USPTO did have substantive rule making authority in this area.¹³¹ *Cuozzo* was spe-

(Newman, J., concurring-in-part and dissenting-in-part) (“The statutory provisions and the legislative purpose of substituting an agency tribunal for district court proceedings on aspects of patent validity are defeated by the PTO’s position that it can leave some challenged claims untouched.”); *Synopsys, Inc. v. Mentor Graphics Corp.*, 814 F.3d 1309, 1336 (Fed. Cir. 2016) (Newman, J., dissenting) (“the record confirms that throughout the gestation of the America Invents Act, legislators of the House and Senate sought strong and conclusive resolution of the most challenging issues of patent-supported innovation, by providing an effective alternative to district court litigation, whereby the expert agency would reliably and confidently review the validity of granted patents.”).

¹²⁶ See *supra* notes 54-57 and accompanying text (explaining interaction of BRI and claim amendments during examination, reexamination, and reissuance).

¹²⁷ *Cuozzo*, 2016 WL 3369425, at *8.

¹²⁸ *Id.* at *15 (Alito, J., dissenting) (“Congress required only that judicial review, including of issues bearing on the institution of patent review proceedings, be channeled through an appeal from the agency’s final decision.”)

¹²⁹ *Id.* at *20 (“I take the Court at its word that today’s opinion will not permit the Patent Office to act outside its statutory limits in these ways. But how to get there from the Court’s reasoning—and how to determine which statutory limits we should enforce and which we should not—remains a mystery. I would avoid the suspense and hold that 35 U.S.C. § 314(d) does not bar judicial review.”)

¹³⁰ See *supra* note 105.

¹³¹ *Id.* The Court reasoned:

That statute [35 U.S.C. § 2(b)(2)(A)] does not clearly contain the Circuit’s claimed limitation, nor is its language the same as that of § 316(a)(4). Section 2(b)(2)(A) grants the Patent Office authority to issue “regulations” “which . . . shall govern . . . proceedings in the Office” (emphasis added), but the statute before us, § 316(a)(4), does not refer to “proceedings”—it refers more broadly to regulations “establishing and governing inter partes review.” The Circuit’s prior interpretation of §

cific to the statute at play in the case, but its reasoning brings into question the Federal Circuit's earlier rule denying the USPTO such authority. If *Cuozzo* is broadly interpreted, it would mark a sea change in patent law and the institutional relationship between the USPTO and the Federal Circuit. Minimally, *Cuozzo* suggests that the Court views claim construction as a substantive issue and not one of procedure.

As to both holdings, the Supreme Court treated the USPTO like any other administrative agency. It generally deferred to the manner by which the agency decided to regulate proceedings before it. Thus, *Cuozzo* can be viewed as the Supreme Court confirming a shift in power away from the Federal Circuit and to the USPTO, particularly under the America Invents Act. What downstream consequences this may have for the relationship between the court and agency remain to be seen.

Because this decision was effectively an administrative law decision rather than a patent law decision, however, there is a paucity of consideration or elaboration of claim construction doctrine. The Court offered no insight as to the appropriate methodology for performing claim construction under the BRI standard. For example, the Court did not consider whether the earlier prosecution history should be routinely considered in post-issuance proceedings like IPRs, even under the BRI standard.¹³² Nor was there an elaboration on the appropriate use of the specification to narrow claim scope, an issue that has generated some controversy within the Federal Circuit.¹³³ Such clarification would have been helpful because it impacts whether prosecution disclaimer could, and should, become relevant in IPRs, PGRs, and CBMs. The relevance could be muted, however, if the PTAB and examiners refuse to allow narrowing arguments under *Marine Polymer*. *Cuozzo* offers us nothing in this regard. Thus, the limits of BRI – and how it actually differs, if at all, from the *Phillips* methodology – remains unexplored.

B. B & B Hardware Opens the Door to Issue Preclusion from Adversarial Administrative Proceedings

One issue that may still arise is the possibility of issue preclusion applying to PTAB claim construction decisions once there is a final decision. Had the Supreme Court adopted the *Phillips* methodology, then issue preclusion almost certainly would apply to PTAB claim constructions in the various adversarial, post-grant proceedings, once there was a final decision. But, even with BRI, issue preclusion remains a possibility.

2(b)(2)(A) cannot magically render unambiguous the different language in the different statute before us. *Id.*

¹³² See *supra* notes 52 and accompanying text.

¹³³ The Supreme Court had previously asked for the Solicitor General's views on this issue, though the Solicitor recommended declining review in that case. Brief of United States as Amicus Curiae, Retractable Technologies, Inc. v. Becton, Dickinson and Co., No. 11-1154, 2012 WL 5940288, at 7 (U.S. Nov. 28, 2012).

Issue preclusion prevents the relitigation of an issue that has previously been decided. Generally, issue preclusion has four necessary elements: (1) the issue at stake must be identical to the one in the prior litigation; (2) the issue must have been actually litigated in the prior suit; (3) the determination of the issue in the prior litigation must have been a critical and necessary part of the judgment in that action; and (4) the party against whom the earlier decision is asserted must have had a full and fair opportunity to litigate the issue in the earlier proceeding.¹³⁴ Issue preclusion applies to district court constructions, so long as there is a final judgment. There is no issue preclusion merely after a *Markman* hearing.¹³⁵ After a judgment regarding validity or infringement, however, then issue preclusion can apply.¹³⁶

Issue preclusion generally has applied within the judicial system between courts, but the Supreme Court has made clear that it can also apply between courts and administrative agencies adjudicative arms. The Supreme Court created the possibility for issue preclusion in a trademark case, *B & B Hardware, Inc. v. Hargis Industries, Inc.*¹³⁷ The Court held in *B & B Hardware* that issue preclusion could apply in district courts as a result of decisions in trademark registration oppositions by the Trademark Trial and Appeal Board (TTAB).¹³⁸ In particular, the Court held that a conclusion of a likelihood of consumer confusion could preclude relitigation of that issue in an infringement context.¹³⁹

The Court addressed a threshold issue: could issue preclusion apply to agency determinations at all?¹⁴⁰ The Court answered that question in the affirmative,¹⁴¹ explaining that “[b]oth this Court’s cases and the Restatement make clear that issue preclusion is not limited to those situations in which the same issue is before two courts. Rather, where a single issue is before a court and an administrative agency, preclusion also often applies.”¹⁴² In so holding, the Court turned away arguments that issue preclusion based on an agency decision would somehow create constitutional issues or that issue preclusion could not apply because agencies did not exist at common law.¹⁴³

The Supreme Court also rejected any categorical bar of issue preclusion in the particular context of TTAB determinations. The Court considered whether it was evident that Congress intended issue preclusion not to apply to TTAB deci-

¹³⁴ *RF Del., Inc. v. Pac. Keystone Techs., Inc.*, 326 F.3d 1255, 1261 (Fed. Cir. 2003) (quoting *In re McWhorter*, 887 F.2d 1564, 1566 (11th Cir. 1989)).

¹³⁵ *See id.* at 1261 (“Here, Pacific has not met its burden of proof to invoke collateral estoppel because the standard for judicial finality is not satisfied.”).

¹³⁶ *See, e.g., Abbott Labs. v. Dey L.P.*, 110 F.Supp.2d 667, 670 (N.D. Ill. 2000) (applying collateral estoppel to claim construction based on prior district court judgment).

¹³⁷ *See generally* 135 S.Ct. 1293 (2015).

¹³⁸ *Id.* at 1299.

¹³⁹ *Id.* at 1308.

¹⁴⁰ *Id.* at 1302.

¹⁴¹ *Id.*

¹⁴² *Id.* at 1303.

¹⁴³ *Id.* at 1304.

sions.¹⁴⁴ While acknowledging the availability of a *de novo* review of the TTAB decision at a district court, the Court nevertheless reasoned that “[o]rdinary preclusion law teaches that if a party to a court proceeding does not challenge an adverse decision, that decision can have preclusive effect in other cases, even if it would have been reviewed *de novo*.”¹⁴⁵ The Supreme Court also noted the two-way street of issue preclusion here because the TTAB affords preclusive effect to district court decisions in its hearings.¹⁴⁶

The Court also rejected that the streamlined nature of the TTAB opposition hearings should render issue preclusion inapplicable. TTAB hearings are rather streamlined, and decisions are based solely on written materials with no testimony allowed.¹⁴⁷ Nevertheless, “the TTAB allows parties to submit transcribed testimony, taken under oath and subject to cross-examination, and to request oral argument.”¹⁴⁸ In many ways, opposition hearings are “similar to a civil action in a federal district court.”¹⁴⁹ The Court also recognized that these proceedings were not entirely about expediency, given the availability of a *de novo* review in district courts.¹⁵⁰ Consequently, there was nothing evident about opposition proceedings to suggest that Congress did not intend issue preclusion to apply to TTAB decisions.

Finally, the Court concluded that the variations between the TTAB and the circuit courts of appeal on the standard for analyzing the likelihood of confusion did not merit a categorical exclusion of issue preclusion. The legal standard for consumer confusion varies across the circuits, so seemingly the manner that the TTAB evaluates the issue could differ from that of other courts.¹⁵¹ Nevertheless, the Supreme Court concluded that issue preclusion could still apply even with these variations, and the Court rejected a categorical exclusion of issue preclusion on this basis.¹⁵² While it recognized that differences exist between registration and infringement,¹⁵³ the Court nevertheless concluded that “the same likelihood-of-confusion standard applies to both registration and infringement.”¹⁵⁴

¹⁴⁴ *B & B Hardware*, 135 S.Ct. at 1305.

¹⁴⁵ *Id.*

¹⁴⁶ *Id.* at 1305-06 (“When a district court, as part of its judgment, decides an issue that overlaps with part of the TTAB’s analysis, the TTAB gives preclusive effect to the court’s judgment.”).

¹⁴⁷ *Id.* at 1300.

¹⁴⁸ *Id.*

¹⁴⁹ *Id.* (quoting TTAB Manual of Procedure § 102.03 (2014)).

¹⁵⁰ *Id.* at 1306 (“Here, if a streamlined process in all registration matters was particularly dear to Congress, it would not have authorized *de novo* challenges for those ‘dissatisfied’ with TTAB decisions.”).

¹⁵¹ Barton Beebe, *An Empirical Study of the Multifactor Tests for Trademark Infringement*, 94 CAL. L. REV. 1581, 1582-83 (2006) (“Each circuit has developed its own formulation of the test. . . . While there is overlap among some of the factors used, there is also great diversity—not just in which factors are employed, but in how they are employed.”).

¹⁵² *B & B*, 135 S. Ct. at 1306-07.

¹⁵³ *Id.* at 1306-07.

¹⁵⁴ *Id.* at 1306.

The Court also appreciated that the analysis at the TTAB usually is based on a registration, unlike district court litigation that focuses on the actual use of the mark.¹⁵⁵ In the Court's view, however, this distinction would impact whether to apply issue preclusion in a particular case and did not justify a blanket prohibition on preclusion.¹⁵⁶ Other procedural differences between the TTAB and district courts could justify not applying issue preclusion in a particular case, if ~~the~~ procedures used in the first proceeding were fundamentally poor, cursory, or unfair."¹⁵⁷ The Supreme Court rejected the contention that there was some reason to believe that the TTAB proceedings would be unfair categorically, however.¹⁵⁸

The Court then instructed the Eighth Circuit to use the following rule on remand to determine whether to apply issue preclusion: —So long as the other ordinary elements of issue preclusion are met, when the usages adjudicated by the TTAB are materially the same as those before the district court, issue preclusion should apply."¹⁵⁹

Consequently, it is possible for a TTAB conclusion on the likelihood of confusion to preclude that issue from being relitigated in a district court. Unsurprisingly, this opens the door to considering a similar situation with the TTAB's sister administrative body, the PTAB. Many IPRs are filed in light of parallel district court litigation, which is often stayed. As such, the PTAB may be the first to consider issues of claim construction. Could the PTAB's decision trigger issue preclusion on that issue? The next subsection explores that possibility in light of *B & B Hardware*.

C. *Could PTAB Claim Constructions Trigger Issue Preclusion in District Courts, Even Post-Cuozzo?*

B & B Hardware clearly opens the door to the possibility of issue preclusion as to claim construction based on a PTAB decision. The analysis in *B & B Hardware* strongly suggests that PTAB claim constructions in IPRs, PGRs, and CBMs could have preclusive affect in the district courts.¹⁶⁰ These procedures, like TTAB oppositions, are adversarial in nature and are designed to be similar to district court litigation.¹⁶¹ They are of course streamlined, but there is some opportunity for discov-

¹⁵⁵ *B & B Hardware* 135 S.Ct. at 1307-08.

¹⁵⁶ *Id.* at 1308 (“[I]f the TTAB does not consider the marketplace usage of the parties’ marks, the TTAB’s decision should have no later preclusive effect in a suit where actual usage in the marketplace is the paramount issue.”) (quoting 6 J. THOMAS MCCARTHY, MCCARTHY ON TRADEMARKS AND UNFAIR COMPETITION, § 32:101, at 32–246 (4th ed. 2010)).

¹⁵⁷ *Id.* at 1309.

¹⁵⁸ *Id.*

¹⁵⁹ *Id.* at 1310.

¹⁶⁰ In a non-precedential decision, the Federal Circuit recently rejected issue preclusion as to claim construction within the PTAB based on district court litigation because the issue had not been actually litigated. *See Cf. In re L.F. Centennial Ltd.*, 2015-1931, slip op. at 9 (Fed. Cir. June 29, 2016)

¹⁶¹ *See* H.R. REP. NO. 112-98, at 68 (2011) *as reprinted in* 2011 U.S.C.C.A.N. 67, 92 (describing

ery. There is considerable similarity between the TTAB's opposition proceedings and the PTAB's various post-issuance adversarial proceedings. The Federal Circuit has noted the potential for issue preclusion to arise from a PTAB claim construction, although it seemed to be skeptical it could arise.¹⁶²

Of course, after *Cuozzo*, the standard for claim construction at the PTAB differs from that in district courts.¹⁶³ One could argue that because the Supreme Court kept the BRI standard, issue preclusion *per se* should not apply because the legal standards differ between PTAB proceedings and district court litigation.¹⁶⁴ Additionally, because the PTAB does not use earlier prosecution histories as frequently as they are used in district court litigation, one could argue that there remain significant differences between claim construction at the PTAB and the district courts. Consequently, there should be no issue preclusion.¹⁶⁵

B & B Hardware, however, suggests that such differences likely cannot result in a categorical exclusion of the use of issue preclusion. The differences among the circuit courts as to the assessment of the likelihood of consumer confusion are far more varied than the differences between the *Phillips* and BRI standards. The Court in *B & B Hardware* refused to allow even those wide variations from creating a categorical exclusion of issue preclusion.

Moreover, it is not entirely clear how truly different the BRI and *Phillips* standards are. Many people have wondered whether there is any difference in the vast majority of cases.¹⁶⁶ Any interpretation must be "reasonable," which may account for surrender of claim scope through the specification itself. If the PTAB claim

PGR as a "court-like proceeding"); see also *In re Cuozzo Speed Techs., LLC*, 793 F.3d 1268, 1285 (Fed. Cir. 2015), *cert. granted sub nom.* *Cuozzo Speed Techs., LLC v. Lee*, 136 S. Ct. 890 (2016) ("Now, the America Invents Act not only authorizes the PTO to conduct litigation-type adversarial proceedings to decide patent validity, but also authorizes such proceedings even when there is no 'controversy' under Article III.").

¹⁶² *SkyHawke Techs., LLC v. Deca Int'l Corp.*, No. 2016-1325, 2016 WL 3854162, at *2 (Fed. Cir. July 15, 2016) ("While administrative decisions by the U.S. Patent and Trademark Office can ground issue preclusion in district court when the ordinary elements of issue preclusion are met. . . , we cannot foresee how the claim construction reached by the Board in this case could satisfy those ordinary elements."). Issue preclusion was not squarely presented to the court in this case, however. Instead, it was addressing whether a party that prevailed at the PTAB could nevertheless appeal a claim construction determination that it did not like. *Id.* at *1. The court rejected the appeal. *Id.*

¹⁶³ Assuming, of course, that the patent at issue has not expired. See *supra* note 53.

¹⁶⁴ *Cf. SkyHawke*, 2016 WL 3854162, at *2 ("Because the Board applies the broadest reasonable construction of the claims while the district courts apply a different standard of claim construction as explored in *Phillips v. AWH Corp.*, 415 F.3d 1303 (Fed. Cir. 2005) (en banc), the issue of claim construction under *Phillips* to be determined by the district court has not been actually litigated.").

¹⁶⁵ The same claim construction issue must also be presented, and there could be differences in the terms at issue for purposes of validity as opposed to infringement.

¹⁶⁶ See, e.g., Scott A. McKeown, *PTAB Finds BRI Claim Construction No Different under Phillips*, PATENTS POST-GRANT (July 15, 2014), <http://www.patentspostgrant.com/ptab-finds-bri-claim-construction-no-different-than-phillips-analysis> ("Phillips may be different from the BRI in name only.") (last visited June 29, 2016).

construction relies upon the patentee's lexicography in the specification, then the standard very well may be the same. Patentees in IPRs and PGRs are in a different posture than in litigation. They very well may argue for narrower interpretations claims. In contrast, in litigation, they often argue for broader interpretations to ensure that the accused device is covered by the claim.¹⁶⁷ So, it may be important to prevent relitigation of the issue.¹⁶⁸ One key difference could be the tendency of the PTAB not to rely on earlier prosecution histories, which could cause differences. If the patentee is successful at the PTAB, it very well may be that the legal standard does not vary.

Also different from TTAB proceedings are the statutory estoppel provisions found in the various post-issuance proceedings in the PTAB.¹⁶⁹ These provisions could suggest that Congress intended for issue preclusion to not apply in the PTAB context. These statutory estoppel provisions preclude a party challenging the patent from relitigating in the district courts any issues it actually raised or could have raised at the USPTO. These provisions, however, are tied to the "grounds" raised within the proceeding. Claim construction is not such a "ground," so seemingly issue preclusion could still apply in a manner distinct from the statutory estoppel provisions. Nevertheless, these estoppel provisions may provide evidence that Congress intended to displace classic collateral estoppel.

The streamlined nature of the PTAB proceedings is also not a reason to refuse to apply issue preclusion. The Supreme Court rejected a similar argument that the streamlined nature of the TTAB opposition hearings should render issue preclusion inapplicable. TTAB also hearings are rather streamlined, and decisions are based solely on written materials with no testimony allowed.¹⁷⁰ Nevertheless, "the TTAB allows parties to submit transcribed testimony, taken under oath and subject to cross-examination, and to request oral argument."¹⁷¹ In many ways, opposition hearings are "similar to a civil action in a federal district court."¹⁷² The streamlined nature of PTAB proceedings, like TTAB proceedings, likely does not suggest that Congress did not intend to refuse the application of issue preclusion to PTAB findings.

¹⁶⁷ See *supra* notes 61-63 and accompanying text.

¹⁶⁸ The patent holder could also be subject to judicial estoppel if they truly change their position between the TTAB and district court. *Cf.* In re L.F. Centennial Ltd., 2015-1931, slip op. at 9 (Fed. Cir. June 29, 2016) (considering but rejecting judicial estoppel within the PTAB based on claim construction representations at the district court).

¹⁶⁹ 35 U.S.C. § 315(e) (2013) (petitioner estopped before USPTO, district courts, and ITC "on any ground that the petitioner raised or reasonably could have raised during that inter partes review"); see also 35 U.S.C. § 325(e) (2013) (petitioner estopped before USPTO, district courts, and ITC "on any ground that the petitioner raised or reasonably could have raised during that post-grant review").

¹⁷⁰ *Id.* at 1300.

¹⁷¹ *B & B Hardware, Inc.*, 135 S.Ct. at 1300.

¹⁷² *Id.* (quoting TRADEMARK TRIAL AND APPEAL BOARD, MANUAL OF PROCEDURE § 102.03 (2014)).

Another difference that could suggest that Congress did not intend PTAB decisions in these proceedings to have preclusive effect is the lack of a *de novo* review by a district court. A final decision by the PTAB in IPRs, PGRs, and CBMs can only be appealed to the Federal Circuit.¹⁷³ This differs from the TTAB, where such *de novo* review is available. The Court also recognized that these proceedings were not entirely about expediency, given the availability of a *de novo* review in district courts.¹⁷⁴ Consequently, there was nothing evident about opposition proceedings to suggest that Congress did not intend issue preclusion to apply to TTAB decisions. It suggests that, unlike TTAB proceedings, expediency truly drove Congress in creating these procedures.¹⁷⁵ There is much in the legislative history to support this view.

These structural differences, however, are not sufficient in my opinion. In many ways the PTAB proceedings more closely mirror district court litigation than TTAB hearings. The lack of *de novo* review seems to be a minor aspect of the Court's reasoning in *B & B Hardware*. As for the estoppel provisions, they apply primarily to the arguments on validity, not claim construction, and are limited to the petitioners, not the patent owner. Issue preclusion, therefore, would have a different form of application than the statutory estoppel provisions.¹⁷⁶

V. Conclusion

IPRs have proven to be an immensely popular alternative or complement to district court litigation. They undeniably have altered our patent system. The PTAB may also, indirectly and directly, have a broader impact on claim construction in the district courts. Indirectly, the PTAB's recent refusal to narrow claims based on argumentation may impact the ability of district courts to rely upon prosecution disclaimer. If no disclaimer by argument is allowed, then it would seem the district courts will have nothing upon which to draw. Additionally, even with the Supreme Court retaining the USPTO's BRI standard for claim construction, there is a real possibility that PTAB claim constructions in IPRs, PGRs, and CBMs could have preclusive effect in the district courts. If so, then litigants in these proceedings at the USPTO will have even greater incentives to appeal to the Federal Circuit so that

¹⁷³ See 35 U.S.C. § 319 (2013) (permitting appeals from IPRs only under 35 U.S.C. §§ 141-44, which are specific to Federal Circuit); see also 35 U.S.C. § 329 (2013) (permitting appeals from PGRs (and therefore CBMs) only under 35 U.S.C. §§ 141-44, which are specific to Federal Circuit).

¹⁷⁴ *Id.* at 1306 (“Here, if a streamlined process in all registration matters was particularly dear to Congress, it would not have authorized *de novo* challenges for those ‘dissatisfied’ with TTAB decisions.”).

¹⁷⁵ H.R. REP. NO. 112-98, at 48 (2011) as reprinted in 2011 U.S.C.C.A.N. 67, 78 (stating “the purpose of the section as providing quick and cost effective alternatives to litigation.”).

¹⁷⁶ There is a burden of proof difference between the courts and the PTAB. Because patents are presumed valid in litigation, a party must prove invalidity under the clear and convincing standard. *Microsoft Corp. v. i4i Ltd. P'ship*, 131 S.Ct. 2238, 2242 (2011). The burden of proof in PTAB proceedings, however, is a preponderance of the evidence. 35 U.S.C. § 316(e) (2013). The burden of proof, however, is irrelevant for claim construction, which is not governed by these burdens of proof.

the court, and not the USPTO, has the final say on the meaning of the claim terms. Given the influx of PTAB appeals at the Federal Circuit, this outcome may not be desirable from a structural viewpoint. Regardless, the PTAB is positioned to have a considerable impact on the law of claim construction.

HEINONLINE

Citation: 97 J. Pat. & Trademark Off. Soc'y 630 2015

Provided by:

GW Law Library



Content downloaded/printed from [HeinOnline](#)

Thu May 11 13:54:00 2017

-- Your use of this HeinOnline PDF indicates your acceptance of HeinOnline's Terms and Conditions of the license agreement available at <http://heinonline.org/HOL/License>

-- The search text of this PDF is generated from uncorrected OCR text.

-- To obtain permission to use this article beyond the scope of your HeinOnline license, please use:

[Copyright Information](#)

Forum Shopping Under The Patent Cases Pilot Program

Patent Litigation in a District Tailored to Your Technology

Jack DaSilva

Contents

I. Introduction	631
A. Legislative Impetus for the PPP	631
B. How Local Patent Rules Complement the PPP	632
II. The Purpose of the PPP Is to Enhance Judicial Expertise in Patent Case Management	634
A. Legislative History and Statutory Construction of the PPP	635
B. Examination of the PPP Within the Participating Districts	636
1. The PPP Viewed Through Reassignment Rates	637
III. Industry-Based Forum Selection in Response to the PPP	639
A. Pharmaceutical Patent Case Forum Shopping	640
B. Semiconductor-Based Patent Case Forum Shopping	643
C. Software Patent Case Forum Shopping	646
D. Industry-Based Forum Shopping Delivers Few Conclusions About the Efficacy of the PPP	650
IV. Solving Forum Shopping In Lieu of the Current PPP	650
A. Funding the PPP and Adapting It to the Geographic Realities of Forum Shopping	651
V. Conclusion	653
VI. Appendix-Section III Methodology	653
A. Selection of Pharmaceutical Patent Cases Filed	653
B. Selection of Semiconductor-Based Patent Cases Filed	654
C. Selection of Software Patent Cases Filed	654
D. Factors Potentially Influencing Results	654

E. Tables and Graphs	659
1. <i>t</i> Statistic Significance	659

I. Introduction

On January 4, 2011 Congress enacted the Patent Case Pilot Program Act, which Representative Darrell Issa sponsored.¹ The statute's stated purpose was to create the Patent Pilot Case Program (PPP) "to encourage enhancement of expertise in patent cases among [federal] district [court] judges."² This would be achieved by funneling patent cases to a limited number of federal judges, thus increasing specialization in and familiarity with patent case management.³ Representative Sensenbrenner, Chairman of the Committee of the Judiciary, aptly described the general premise underlying the PPP's structure as "practice makes perfect."⁴ Particularly, certain federal judges would receive more "practice" by presiding over more patent cases.⁵ However, this theory remains largely untested and requires that the districts participating in the PPP attract a substantial number of patent litigants.

A. Legislative Impetus for the PPP

Representative Issa's motivation for the PPP sprang from his personal experience in the electronics industry.⁶ According to Representative Issa, confidence in a company's intellectual property "allows a company to plan which products it will invest [in] . . . and also fosters confidence from the investment community."⁷ His statement referred to his opinion, and that of other Congressmen and legal scholars,⁸ that high reversal rates of district court patent rulings encourage parties to appeal, which prolongs litigation and creates uncertainty. It was such uncertainty that Representative Issa sought to address.⁹

High reversal rates in patent cases are partially due to the unique challenges of patent litigation. These challenges include: (1) ascertaining the appropriate scope of discovery; (2) understanding the technical nature of the sub-

¹ Patent Cases Pilot Program Act, Pub. L. No. 111-349, 124 Stat. 3674 (2011).

² 124 Stat. at 3674.

³ 152 CONG. REC. H7851, H7851 (daily ed. Sept. 28, 2006) (statement of Rep. Jim Sensenbrenner).

⁴ *Id.* at H7851 (statement of Rep. Jim Sensenbrenner).

⁵ *Id.*

⁶ *Improving Federal Court Adjudication of Patent Cases: Hearing Before the Subcomm. on Courts, the Internet, & Intellectual Property of the H. Comm. on the Judiciary*, 109th Cong. at 14 (2005) (statement of Rep. Darrell E. Issa) [hereinafter "Hearing"].

⁷ *Id.* at 14.

⁸ *See, e.g., Hearing, supra* note 6 at 9 (statement of Rep. Lamar Smith) (stating that by 1992 the Advisory Commission of Patent Law Reform recognized the issue of, "spiraling cost and complexity associated with the enforcement of patent rights"); Kimberly Moore, *Judges, Juries, and Patent Cases – An Empirical Peek Inside the Black Box*, 99 MICH. L. REV. 365, 397 (2000) (identifying 22% reversal rate of district court determinations in patents cases, compared with 18% for general litigation); Pauline Pelletier, *The Impact of Local Patent Rules on Rate and Timing of Case Resolution Relative to Claim Construction: An Empirical Study of the Past Decade*, 8 J. BUS. & TECH. L. 451, 467-68 (2013).

⁹ *Hearing, supra* note 6 at 14 (statement of Rep. Darrell E. Issa) (stating more than 35% of District Court claim construction rulings reversed).

ject matter in dispute; and (3) managing the high stakes of litigation.¹⁰ However, other aspects unique to patent litigation allow for improved efficiency through procedural measures. Patent litigation has a limited number of determinative issues: claim validity, claim scope, and infringement of the claim(s) at issue.¹¹ Moreover, local patent rules in certain districts create predictability in patent litigation by establishing procedural requirements and deadlines.¹² Such procedural deadlines and safeguards align with the PPP's legislative intent "to decrease the cost of litigation by increasing the success of district court judges."¹³

B. How Local Patent Rules Complement the PPP

District courts that streamline patent litigation or are consistent in their patent case resolution have become popular fora for litigants.¹⁴ The popularity of the Eastern District of Texas (E.D. Tex.) is an example of plaintiffs' apparent response to a court's adoption of local patent rules. In response to the influx of patent cases filed in the E.D. Tex. from 1997 to 2001,¹⁵ Hon. T. John Ward of the E.D. Tex. adopted patent rules through a series of judicial orders starting in 2001.¹⁶ The patent caseload of the E.D. Tex. continued to increase from 2001 through 2005, when the entire district adopted local patent rules.¹⁷ Since adopting local patent rules the patent caseload of the E.D. Tex. has continued to grow, increasing by 850% between 2005 and 2014.¹⁸

The speed with which the E.D. Tex. disposed of patent cases likely led to the increase in patent cases filed there.¹⁹ Disposition speed often dictates litigants' forum preference because of potential and perceived effects on favorable dispositions.²⁰ Many litigants seek jurisdictions where cases proceed to trial as quickly as possible, to: (1) obtain injunctive relief; (2) limit defendants' ability to design around the claim at issue; (3) preserve patent term; and (4) settle quickly.²¹ The median time to trial and the median time to a claim con-

¹⁰Pelletier, *supra* note 8, at 453-54.

¹¹Pelletier, *supra* note 8, at 454.

¹²*Id.*

¹³156 CONG REC. H8536, H8539 (daily ed. Dec. 16, 2010) (statement of Rep. Darrell Issa).

¹⁴Mark Lemley, *Where to File Your Patent Case*, 38 AIPLA Q.J. 401, 403-404 (2010).

¹⁵Alfonso Chan, *Proposed Patent Local Rules for Adoption by Texas' Federal District Courts*, 7 COMP. L. REV. & TECH. J. 149 (2003) (stating that patent filings increased by 350% from 1997 to 2001).

¹⁶See Chan, *supra* note 15 at 149, 151; Notice of Scheduling Conference Proposed Deadlines for Docket Control Order and Discovery Order, Civ. No. 2:00-CV-999 (TJW) (E.D. Tex. 2001), *reprinted in* Chan, *supra* note 15 app. C, at 203-206; Additional Provisions and Procedures for Inclusion in Discovery Orders Entered for Patent Cases Pending Before T. John Ward (E.D. Tex. 2001), *reprinted in* Chan, *supra* note 15 app. F, at 214-218.

¹⁷Data from Lex Machina as of 2/17/2015, which includes only those cases with at least one claim for patent infringement or non-infringement, patent invalidity or validity, or patent unenforceability or enforceability filed in the E.D. Tex. LEX MACHINA, <https://law.lexmachina.com/court/txed> (last visited Apr. 4, 2015) (showing that patent filings at the E.D. Tex. increased from 37/year to 150/year, or 305%).

¹⁸LEX MACHINA, <https://law.lexmachina.com/court/txed> (last visited Apr. 4, 2015) (showing that patent filings at the E.D. Tex. increased from 150/year to 1425/year, or 850%).

¹⁹Lemley, *supra* note 14, at 405 (hypothesizing that prior to the development of the Stanford Intellectual Property Litigation Clearinghouse (SIPLC) in December 2008, plaintiffs likely chose their forum based on how fast a court's docket moved because that was the best available indicator of the district's speed and efficiency).

²⁰See Lemley, *supra* note 14, at 414; Pelletier, *supra* note 8, at 492.

²¹See Lemley, *supra* note 14, at 403; Pelletier, *supra* note 8, at 493.

struction hearing in the E.D. Tex. were substantially less than the average time to claim construction hearings across all districts in 2004 and 2005.²²

Rocket dockets such as the E.D. Tex. tend to attract a disproportionate number of plaintiffs. Plaintiffs have more time to prepare for trial than defendants because plaintiffs control complaint filing and service of process.²³ In contrast, defendants are alerted to impending litigation only upon service of process.²⁴ Strategically, an expedited schedule aids well-prepared plaintiffs by reducing effort required of plaintiffs during a trial.²⁵

However, at least one empirical study of pre-PPP data suggests that forum choices do *not* appear to be outcome driven.²⁶ In assessing the effects of the PPP on participating districts, the analysis observed that the Northern District of Texas (N.D. Tex.) and the Northern District of Georgia (N.D. Ga.) had a similar number of cases filed between 2000 and 2010.²⁷ Even so, the 55.1% win rate in the N.D. Tex. was significantly higher than the 11.5% win rate in the N.D. Ga.²⁸ This suggests that something besides the likelihood of success at trial motivates litigants' venue choice, and it may be necessary to reconsider the premises of the PPP.

One source of increasing patent litigation costs is forum shopping²⁹— the propensity of litigants to seek an advantage through filing in a particular venue when any of several are proper for the litigation.³⁰ Forum shopping is prevalent in patent litigation because patent venue is permissive.³¹ The expense of forum shopping thus arises in part from the research plaintiffs undertake to select the most favorable forum at the time. Plaintiffs routinely make such investigations because patent case filing volume at the various districts varies over time.³² Further, the expertise garnered by federal district judges is essentially wasted when litigants' preference for those judges' fora wanes and shifts to a new forum.

To address issues arising from forum shopping, the PPP must direct liti-

²²LEX MACHINA, <https://law.lexmachina.com/court/txed> (last visited Apr. 4, 2015) (showing the median time to trial and claim construction hearing in the E.D. Tex. in 2004 was 1.89 years and 1.21 years, and in 2005 1.90 years and 1.17 years, while across all districts the median time to trial and time to claim construction hearing was 2.17 years and 1.46 years in 2004 and 2.23 years and 1.25 years in 2005).

²³

²⁴*Id.*

²⁵*Id.*

²⁶See Lemley, *supra* note 14, at 411 (stating that the data may not support the conclusion that litigants shop by win rates).

²⁷Lemley, *supra* note 14, at 407.

²⁸Lemley, *supra* note 14, at 410.

²⁹See *Hearing*, *supra* note 6 at 31-32 (2005) (statement of John B. Pegram, Senior Counsel, N.Y.C. Office, Fish & Richardson, P.C.); Adam Shartzter, *Patent Litigation 101: Empirical Support for the Patent Pilot Program's Solution to Increase Judicial Experience in Patent Law*, 18 FED. CIR. B.J. 191, 211 (2008) (stating that the cost of the average patent litigation rose as much as 98.9% between 2001 and 2007).

³⁰See generally Carrie E. Johnson, *Rocket Dockets: Reducing Delay in Federal Civil Litigation*, 85 Calif. L. Rev. 225, 227 (1997).

³¹See 28 U.S.C. Â§ 1400(b) (stating that venue is proper both "in the judicial district where the defendant resides, or where the defendant has committed acts of infringement"); *VE Holding Corp. v. Johnson Gas Appliance Co.*, 917 F.2d 1574, 1580 (Fed. Cir. 1990) (interpreting that "resides" in 28 U.S.C. Â§ 1400(b) is controlled by the general venue statute 28 U.S.C. Â§Â§ 1391(b-c)).

³²See *Hearing*, *supra* note 6, at 18-19 (statement of Kimberly A. Moore, Professor of Law, George Mason Univ. Sch. of Law).

gants' forum preferences to participating districts, but empirical studies have not discerned a significant relationship between forum shopping and the PPP or practices like the adoption of local patent rules. This note highlights these issues by comparing subsets of forum shopping behavior and a district's participation in the PPP. Further, this note also includes an empirical study of industry-specific forum shopping in PPP and non-PPP districts. Instead of enhancing judicial expertise, empirical evidence and insights into the operation of the PPP suggest that it has failed to: (1) modify litigants' forum shopping preferences; and (2) significantly enhance judicial expertise. In the future the PPP may be successful if: funding is allocated for judicial training and clerkships, as previously proposed;³³ a minimum number of designated judges in each participating district is enforced; and participating districts are selected on the basis of geography and patent case docket volume.

Section II of this note describes the PPP and examines the operation of the PPP within the participating districts. It focuses on the reassignment of patent cases from non-designated to designated judges under the PPP, and the effect adopting local patent rules had on the rate of patent cases filed in those districts.

Section III of this note investigates industry-specific patent case filings in participant PPP districts as well as high volume non-PPP patent litigation districts. This examination focuses on assessing whether certain industries have preferred particular district courts and whether those preferences have changed as a result of the PPP. Changes in litigants' forum preferences reflect the degree to which the PPP has met its underlying goals and whether its continued existence is justified.

Section IV of this note assesses extant proposals for further reform of patent litigation, describes a new proposal for patent litigation reform, and compares these proposals. This assessment focuses on the problems identified by these proposals to evaluate their efficacy.

II. The Purpose of the PPP Is to Enhance Judicial Expertise in Patent Case Management

The express purpose of the PPP is for the "enhancement of expertise in patent cases among district judges."³⁴ However, this statement is troublingly vague and therefore makes evaluation of the PPP challenging. The progress of the PPP is assessed by periodic administrative reports prepared by the Director of the Administrative Office of the United States Courts (Director), which detail a variety of statistics from participating districts.³⁵ Legal scholars have

³³155 CONG. REC. H3456, H3457 (daily ed. Mar. 17, 2009) (earlier versions of the PPP included Section 1(f) authorizing \$5,000,000 for the "educational and professional development" of designated judges and to hire judicial clerks with technical expertise).

³⁴Patent Cases Pilot Program Act, Pub. L. No. 111-349, 124 Stat. 3674, 3674 (2011).

³⁵See 124 Stat. at 3675-76. See also FEDERAL JUDICIAL CENTER, U.S. FEDERAL COURTS, Status Update on Study of Patent Pilot Program (December 2013) [hereinafter "December Report"]; FEDERAL JUDICIAL CENTER, U.S. FEDERAL COURTS, Status Update on Study of Patent Pilot Program (February 2013) [hereinafter "February

attempted to evaluate the PPP through empirical studies of a variety of metrics including: reassignment rates and adoption of local patent rules.³⁶ Both the administrative reports and empirical studies offer insight as to the effect the PPP has had on forum shopping in participating districts.³⁷

A. Legislative History and Statutory Construction of the PPP

Starting January 4, 2011, the Director could designate district courts as members of the PPP.³⁸ The Director's individual designations were subject to one of two requirements: that the district court (1) be among the fifteen busiest districts by patent case filings in 2010, or (2) already have adopted (or certify to the Director the intent to adopt) local patent rules.³⁹ The composition of the Director's designations must comply with two further requirements: (1) at least three of the participating districts have more than ten judgeships with at least three of the judges being designated under the PPP, and (2) at least three of the participating districts have fewer than ten judgeships with at least two of the judges being designated under the PPP.⁴⁰ This provides a cross section of district courts with high and low volumes of patent case filings, and small and large numbers of judges. The resulting composition of participating districts facilitates the PPP's purpose, fulfills the underlying motivation of the PPP to disperse patent case filings amongst a larger number of fora, and supplies a diverse sample of participating districts for empirical study of the PPP's effects.⁴¹

The PPP's default random assignment of cases to judges in participating districts⁴² facilitates empirical studies of the program's success. The PPP provides for the voluntary designation of judges within the district to whom non-designated judges may reassign patent cases.⁴³ This provision moderates the specialization of designated judges by maintaining the size of their docket, only increasing the number of assigned patent cases.⁴⁴ Ideally, no single judicial docket is taken over by patent cases, as patent cases represent a small portion of generalist judges' dockets and not all cases within a district are necessarily reassigned to designated judges.⁴⁵ Preferably, designated judges receive enough patent cases to improve their familiarity with patent cases, as

Report"].

³⁶ See Pelletier, *supra* note 8, at 455; Ron Vogel, *The Patent Pilot Program: Reassignment Rates and the Effect of Local Patent Rules*, NYIPLA, Oct/Nov 2013 Bulletin at 13-14.

³⁷ See generally December report, *supra* note 36; February report, *supra* note 36; Pelletier, *supra* note 8, at 455-57; Vogel, *supra* note 37, at 13-15.

³⁸ See Patent Cases Pilot Program Act, Pub. L. No. 111-349, 124 Stat. 3674, 3674 (2011).

³⁹ 124 Stat. at 3675.

⁴⁰ *Id.*

⁴¹ *Hearing, supra* note 6 at 15 (statement of Rep. Darrell E. Issa).

⁴² See Randall Rader, *Addressing the Elephant: The Potential Effects of the Patent Cases Pilot Program and Leahy-Smith America Invents Act*, 62 AM. U. L. REV. 1105, 1106 (2013).

⁴³ 124 Stat. at 3674.

⁴⁴ *Id.*

⁴⁵ Though some districts have exhibited 100% or nearly 100% reassignment rates. See Vogel, *supra* note 37, at 14 (stating that as of October 2013, W.D. Pa., D. Nev., and N.D. Tex. reassigned 100%, 88.5%, and 76.1% of patent cases, respectively).

the PPP seeks a degree of specialization from generalist judges to facilitate more effective resolution of patent cases.⁴⁶

The Patent Case Pilot Program Act provides for “periodic” reports from “[t]he Director . . . , in consultation with the chief judge of each of the [participating] district courts.”⁴⁷ The reports must analyze the expertise of the designated judges and the efficiency of the participating courts.⁴⁸ Also required therein are comparisons of designated and non-designated judges on the basis of reversal rate at the Court of Appeals for the Federal Circuit and the duration from filing to trial.⁴⁹ The reports are further required to discuss any indication of forum shopping among the participating districts and whether the PPP should extend beyond its proposed ten-year period of operation.⁵⁰

The February and December 2013 reports to the House and Senate judiciary subcommittees complied with these requirements by detailing a variety of statistics for each district and surveying the designated judges to determine: the number of patent cases filed, the number of pilot cases,⁵¹ the percentage of patent cases that are pilot cases, the likeliness of designated judges to use certain resources if provided, termination of pilot and non-pilot cases, disposition of terminated patent cases, and the duration of pilot and non-pilot cases.⁵² Given the present dearth of existing reports, their statistical utility is currently limited, which has prompted legal scholars to use other sources to evaluate forum shopping and the PPP.⁵³

B. Examination of the PPP Within the Participating Districts

Numerous factors drive patent litigants’ forum preference, including: average time to trial, average trial length, average time to claim construction hearing, adoption of patent rules, and perceived friendliness to plaintiffs or defendants.⁵⁴ Such factors have stymied efforts to dowse litigants’ true motivations by legal scholars seeking to inform the judiciary and legislature regarding case management and statutory reform. Legal scholars suggest that reassignment rates may inform litigants’ forum shopping preferences.⁵⁵

⁴⁶Hearing, *supra* note 6 at 32 (statement of John B. Pegram, Senior Counsel, N.Y.C. Office, Fish & Richardson, P.C.) (“When you have cancer do you want to go to the City of Hope Hospital, or just let your general practitioner take care of it?”).

⁴⁷124 Stat. at 3675-76.

⁴⁸*Id.*

⁴⁹*Id.*

⁵⁰124 Stat. at 3676.

⁵¹December Report, *supra* note 36 (stating that pilot cases meet one of three conditions: (1) the judge assigned the case was a designated judge at the time of random assignment; (2) a designated judge received the case through transfer from a non-designated judge within the time limit established by each court; or (3) a designated judge received the case through transfer from a designated judge after the time limit established by each court).

⁵²February Report, *supra* note 36; December Report, *supra* note 36.

⁵³See Vogel, *supra* note 37, at 14; Pelletier, *supra* note 8, at 454-55.

⁵⁴See generally Lemley, *supra* note 14, at 401-36; Pelletier, *supra* note 8, at 455.

⁵⁵Vogel, *supra* note 37, at 13; Pelletier, *supra* note 8, at 454-55.

1. The PPP Viewed Through Reassignment Rates

Patent case reassignment rates among judges within participating districts may be indicative of the degree that these districts utilize the PPP.⁵⁶ Districts with a high number of patent cases on their dockets have judges with corresponding expertise in case management,⁵⁷ which eliminates much motivation to utilize the PPP's reassignment mechanism.⁵⁸ Moreover, the reassignment mechanism may illustrate the effects of participation in the PPP because it serves as the hallmark difference between participating and non-participating districts.⁵⁹

Through October 2013, nearly a third of all patent cases assigned to non-designated judges in participating districts were reassigned to designated judges.⁶⁰ The lowest reassignment rates arose in the Northern District of California (N.D. Cal.), the Southern District of New York (S.D.N.Y.), the District of New Jersey (D.N.J.), and the Central District of California (C.D. Cal.),⁶¹ busy districts where judges regularly deal with patent litigation.⁶² Since the lowest reassignment rates occur in districts with high volumes of patent case filings, it may be expected that busy districts are less likely to exercise the PPP's reassignment option.⁶³ A comparison of the districts with the highest and lowest reassignment rates supports this inference about busy districts.

The lowest reassignment rates occurred in the N.D. Cal., the D.N.J., and the C.D. Cal., which respectively had 0.6%, 16.7%, and 18.8% reassignment rates.⁶⁴ In contrast, the highest reassignment rates occurred in the Western District of Pennsylvania (W.D. Pa.), the District of Nevada (D. Nev.), and the Northern District of Texas (N.D. Tex.), which respectively had 100%, 88.5%, and 76.1% reassignment rates.⁶⁵ This comparison is especially instructive since the two groups of districts have similar proportions of designated and non-designated judges, but dissimilar reassignment rates.⁶⁶ The high reassignment and low reassignment districts differ in two critical characteristics: reassignment rate and amount of patent cases per judge.⁶⁷

While the individual courts have varying proportions of designated judges, the low reassignment districts as a group are composed of about 27% desig-

⁵⁶ See Vogel, *supra* note 37, at 13-14.

⁵⁷ See generally 152 CONG. REC. at H7851 (statement of Rep. Jim Sensenbrenner).

⁵⁸ See generally Vogel, *supra* note 37, at 14.

⁵⁹ See Vogel, *supra* note 37, at 13; See generally Rader, *supra* note 43, at 1106.

⁶⁰ See Vogel, *supra* note 37, at 13 (identifying that 649 of the 2,037 patent cases initially assigned to judges not designated under the PPP were reassigned to designated judges).

⁶¹ Vogel, *supra* note 37, at 13-14.

⁶² See Vogel, *supra* note 37, at 13-14; Joe Mullins, *Why East Texas Courts Are Back on "Top" for Patent Lawsuits*, ARS TECNICA (Jan. 16, 2013, 10:30 PM), <http://arstechnica.com/tech-policy/2013/01/east-texas-courts-are-back-on-top-for-patent-lawsuits/>.

⁶³ See Vogel, *supra* note 37, at 13-14 (analyzing reassignment data from the districts' respective entry into the PPP until October 2013).

⁶⁴ See Vogel, *supra* note 37, at 13-14 (based upon data from Table 2 therein, by calculating patent cases reassigned by non-patent judges as a percentage of patent cases assigned to those judges).

⁶⁵ *Id.*

⁶⁶ Vogel, *supra* note 37, at 14.

⁶⁷ The C.D. Cal., the N.D. Cal., and the D.N.J. respectively had 22.8, 15.3, and 11.6 patent cases per judge; the D. Nev., the W.D. Penn., and the W.D. Tenn. respectively had 5.8, 3.8, and 7.3 patent cases per judge. Vogel, *supra* note 37, at 14 (based upon data from Table 2 therein).

nated judges, which is similar to the high reassignment districts composed of about 32.5% designated judges.⁶⁸ These compositions are strikingly similar in view of the differences in patent caseload and reassignment rates.⁶⁹ Even more surprising is a comparison of the ratio of judges to patent cases. The high reassignment courts totaled 40 judges and 225 patent cases from September 2011 through October 2013 and the low reassignment courts totaled 143 judges and 1,834 patent cases.⁷⁰ The resultant ratio of patent cases per judge for the high reassignment courts was approximately 5.6 to 1, while for low reassignment courts the ratio was approximately 12.8 to 1.

Table II.1. Percentage of patent cases reassigned, number of designated judges, and total number of judges and magistrates in certain PPP districts.

		Number of Designated Judges	Total Number of judges	Reassignment rate (%)
low reassignment districts	N.D. Cal.	12	31 ^a	0.6
	D.N.J.	11	25	16.7
	C.D. Cal.	6	37	18.8
	S.D.N.Y.	10	50	22.1
	Total	39	143	
high reassignment districts	W.D. Pa.	6	14	100.0
	D. Nev.	4	12	88.5
	N.D. Tex.	2	14	76.1
	Total	12	40	

^aThis number includes judges and magistrates. See Vogel, *supra* note 37, at 14 n.12.

These comparisons suggest that the reassignment rate is inversely proportional to the districts' familiarity with patent cases. It also appears that larger districts receive more patent case filings per judge, giving their judges more opportunities to gain expertise through increased familiarity with patent cases. The instruction distilled from these comparisons seems to reinforce the premise of the PPP, namely that repeated exposure to patent cases improves judges' expertise.⁷¹ However, this relationship between patent case filings and judicial expertise implies that the large, high volume patent districts benefit the least from the reassignment mechanism of the PPP, since their judges already have expertise in managing patent cases. Unfortunately, the high volume districts arguably have the most to gain from *improved* judicial expertise under the PPP due precisely to the large number of patent cases they must manage.

The Southern District of Florida (S.D. Fla.) is an intriguing case study of the hypothesis that high volume districts receive little or no benefit from the reassignment mechanism of the PPP. The S.D. Fla. has routinely been among the ten districts receiving the greatest volume of patent cases filed over the

⁶⁸Vogel, *supra* note 37, at 14.

⁶⁹See Vogel, *supra* note 37, at 13-14.

⁷⁰Vogel, *supra* note 37, at 14 (based upon data from Table 2 therein).

⁷¹Hearing, *supra* note 6 at 14-15 (statement of Rep. Darrell E. Issa).

previous fifteen years.⁷² It was thus selected for participation in the PPP, and declared its intention to participate prior to any other district.⁷³ However, the S.D. Fla. announced in June of 2014 that it was withdrawing from the PPP.⁷⁴ This was in contravention to the district's fervor to participate in the PPP, and the PPP's arguable utility in improving district judges' patent case management expertise.⁷⁵

Unfortunately, interpretation of the S.D. Fla.'s decision to withdraw is poorly aided by the administrative order announcing this withdrawal.⁷⁶ The administrative order states only that the district determined that the administration of justice would best be served by termination of the PPP and a return to an entirely random assignment of patent cases,⁷⁷ but no further explanation of the basis for withdrawal.⁷⁸ However, the S.D. Fla.'s small number of PPP designated judges (only three of its twenty-five judges) and substantial reassignment rate (51.4%, representing 108 of 210 pilot patent cases) implies the district's withdrawal from the PPP was due to an unmanageable caseload for designated judges.⁷⁹ Ironically, the high reassignment of patent cases indicated that the PPP was operating as intended through the diversion of patent cases to only a few judges to improve their expertise.⁸⁰ This suggests that the PPP's success depends on moderating its operation by establishing a minimum ratio of designated judges to non-designated judges, in order to prevent overloading PPP designated judges' dockets with patent cases.

III. Industry-Based Forum Selection in Response to the PPP

There have been no previous studies of the PPP's effect on industry-specific forum shopping.⁸¹ In order to examine its effect, the present analysis considered industry-specific patent filings from 2000 through 2014 of participating districts and certain non-PPP districts. The selection of the district court filings consisted in part of a search of the Lex Machina party database for patent case filings with a party name containing the industry in question. Next, the search was narrowed for the ten largest companies involved in predominantly

⁷²LEX MACHINA, <https://law.lexmachina.com/cases/?filters=true&view=analytics&tab=summary> (last visited Apr. 4, 2015).

⁷³February Report, *supra* note 36 at 1 n.1; UNITED STATES DISTRICT COURT, SOUTHERN DISTRICT OF FLORIDA, Administrative Order 2011-53: In Re: Establishment of Pilot Project and Assignment of Patent Cases (July 5, 2011), available at <https://www.flsd.uscourts.gov/wp-content/uploads/adminOrders/2011/2011-53.pdf> [hereinafter "S.D. Fla. Order 2011-53"].

⁷⁴UNITED STATES DISTRICT COURT, SOUTHERN DISTRICT OF FLORIDA, Administrative Order 2014-58: In Re: Termination of Pilot Project for Assignment of Patent Cases (June 12, 2014), available at <http://www.flsd.uscourts.gov/wp-content/uploads/adminOrders/2014/2014-58.pdf> [hereinafter "S.D. Fla. Order 2014-58"].

⁷⁵S.D. Fla. Order 2011-53, *supra* note 75.

⁷⁶S.D. Fla. Order 2014-58, *supra* note 76.

⁷⁷S.D. Fla. Order 2014-58, *supra* note 76.

⁷⁸*Id.*

⁷⁹Vogel, *supra* note 37, at 14 (based upon data from Table 2 therein, by calculating patent cases reassigned by non-patent judges as a percentage of patent cases assigned to those judges).

⁸⁰Patent Cases Pilot Program Act, Pub. L. No. 111-349, 124 Stat. 3674, 3674 (2011).

⁸¹*See, e.g.,* Pelletier, *supra* note 8, at 451-501; Lemley, *supra* note 14, at 401-36; Vogel, *supra* note 37, at 13-19.

one technology or those companies' subsidiaries practicing only the specified technology. This selection process maximized the sample size analyzed for each technology, while limiting the inclusion of erroneous court filings, which related to a technology other than the technology of interest.⁸² Further discussion of study methodology and associated data is provided in Section VI: Appendix.

A. Pharmaceutical Patent Case Forum Shopping

The D.N.J. (PPP)⁸³ has historically been the preferred patent litigation forum for pharmaceutical companies.⁸⁴ This is not surprising, since several of the largest pharmaceutical companies in the world are based in the state.⁸⁵ The District of Delaware (D. Del.) (non-PPP) is the only district whose pharmaceutical patent case filings were comparable to the D.N.J. (PPP) during the past fifteen years.⁸⁶ This is expected, given Delaware's geographic proximity to New Jersey and Delaware's renown in corporate law matters.⁸⁷ The D. Del. (non-PPP) recently eclipsed the D.N.J. (PPP) as the most popular district for filing pharmaceutical patent cases.⁸⁸

Prior to 2007, the S.D.N.Y. (PPP) was one of only a few districts rivaling the D.N.J. (PPP) and the D. Del. (non-PPP) in their share of pharmaceutical patent case filings, with between 10% and 20% of all pharmaceutical patent cases filed each year.⁸⁹ The Northern District of Illinois (N.D. Ill.) (PPP) and the C.D. Cal. (PPP) also secured a substantial portion of pharmaceutical patent cases filed from 2000 through 2006.⁹⁰ The two districts otherwise received less than 10% of pharmaceutical patent cases filed per year.⁹¹ These districts (the D.N.J. (PPP), the D. Del. (non-PPP), the S.D.N.Y. (PPP), the N.D. Ill. (PPP), and the C.D. Cal. (PPP)) received substantially more pharmaceutical patent case filings than all other districts between 2000 and 2006, during which time only a few districts received more than 5% of the pharmaceutical patent cases filed

⁸²This methodology selects a representative subset of the desired patent cases that is extensive, but not exclusive.

⁸³Districts participating in the PPP are denoted as (PPP) inserted following their name and districts non-participating in the PPP are denoted as (non-PPP).

⁸⁴Patent Case Filings Limited To the Pharmaceutical Industry, LEX MACHINA, <https://law.lexmachina.com/party/?edit=true&q=> (follow "Parties" hyperlink; then search "Add Parties" as described in section III *supra* and section VI.A *infra*).

⁸⁵See generally Jeanne Fromer, *Patentography*, 85 N.Y.U.L. REV. 1444, 1447 (2010); *List of biotech, pharma & life science companies in New Jersey*, BIOPHARMGUY, <http://biopharmguy.com/links/state-nj-all-geo.php> (last visited Feb. 15, 2015).

⁸⁶Patent Case Filings Limited To the Pharmaceutical Industry, LEX MACHINA, <https://law.lexmachina.com/party/?edit=true&q=> (follow "Parties" hyperlink; then search "Add Parties" as described in section III *supra* and section VI.A *infra*).

⁸⁷See generally Faith Stovelman, *Regulatory Competition, Choice of Forum, and Delaware's Stake In Corporate Law*, 34 DEL. J. CORP. L. 57 (2009).

⁸⁸Patent Case Filings Limited To the Pharmaceutical Industry, LEX MACHINA, <https://law.lexmachina.com/party/?edit=true&q=> (follow "Parties" hyperlink; then search "Add Parties" as described in section III *supra* and section VI.A *infra*).

⁸⁹*Id.*

⁹⁰*Id.*

⁹¹*Id.*

in any given year and most received less than 5% in each year.⁹²

Since 2000, the D.N.J. (PPP) has been selected for more than 30% of all pharmaceutical patent cases filed, reaching a high of 51.3% in 2007 and still attracting 19.6% in 2000, the lowest year between 2000 and 2014.⁹³ Prior to 2009, the D.N.J. (PPP) had more yearly pharmaceutical patent cases filed than all other districts; except for in 2004, when the D. Del. (non-PPP) received 28.1% of the pharmaceutical patent cases filed and the D.N.J. (PPP) received only 20.7%.⁹⁴

From 2007 through 2011 there was a marked increase in the number of pharmaceutical patent case filings, from an average of 106.1 per year from 2000 through 2006 up to 243.2 per year from 2007 through 2011.⁹⁵ During the 2007 to 2011 period, the D.N.J. (PPP) experienced a marked decline from a 2007 peak, but still had between 25.7% and 37.7% of all pharmaceutical patent cases filed each year.⁹⁶ The average number of pharmaceutical patent cases filed in the D.N.J. (PPP) rose from 27.1 per year between 2000 and 2006 to 83.2 per year between 2007 and 2011.⁹⁷ During the same period the D. Del.'s (non-PPP) portion of the pharmaceutical patent case filings grew substantially from an average of 18.3 per year between 2000 and 2006— which represented an average of 16.7% of the total pharmaceutical patent cases filed per year— to an average of 71.4 per year between 2007 and 2011— which represented an average of 29.0% of the total patent cases filed per year.⁹⁸ Except for 2007, the D. Del. (non-PPP) received slightly more pharmaceutical patent case filings than the D.N.J. (PPP) in the years immediately preceding the PPP's introduction.⁹⁹

Since the PPP's creation in September of 2011,¹⁰⁰ the D.N.J. (PPP) and the D. Del. (non-PPP) have been the preferred fora for pharmaceutical patent cases.¹⁰¹ However, there has been no clear increase in preference for the D.N.J. (PPP) or for PPP districts as a whole.¹⁰² Since the creation of the PPP, participating districts have received only a slight majority of pharmaceutical patent case filings.¹⁰³ This suggests that the PPP has had no impact on forum shopping in the pharmaceutical industry. Further, statistical analysis of the PPP districts' pharmaceutical patent case filings from before and after the creation of the PPP shows no significant change in caseload.¹⁰⁴

⁹² *Id.*

⁹³ *Id.*

⁹⁴ *Id.*

⁹⁵ *Id.*

⁹⁶ *Id.*

⁹⁷ *Id.*

⁹⁸ *Id.*

⁹⁹ *Id.*

¹⁰⁰ Patent Cases Pilot Program Act, Pub. L. No. 111-349, 124 Stat. 3674, 3674 (2011)

¹⁰¹ Patent Case Filings Limited To the Pharmaceutical Industry, LEX MACHINA, <https://law.lexmachina.com/party/?edit=true&q=> (follow "Parties" hyperlink; then search "Add Parties" as described in section III *supra* and section VI.A *infra*) (showing that the S.D.N.Y. (PPP) never captured more than 10.9% of the total filings from 2012 through 2014 and all districts besides the D.N.J. (PPP) and the D. Del. (non-PPP) represented only 33.5% in 2012, 31.3% in 2013, and 19.6% in 2014).

¹⁰² *Id.*

¹⁰³ *Id.* (showing that the PPP districts received 51.4% pharmaceutical patent case filings in 2012, 50.2% in 2013, but lost their majority in large part due to the D. Del.'s (non-PPP) increased filings, dropping to 43.6% in 2014).

¹⁰⁴ See section VI.E.1 *infra*.

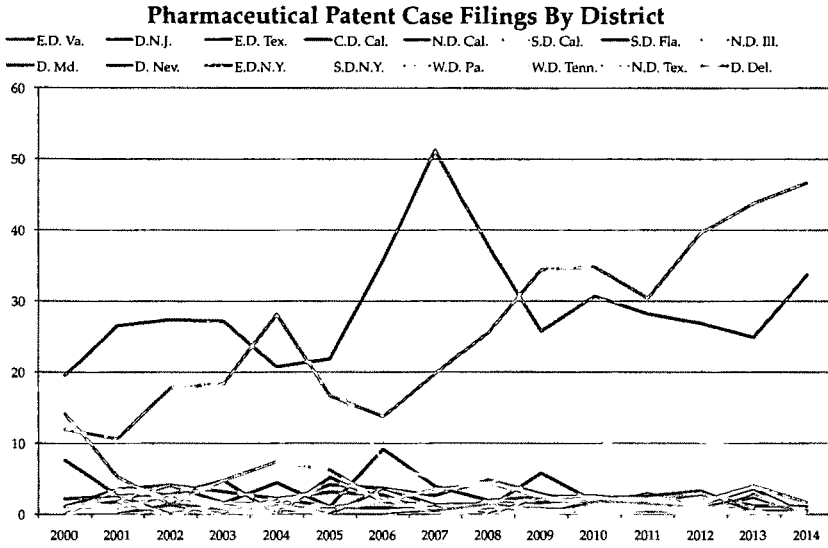


Figure III.1. Percentage of all pharmaceutical patent cases filed by year in each district of the PPP and the non-PPP district, the D. Del.

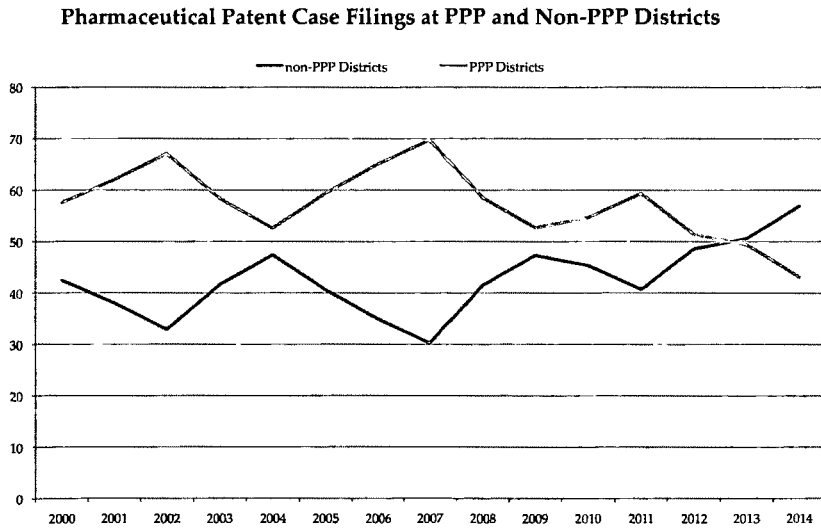


Figure III.2. Percentage of all pharmaceutical patent cases filed by year in the PPP districts and the non-PPP districts.

B. Semiconductor-Based Patent Case Forum Shopping

The E.D. Tex. (PPP) recently received more patent case filings than any other district as of early-2013,¹⁰⁵ especially semiconductor-based patent cases.¹⁰⁶ Unsurprisingly the N.D. Cal. (PPP), home to Silicon Valley, also received a large number of semiconductor-based patent case filings prior to and after the PPP began.¹⁰⁷ These two districts alone eclipse all the non-PPP districts in semiconductor-based patent case filings received from 2000 through 2014, only receiving fewer semiconductor-based patent cases than all the non-PPP districts combined in 2000.¹⁰⁸ The D. Del. (non-PPP) was the only district to rival the fraction of semiconductor-based patent cases filed at the E.D. Tex. (PPP) or the N.D. Cal. (PPP).¹⁰⁹ However, the D. Del. (non-PPP) never received more semiconductor-based patent cases than the E.D. Tex. (PPP) and the N.D. Cal. (PPP) combined. The D. Del. (non-PPP) received more than the E.D. Tex. (PPP) in 2000, and more than the N.D. Cal. (PPP) from 2011 through 2013. In only 2000 and 2002 did any district other than these three receive more than 10% of a year's total semiconductor-based patent cases.¹¹⁰ In 2000 the Eastern District of Virginia (E.D. Va.) (non-PPP) received 11.8% of all semiconductor-based patent cases filed.¹¹¹ In 2002 the C.D. Cal. (PPP) received 10% of all semiconductor-based patent cases filed and the Eastern District of New York (E.D.N.Y.) (PPP) received 12% of all semiconductor-based patent cases filed.¹¹²

¹⁰⁵Mullins, *supra* note 63.

¹⁰⁶Patent Case Filings Limited To the Semiconductor Industry, LEX MACHINA, <https://law.lexmachina.com/party/?edit=true&q=> (follow "Parties" hyperlink; then search "Add Parties" as described in section III *supra* and section VI.C *infra*).

¹⁰⁷*Id.*

¹⁰⁸*Id.*

¹⁰⁹*Id.*

¹¹⁰*Id.*

¹¹¹*Id.*

¹¹²*Id.*

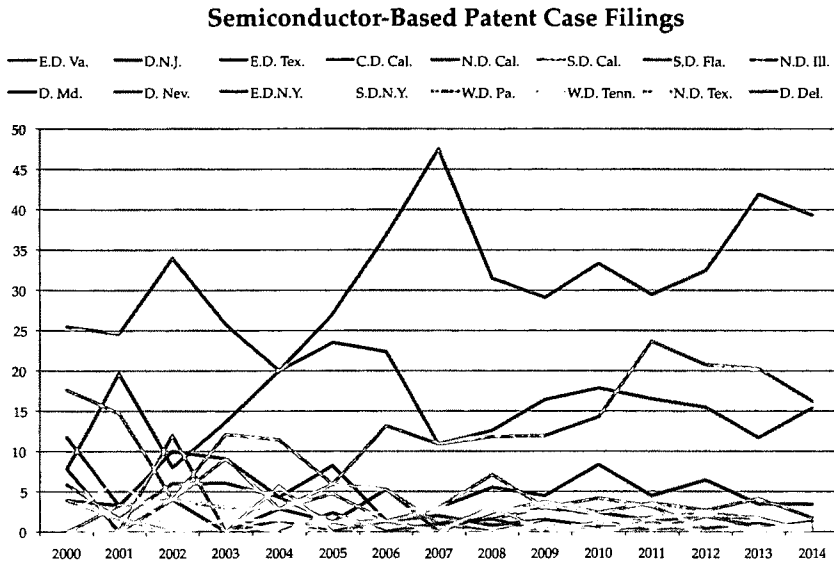


Figure III.3. Percentage of all semiconductor-based patent cases filed by year in each district of the PPP and the non-PPP districts, the D. Del. and the E.D. Va.

From 2000 through 2014, PPP districts as a whole did not experience substantial fluctuations in the fraction of all semiconductor-based patent cases filed.¹¹³ The PPP districts reached their peak fraction in 2002 at 82.0% of all semiconductor-based patent cases filed, immediately after their nadir in 2001 at 63.9% of all semiconductor-based patent cases filed.¹¹⁴ In 2002, four PPP participating districts—the N.D. Cal., the E.D.N.Y., the C.D. Cal., and the D.N.J.—received their largest fraction of semiconductor-based patent cases filed between 2000 and 2014.¹¹⁵ The PPP districts received an average of 72.2% of the total semiconductor-based patent cases filed per year from 2000 through 2006, an average of 71.5% per year from 2007 through 2011, and an average of 68.2% per year from 2012 through 2014 (after the creation of the PPP).¹¹⁶

While the fraction of semiconductor-based cases filed in the PPP districts as a whole did not substantially change upon introduction of the PPP,¹¹⁷ the combined fraction filed at the E.D. Tex. (PPP) and the N.D. Cal. (PPP) increased.¹¹⁸ From 2000 through 2006 the E.D. Tex. (PPP) and the N.D. Cal.

¹¹³ *Id.*

¹¹⁴ *Id.*

¹¹⁵ *Id.*

¹¹⁶ *Id.*

¹¹⁷ Statistical analysis of the PPP districts' semiconductor-based patent filings pre- and post-PPP showed no significant change in caseload. See section VI.E.1 *infra*.

¹¹⁸ Patent Case Filings Limited To the Semiconductor Industry, LEX MACHINA, <https://law.lexmachina.com/party/?edit=true&q=> (follow "Parties" hyperlink; then search "Add Parties" as described in section III *supra* and section VI.C *infra*).

(PPP) received 44.1% of semiconductor-based patent cases filed per year, increasing to 49.0% per year between 2007 and 2011, and increasing again to 52.1% per year from 2012 through 2014.¹¹⁹ The semiconductor-based patent cases filed at the E.D. Tex. (PPP) drove this trend.¹²⁰ Semiconductor-based patent cases filed at the E.D. Tex. (PPP) increased consistently from 19.0% of all semiconductor-based patent cases filed per year between 2000 and 2006, to 34.2% per year between 2007 and 2011, and reached 37.9% per year between 2012 and 2014.¹²¹ In contrast, the N.D. Cal. (PPP) experienced a decrease in the fraction of semiconductor-based patent cases filed.¹²² The N.D. Cal. (PPP) semiconductor-based patent case filings dropped from an average of 25.1% per year between 2000 and 2006, to an average of 14.9% per year between 2007 and 2011, and down to an average of 14.2% per year between 2012 and 2014.¹²³

Since September 2011, the E.D. Tex. (PPP), the N.D. Cal. (PPP), and the D. Del. (non-PPP) have been the preferred fora for semiconductor-based patent cases.¹²⁴ There has been some increase in preference for the E.D. Tex. (PPP), but not the N.D. Cal. or for the PPP districts as a whole.¹²⁵ Further, statistical analysis of the PPP districts' semiconductor-based patent case filings from before and after the creation of the PPP shows no significant change in caseload.¹²⁶

¹¹⁹ *Id.*

¹²⁰ *Id.*

¹²¹ *Id.*

¹²² *Id.*

¹²³ *Id.*

¹²⁴ Patent Case Filings Limited To the Semiconductor Industry, LEX MACHINA, <https://law.lexmachina.com/party/?edit=true&q=> (follow "Parties" hyperlink; then search "Add Parties" as described in section III *supra* and section VI.C *infra*).

¹²⁵ *Id.*

¹²⁶ See section VI.E.1 *infra*.

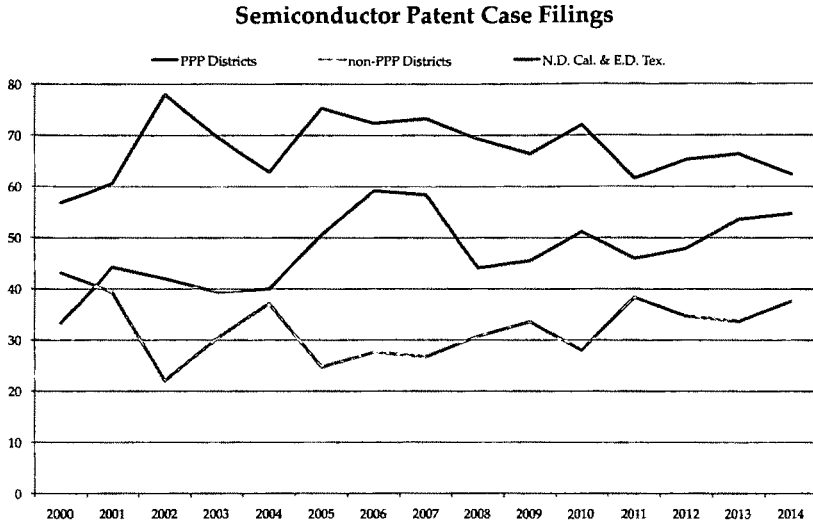


Figure III.4. Percentage of all semiconductor-based patent cases filed by year in the PPP districts and the non-PPP districts.

C. Software Patent Case Forum Shopping

Predictably, software patent case filings resemble the forum preferences of semiconductor-based patent case filings.¹²⁷ This is not surprising, given that companies involved in semiconductor-based patent litigation transact business with companies intimately related to software.¹²⁸ Similar to semiconductor-based litigants, software litigants displayed a clear preference for the E.D. Tex. (PPP) and the N.D. Cal. (PPP), both prior to and since the creation of the PPP.¹²⁹

For the most of 2000 through 2014, the E.D. Tex. (PPP) and the N.D. Cal. (PPP) received more software patent cases filed than all other districts.¹³⁰ In the early 2000s litigants favored the N.D. Cal. (PPP) while favoring no other district distinguishably from its peers.¹³¹ During this period, the combined software patent cases filed at the E.D. Tex. (PPP) and N.D. Cal. (PPP) never surpassed half of all yearly software patent cases filed.¹³²

Two non-PPP districts, the D. Del. and the Western District of Washington (W.D. Wash.), began receiving a substantial portion of the software patent

¹²⁷ Patent Case Filings Limited to the Software Industry, LEX MACHINA, [https://law.lexmachina.com/party/?edit=true&q=\(follow+\"Parties\"+hyperlink;+then+search+\"Add+Parties\"+as+described+in+section+III+supra+and+section+VI.D+infra\).](https://law.lexmachina.com/party/?edit=true&q=(follow+\)

¹²⁸ Gang Liang et al., *How Semiconductor Companies Can Get Better at Managing Software Development*, 4 MCKINSEY ON SEMICONDUCTORS Autumn 2014 at 37.

¹²⁹ Patent Case Filings Limited to the Software Industry, LEX MACHINA, [https://law.lexmachina.com/party/?edit=true&q=\(follow+\"Parties\"+hyperlink;+then+search+\"Add+Parties\"+as+described+in+section+III+supra+and+section+VI.D+infra\).](https://law.lexmachina.com/party/?edit=true&q=(follow+\)

¹³⁰ *Id.*

¹³¹ *Id.*

¹³² *Id.*

cases filed in 2009.¹³³ Combined software patent cases filed at the D. Del. (non-PPP) and the W.D. Wash. (non-PPP) have never surpassed the combined filings at the E.D. Tex. (PPP) and the N.D. Cal. (PPP),¹³⁴ but software patent cases filed at the D. Del. (non-PPP) surpassed that of the N.D. Cal. (PPP) in 2011 and remain so.¹³⁵ Similarly, software patent cases filed at the W.D. Wash. (non-PPP) equaled those at the N.D. Cal. (PPP) in 2014.¹³⁶

A comparison of the software patent case filing trends at the E.D. Tex. (PPP), the N.D. Cal. (PPP), the D. Del. (non-PPP), and the W.D. Wash. (non-PPP) illustrates the turbulence of litigants' changing forum preferences. Software patent cases filed in the non-PPP districts generally increased from 2000 through 2014, but even more so since the creation of the PPP.¹³⁷ In contrast, the software patent cases filed at the N.D. Cal. (PPP) have generally decreased from 2000 through 2014.¹³⁸ Conversely, the software patent cases filed at the E.D. Tex. (PPP) rose sharply in the early 2000s, peaked in 2007, decreased substantially, and have remained low since.¹³⁹

The E.D. Tex. (PPP) and the N.D. Cal. (PPP) together received a combined average of 43.9% of all software patent case filings per year between 2000 and 2006.¹⁴⁰ Between 2007 and 2011, the fraction of all software patent cases filed in these two districts increased to an average of 51.8% per year.¹⁴¹ After the creation of the PPP, software patent case filings in the E.D. Tex. (PPP) and the N.D. Cal. (PPP) decreased slightly to an average of 50.3% per year between 2012 and 2014.¹⁴² The N.D. Cal. (PPP) by itself averaged 24.6% per year of the software patent case filings between 2000 and 2006,¹⁴³ followed by a decrease to 15.3% per year between 2007 and 2011.¹⁴⁴ After creation of the PPP this fraction further decreased to 14.3% per year between 2012 and 2014.¹⁴⁵

The general trend of increasing combined software patent cases filed at the E.D. Tex. (PPP) and the N.D. Cal. (PPP) was due almost entirely to the massive number of software patent cases filed at the E.D. Tex. (PPP).¹⁴⁶ This likely resulted from litigants' view of the E.D. Tex. (PPP) as the preferred patent "rocket docket."¹⁴⁷ The E.D. Tex. (PPP) averaged 19.3% of the software patent cases filed per year from 2000 to 2006, which increased to 36.4% per year between 2007 and 2011.¹⁴⁸ Similar to the N.D. Cal. (PPP) and the E.D. Tex. (PPP)

¹³³ *Id.*

¹³⁴ *Id.*

¹³⁵ *Id.*

¹³⁶ *Id.*

¹³⁷ *Id.*

¹³⁸ *Id.*

¹³⁹ *Id.*

¹⁴⁰ *Id.*

¹⁴¹ *Id.*

¹⁴² *Id.*

¹⁴³ *Id.*

¹⁴⁴ *Id.*

¹⁴⁵ *Id.*

¹⁴⁶ *Id.*

¹⁴⁷ Mullins, *supra* note 63.

¹⁴⁸ Patent Case Filings Limited To the Software Industry, LEX MACHINA, <https://law.lexmachina.com/party/?edit=true&q=> (follow "Parties" hyperlink; then search "Add Parties" as described in section III *supra* and section VI.D *infra*).

combined (but in contrast to the trend in the N.D. Cal. (PPP) by itself), after the creation of the PPP, the E.D. Tex. (PPP) experienced a slight decrease in software patent cases filed, dropping to an average of 36.1% of all software patent cases filed per year between 2012 and 2014.¹⁴⁹

The D. Del. (non-PPP) experienced a substantial increase in software patent cases filed since 2008.¹⁵⁰ From 2000 through 2008 the D. Del. (non-PPP) received an average of 3.5% of all software patent cases filed per year.¹⁵¹ From 2009 through 2014 the yearly average of all software patent cases filed at the D. Del. increased dramatically to 20.3%.¹⁵² The W.D. Wash. (non-PPP) accounted for a modest percentage of software patent cases filed prior to 2014, only once exceeding 10% and that in 2000.¹⁵³ However, in 2014 the W.D. Wash. (non-PPP) received 14.3% of all software patent cases filed.

The PPP districts in aggregate experienced a general decline in the percentage of all software patent cases filed since 2007.¹⁵⁴ In 2007, the PPP districts received 80% of software patent cases filed, their largest percentage of cases filed between 2000 and 2014.¹⁵⁵ The PPP districts received an average of 65.8% of the software patent cases filed per year from 2000 through 2006, which increased to 67.4% per year between 2007 and 2011,¹⁵⁶ and then decreased after the creation of the PPP to 59.3% per year from 2012 through 2014.¹⁵⁷ Statistical analysis of the PPP districts' software patent cases filed from before and after the creation of the PPP shows no significant change in caseload.¹⁵⁸ The decrease since the creation of the PPP appears to be due in part to increased filings at the non-PPP districts, the D. Del. and the W.D. Wash.¹⁵⁹

¹⁴⁹ *Id.*

¹⁵⁰ *Id.*

¹⁵¹ *Id.*

¹⁵² *Id.*

¹⁵³ *Id.*

¹⁵⁴ *Id.*

¹⁵⁵ *Id.*

¹⁵⁶ *Id.*

¹⁵⁷ *Id.*

¹⁵⁸ See section VI.E.1 *infra*.

¹⁵⁹ Patent Case Filings Limited To the Software Industry, LEX MACHINA, <https://law.lexmachina.com/party/?edit=true&q=> (follow "Parties" hyperlink; then search "Add Parties" as described in section III *supra* and section VI.D *infra*).

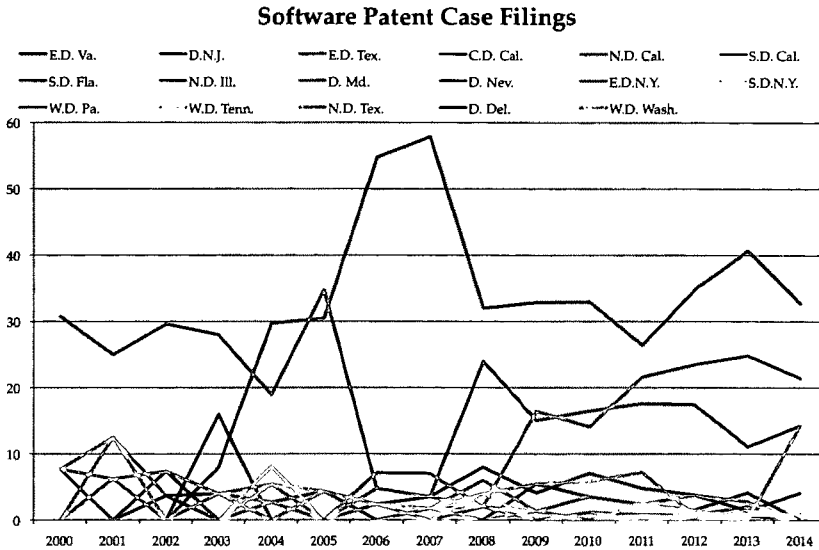


Figure III.5. Percentage of all software patent cases filed by year in each district of the PPP and the non-PPP districts, the D. Del. and the W.D. Wash.

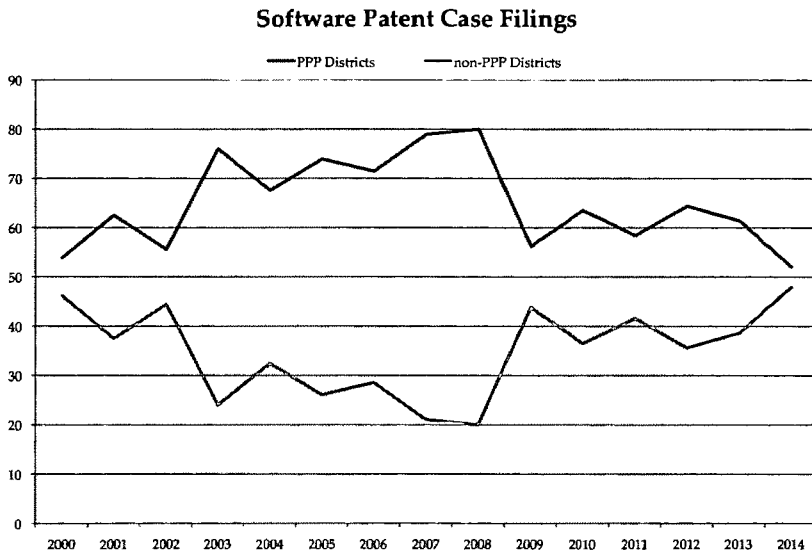


Figure III.6. Percentage of all software patent cases filed by year in the PPP districts and the non-PPP districts.

Based upon the preceding data, the following section seeks to compare and contrast the trends in forum shopping by industry and geography.

D. Industry-Based Forum Shopping Delivers Few Conclusions About the Efficacy of the PPP

The analyzed data indicates prevalent forum shopping in the pharmaceutical, semiconductor-based, and software industries,¹⁶⁰ but observed trends do not appear to correspond to the creation of the PPP.¹⁶¹ These trends reflect a geographic link between where each industry is concentrated and patent cases filed at nearby federal judicial districts.¹⁶² The pharmaceutical industry is concentrated in New Jersey and the D.N.J. received the most pharmaceutical patent cases filed.¹⁶³ The semiconductor-based industry is concentrated around Silicon Valley in California, and Dallas and Austin in Texas,¹⁶⁴ thus, the N.D. Cal. and the E.D. Tex. received high volumes of semiconductor-based patent case filings.¹⁶⁵ Similarly, software companies are prevalent in Silicon Valley, Seattle, Austin, and Dallas, which correspond to the high software patent case filing volumes in the N.D. Cal., the W.D. Wash., and the E.D. Tex.¹⁶⁶

This concentration of patent case filings based on industry location may explain litigants' failure to respond to the PPP by preferentially filing cases in participating districts. The current statutory construction does not account for industry preferences and, so, the PPP may benefit by reshuffling participating districts.

IV. Solving Forum Shopping In Lieu of the Current PPP

In view of the above analysis, the PPP does not appear to be achieving its underlying aim of controlling forum shopping by directing litigants to participating districts "to enhance judicial expertise."¹⁶⁷ Legal practitioners and scholars have suggested solutions to forum shopping other than the PPP, such as geographic venue restrictions.¹⁶⁸ This note suggests revising the PPP through statutory amendments as follows: (1) instating the previously proposed statu-

¹⁶⁰ See sections III.A-C *supra*.

¹⁶¹ See sections III.A-C *supra*.

¹⁶² See sections III.A-C *supra*.

¹⁶³ Patent Case Filings Limited To the Pharmaceutical Industry, LEX MACHINA, <https://law.lexmachina.com/party/?edit=true&q=> (follow "Parties" hyperlink; then search "Add Parties" as described in section III *supra* and section VI.A *infra*); BIOPHARMGUY, <http://biopharmguy.com/links/state-nj-all-geo.php> (last visited Feb. 15, 2015).

¹⁶⁴ See TEXAS WIDE OPEN FOR BUSINESS, <https://texaswideopenforbusiness.com/sites/default/files/11/13/14/profilesemiconductors.pdf> (last visited Feb. 25, 2015); Angel Orrantia, *Silicon Valley Must Reinvent the Semiconductor Industry*, EE TIMES (Sept. 12, 2013 11:00 AM), http://www.eetimes.com/author.asp?section_id=36&doc_id=1319463.

¹⁶⁵ See section III.B *supra*; Patent Case Filings Limited To the Semiconductor Industry, LEX MACHINA, <https://law.lexmachina.com/party/?edit=true&q=> (follow "Parties" hyperlink; then search "Add Parties" as described in section III *supra* and section VI.C *infra*).

¹⁶⁶ Patent Case Filings Limited To the Software Industry, LEX MACHINA, <https://law.lexmachina.com/party/?edit=true&q=> (follow "Parties" hyperlink; then search "Add Parties" as described in section III *supra* and section VI.D *infra*). See also ICANN SILICON VALLEY MEETING, <https://svsf40.icann.org/about> (last visited Apr. 7, 2015).

¹⁶⁷ Patent Cases Pilot Program Act, Pub. L. No. 111-349, 124 Stat. 3674, 3674 (2011).

¹⁶⁸ Fromer, *supra* note 87, at 1447.

tory provision for funding additional clerks and educational experiences for designated judges; (2) requiring a minimum of one designated judge for every five non-designated judges; and (3) reconsidering judicial districts participating in the PPP.

A. Funding the PPP and Adapting It to the Geographic Realities of Forum Shopping

Likely forum shopping motivators for patent litigants are a district's existing judicial expertise and its geographical concurrence with patent litigants.¹⁶⁹ The PPP may be a viable vehicle to direct litigant forum shopping expenses, but this is only possible through reform. Proposed reform would amend the Patent Cases Pilot Program Act to include provisions granting \$5,000,000 in annual funding for clerkships and judicial training, requiring a minimum number of designated judges in each participating district, and reselecting participating judicial districts.

Earlier versions of PPP legislation included Section 1(f) entitled "Authorization for Training and Clerkships" which authorized \$5,000,00 in annual funding for these purposes.¹⁷⁰ Amending the PPP to include such funding would support the education of participating judges and fund judicial clerkships for individuals with technical backgrounds to aid designated judges. Funding would not only give designated judges an advantage over non-designated judges or judges in non-PPP districts in managing technical patent cases, but may even motivate other judges or districts to join the PPP. Rather than learning through trial and error, judges would have the opportunity to educate themselves in anticipation of an increased patent caseload. Further, the judicial workload would be reduced through the assistance of a judicial clerk with appropriate technical expertise.

A provision requiring at least one designated judge per every five non-designated judges addresses the issue of overlaid designated judges. The situation in the S.D. Fla. illustrated that the current PPP could perform too well and overwhelm designated judges representing too small a minority of the districts' judges.¹⁷¹ The ratio of designated judges to non-designated judges in the S.D. Fla. was ~1:8.3.¹⁷² Amendment of the Patent Cases Pilot Program Act to require a minimum ratio of designated to non-designated judges in a participating district mitigates the danger of overloading designated judges with too many patent cases.

Finally, another amendment would reevaluate and reselect the participating districts. Participating districts should be composed of the busiest patent fora and their low volume geographic neighbors. This would allow the PPP to comply with other requirements of Patent Cases Pilot Program Act, such as containing districts with more than and fewer than 10 authorized judge-

¹⁶⁹ See section III.D *supra*. See also Fromer, *supra* note 87, at 1447.

¹⁷⁰ 155 CONG. REC. at H3457. Section 1(f) of the original PPP bill did not make it through Senate, purportedly to ease its passage during a lame duck session of Congress.

¹⁷¹ See section II.B.1 *supra*.

¹⁷² Vogel, *supra* note 37, at 14 (based upon data from Table 2 therein).

ships.¹⁷³ For instance, the E.D. Tex., the N.D. Cal., the D.N.J., the S.D.N.Y., the N.D. Ill., and the C.D. Cal. would be retained as high volume strategically located districts and be paired with certain participating low volume districts. As a few examples, the D.N.J. would pair with the District of Maryland (D. Md.); and the N.D. Cal. would pair with the D. Nev. However, the W.D. Pa. and the W.D. Tenn. would be jettisoned from the PPP as low volume districts located outside the geographically critical patent industry locations. In place of these low volume districts, the Western District of Wisconsin (W.D. Wis.) and the District of Vermont (D. Vt.) would be invited to participate in the PPP and paired with neighboring high volume districts, respectively the N.D. Ill. and the S.D.N.Y.

The three proposed amendments maintain the total number of districts participating in the PPP and better satisfy the statutory requirement of having at least three districts with fewer than ten authorized judgeships.¹⁷⁴ The PPP currently includes only two districts with fewer than ten judgeships, the W.D. Tenn. and the E.D. Tex.¹⁷⁵ In contrast, the new composition of participating districts would replace the W.D. Pa. (fourteen judgeships)¹⁷⁶ and the W.D. Tenn. (six judgeships)¹⁷⁷ with the W.D. Wis. (three judgeships)¹⁷⁸ and the D. Vt. (four judgeships),¹⁷⁹ resulting in three instead of two districts with fewer than ten authorized judgeships.

Thus, the proposed amendments would fund programs under the PPP, safeguard designated judges, and reselect participating judicial districts. Funding would encourage district participation in the PPP and motivate litigants to file their cases in participating districts. Requiring a minimum ratio of designated and non-designated judges would protect designated judges from receiving too many patent cases and, in so doing, encourage designation. A reselection of participating districts would further encourage litigants to file patent cases in participating districts that are in geographic locations concurrent with or adjacent to industry hubs.¹⁸⁰ These revisions would enable the PPP to better advance its purpose of enhancing judicial expertise.¹⁸¹

¹⁷³ Patent Cases Pilot Program Act, Pub. L. No. 111-349, 124 Stat. 3674, 3675 (2011).

¹⁷⁴ 124 Stat. 3674, 3675.

¹⁷⁵ Vogel, *supra* note 37, at 14.

¹⁷⁶ *Id.*

¹⁷⁷ *Id.*

¹⁷⁸ WESTERN DISTRICT OF WISCONSIN UNITED STATES DISTRICT COURT, <http://www.wiwd.uscourts.gov/about-the-court#judges> (last visited Feb. 26, 2015).

¹⁷⁹ UNITED STATES DISTRICT COURT DISTRICT OF VERMONT, <http://www.vtd.uscourts.gov/judges-info> (last visited Feb. 26, 2015).

¹⁸⁰ LEX MACHINA, <https://law.lexmachina.com/cases/?filters=true&view=analytics&tab=summary> (last visited Apr. 7, 2015). See also Orrantia, *supra* note 165; Jeanne Fromer, *supra* note 87, at 1447.

¹⁸¹ See Patent Cases Pilot Program Act, Pub. L. No. 111-349, 124 Stat. 3674, 3674 (2011).

V. Conclusion

To date the PPP has not had a significant effect on technology-specific forum shopping. For some technologies forum shopping is prevalent and persistent, but there has not been meaningful gravitation of litigants to participating districts since the PPP's institution, regardless of prior forum preferences. Some non-PPP districts, especially the D. Del., have attracted more litigants in several technological industries since the creation of the PPP.¹⁸² The PPP's inability to direct litigants to participating districts is likely due to the PPP's failure to consider geographic preferences and limited resources available to designated PPP judges.

Representative Issa's purpose in creating the PPP— to increase judicial expertise— may be better achieved through legislative amendment of the PPP. The amendment would provide funding for PPP training and clerkships, safeguard designated judges, and reselect participating judicial districts. Funding would avail designated judges with an extra clerk and further educational experiences for these judges. Requiring a minimum number of designated judges would protect the generalist nature of designated judges' dockets. A reselection of participating districts would allow the PPP to mirror current forum shopping geographic preferences. These changes would incentivize judges in participating districts to designate under the PPP, protect judges that do designate, and give reason for districts to apply to participate in the PPP. Such subjective and objective advantages would ultimately encourage litigants to modify their forum preferences as intended by the PPP's drafters.

VI. Appendix-Section III Methodology

A. Selection of Pharmaceutical Patent Cases Filed

Similar to the general description in section III *supra*, initially the one-hundred most litigious companies, based on district court patent litigation filings, with the term "pharmaceutical" in the company's name were selected from Lex Machina's party database. To this initial sample were added the ten largest pharmaceutical companies as determined by their respective annual reports for 2013.¹⁸³ The company names were used as search terms in Lex Machina's party database and their pharmaceutical-related subsidiaries were selected. The corporate parent company was selected if that company predominantly practiced only pharmaceutical technologies, such as Novartis and AstraZeneca. This resulted in a sample of 237 parties, which filed a total of 2,825 pharmaceutical patent cases between January 1, 2000 and January 22, 2015.

¹⁸² See section III *supra*.

¹⁸³ This list included: Johnson & Johnson, Pfizer, Roche, GlaxoSmithKline, Novartis, Sanofi, AstraZeneca, Abbott Laboratories, Merck & Co., and Bayer Healthcare.

B. Selection of Semiconductor-Based Patent Cases Filed

Similar to the procedure described in section III *supra*, the one-hundred most litigious companies with the term “semiconductor” in the company’s name were selected as parties. To this list were added the ten semiconductor companies with the largest market share¹⁸⁴ and some of the largest consumer electronics companies.¹⁸⁵ Each of the company names were used as search terms in Lex Machina’s party database and their semiconductor subsidiaries were selected. The corporate parent company was selected if that company predominantly practiced only semiconductor-based technologies, such as Samsung Electronics Ltd. This resulted in a sample of 199 parties, which filed a total of 2,034 semiconductor-based patent cases between January 1, 2000 and January 22, 2015.

C. Selection of Software Patent Cases Filed

Similar to the procedure described in section III *supra*, the one-hundred most litigious companies with the term “software” in the company’s name were selected as parties. To this list were added the top ten companies on the Forbes Global 2000 list of software companies: Microsoft, Oracle, SAP, Symantec, VMware, Fiserv, CA Technologies, Intuit, Salesforce.com, and Amadeus IT Group.¹⁸⁶ Each of these company names were used as search terms in Lex Machina’s party database and their software subsidiaries were selected. The corporate parent company was selected if that company predominantly practiced only software technologies, such as Symantec. This resulted in a sample of 119 parties, which filed a total of 955 software patent cases between January 1, 2000 and January 22, 2015.

D. Factors Potentially Influencing Results

The broad overview provided through examination of patent cases filed across several districts could potentially be skewed or adversely affected by a myriad of factors. These may include: the inability of a statistical analysis to account for the effect of the unique facts of each case;¹⁸⁷ threatened litigation by patent assertion entities that cause would-be defendants to settle prior to either potential party filing a case; a non-designated judge’s or magistrate’s personal preference for patent cases; a particular judge’s or magistrate’s known tendency to encourage settlement by the parties; or the influence of judicial clerks with a technical background.¹⁸⁸

Table VI.1. Pharmaceutical patent cases filed by year in the participating PPP districts and high volume non-PPP districts from 2000 through 2014.

Pharmaceutical Patent Case Filings	year	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
All Districts		92	113	73	125	135	96	109	228	207	241	267	273	212	249	362
C.D. Cal.		1	4	3	2	6	1	10	9	4	6	6	7	7	1	2
N.D. Cal.		1	2	3	4	3	3	3	0	4	4	6	6	3	9	0
S.D. Cal.		0	4	2	2	1	1	2	1	0	1	2	3	0	7	1
S.D. Fla.		7	3	2	6	0	5	2	3	0	6	7	5	6	3	4
N.D. Ill.		13	6	1	6	10	6	2	8	9	6	3	4	4	10	6
D. Md.		0	0	1	0	3	1	1	3	2	14	5	6	2	0	1
D. Nev.		0	0	1	1	0	0	0	1	3	0	5	4	2	6	0
D. N.J.		18	30	20	34	28	21	39	117	78	62	82	77	57	62	122
E.D.N.Y.		1	2	0	2	2	0	0	0	2	2	1	2	2	0	1
S.D.N.Y.		11	18	14	15	17	19	8	11	9	18	24	36	22	22	19
W.D. Pa.		1	1	2	1	0	0	0	0	0	0	0	2	1	0	0
W.D. Tenn.		0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
E.D. Tex.		0	0	0	0	1	0	4	6	10	7	3	8	2	2	0
N.D. Tex.		0	0	0	0	0	0	0	0	0	1	2	2	1	0	0
All PPP Districts																
D. Del. (non-PPP)		11	12	13	23	38	16	15	45	53	83	93	83	84	109	169

Table VI.2. Medical device patent cases filed by year in the participating PPP districts and high volume non-PPP districts from 2000 through 2014.

Medical Device Patent Case Filings	year	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
All Districts		44	32	43	45	46	33	33	42	44	50	49	46	50	48	74
C.D. Cal.		3	0	2	2	2	0	3	1	0	1	1	4	4	4	2
N.D. Cal.		5	7	6	7	4	5	4	3	6	5	5	2	5	2	3
S.D. Cal.		0	1	3	3	4	0	2	1	2	2	5	0	3	1	4
S.D. Fla.		0	0	0	1	0	1	0	0	0	0	0	0	0	1	2
N.D. Ill.		1	1	2	1	3	2	0	0	3	1	3	4	2	3	0
D. Md.		0	0	0	1	1	0	0	1	0	0	0	1	0	0	0
D. Nev.		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
D. N.J.		1	3	4	3	1	3	0	0	3	2	4	5	2	4	11
E.D.N.Y.		0	0	0	0	0	0	0	0	0	0	0	2	1	2	1
S.D.N.Y.		1	0	2	0	0	0	0	0	1	1	1	2	0	2	0
W.D. Pa.		0	0	1	0	0	0	0	1	3	0	0	0	0	0	0
W.D. Tenn.		0	0	1	1	1	0	1	2	2	0	1	0	1	2	0
E.D. Tex.		0	0	1	0	2	3	8	12	7	3	3	4	6	0	7
N.D. Tex.		0	0	1	0	0	0	0	0	0	2	1	0	1	0	0
All PPP Districts		11	12	23	19	18	14	18	21	27	17	24	24	26	22	32
D. Del. (non-PPP)		9	5	4	9	2	4	1	6	4	8	4	3	11	14	20

Table VI.3. Semiconductor-based patent cases filed by year in the participating PPP districts and high volume non-PPP districts from 2000 through 2014.

Semiconductor-Based Patent Case Filings	year	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
All Districts		51	61	50	66	70	85	76	101	127	134	168	224	265	291	234
C.D. Cal.		2	2	5	6	3	7	1	3	7	6	14	10	17	10	8
N.D. Cal.		13	15	17	17	14	20	17	11	16	22	30	37	41	34	36
S.D. Cal.		0	0	2	2	2	5	4	1	3	5	4	8	7	12	4
S.D. Fla.		0	0	0	0	1	0	1	2	1	2	1	0	6	1	0
N.D. Ill.		0	2	2	6	2	4	1	3	9	4	7	7	1	2	0
D. Md.		0	0	0	0	0	2	0	1	0	2	1	1	0	0	0
D. Nev.		0	0	0	0	0	0	0	1	2	0	0	1	1	3	0
D. N.J.		3	1	3	4	3	1	0	1	2	4	3	0	5	2	0
E.D.N.Y.		4	0	6	0	0	0	0	0	0	1	0	0	0	1	3
S.D.N.Y.		1	4	0	1	1	1	2	3	4	3	3	1	3	1	2
W.D. Pa.		0	0	0	0	0	1	1	0	0	1	0	3	0	0	1
W.D. Tenn.		0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
E.D. Tex.		4	12	4	9	14	23	28	48	40	39	56	66	86	122	92
N.D. Tex.		2	1	0	0	4	0	0	0	4	0	2	4	6	5	0
All PPP Districts		29	37	39	46	44	64	55	74	88	89	121	138	173	193	146
D. Del. (non-PPP)		9	9	2	8	8	5	10	11	15	16	24	53	55	59	38
E.D. Va. (non-PPP)		6	2	2	0	2	1	4	0	3	5	4	3	5	5	6

Table VI.4. Software patent cases filed by year in the participating PPP districts and high volume non-PPP districts from 2000 through 2014.

Software Patent Case Filings	year	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
All Districts		51	61	50	66	70	85	76	101	127	134	168	224	265	291	234
C.D. Cal.		1	0	0	4	0	1	1	2	4	3	6	6	5	2	4
N.D. Cal.		4	4	8	7	7	8	2	2	12	11	14	22	23	16	14
S.D. Cal.		0	0	1	1	0	0	2	2	1	1	0	3	2	0	0
S.D. Fla.		0	0	1	0	1	0	0	0	1	0	1	1	0	1	0
N.D. Ill.		0	2	1	1	1	0	0	1	3	1	3	3	5	4	0
D. Md.		1	0	1	1	0	0	0	1	0	0	0	0	0	0	0
D. Nev.		0	0	1	1	0	0	0	1	0	0	1	0	1	1	0
D. N.J.		0	0	0	0	0	0	0	1	0	1	0	1	1	3	0
E.D.N.Y.		0	0	0	1	1	0	0	1	1	0	0	0	0	0	0
S.D.N.Y.		0	1	0	0	3	0	0	0	2	0	0	3	1	1	1
W.D. Pa.		0	0	0	0	1	0	1	0	0	0	1	0	0	0	0
W.D. Tenn.		0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
E.D. Tex.		0	2	0	2	11	7	23	33	16	24	28	33	46	59	32
N.D. Tex.		1	1	2	1	0	1	1	1	0	0	0	1	0	2	0
All PPP Districts		6	6	12	6	12	6	12	12	10	32	31	52	47	56	47
D. Del. (non-PPP)		0	1	0	1	2	0	3	4	1	12	12	27	31	36	21
W.D. Wash. (non-PPP)		1	2	0	0	2	1	1	1	2	4	5	9	1	0	14

E. Tables and Graphs

1. *t* Statistic Significance

The caseload prior to creation of the PPP was compared to the caseload after the creation of the PPP for the participating PPP districts using a two-tailed student *t* test. This statistical analysis was performed to determine if the change in yearly average caseload for PPP districts was statistically significant. The *t* statistic in particular was chosen because the *t* distribution provides meaningful results when the sample population is not normally distributed.¹⁸⁹

The difference between the average yearly caseload prior to the creation of the PPP and after the creation of the PPP yielded delta (δ). The tabulated δ values were used in the two-tailed student *t* test to evaluate the probability that the mean difference between the pre-PPP and post-PPP average caseloads equaled zero. From the tabulated δ values, δ_{mean} values and $\delta_{\text{st. dev.}}$ values were calculated for use in the two-tailed student *t* test equation.

$$t \text{ statistic} = \frac{\delta_{\text{mean}}}{\frac{\delta_{\text{st. dev.}}}{\sqrt{n}}}$$

The resulting *t* statistic value was compared to the tabulated value for $\alpha \pm$ equal to 0.05, which is the most commonly used significance level.¹⁹⁰ A *t* statistic value less than the tabulated value indicated no significant change.

¹⁸⁴The largest market share companies were: Intel Corp., Samsung Electronics, Qualcomm, Micron Technology, SK Hynix, Toshiba Semiconductor, Texas Instruments, Broadcom, STMicroelectronics, Renesas Electronics.

¹⁸⁵The largest consumer electronics companies were: LG Electronics, Apple Inc., and HTC Corp.

¹⁸⁶The World's Biggest Software & Programming Companies, FORBES, <http://www.forbes.com/global2000/list/> (select "Software & Programming" in the "Filter by industry" drop down menu)

¹⁸⁷Shartzter, *supra* note 30, at 228 (asserting that every patent litigation case is unique because every patent is presumptively different from any other patent before it).

¹⁸⁸Shartzter, *supra* note 30, at 229-30. The present study assumes that patents subjected to multiple litigations are a minority of patent cases and that such cases benefit very little from prior litigation, because claim and issue preclusion rarely control.

¹⁸⁹REAL STATISTICS USING EXCEL, <http://www.real-statistics.com/students-t-distribution/one-sample-t-test/> (last visited Mar. 1, 2015).

¹⁹⁰ENGINEERING STATISTICS HANDBOOK, <http://www.itl.nist.gov/div898/handbook/eda/section3/eda3672.htm> (last visited Mar. 1, 2015).

Table VI.5. Compilation of average yearly patent cases filed for the participating districts both pre- and post-PPP, including the resulting δ , δ_{mean} , $\delta_{\text{st. dev.}}$, and t statistic.

Districts $\alpha_{\pm 0.05} (n=14) = 2.16$	Average yearly patent case filing pre-PPP	Average yearly patent case filing post-PPP	δ
C.D. Cal.	260.83	404.67	143.84
N.D. Cal.	168.17	255	86.83
S.D. Cal.	62.75	147.33	84.58
S.D. Fla.	54.75	144	89.25
N.D. Ill.	153.42	204.67	51.25
D. Md.	27.58	28.67	1.09
D. Nev.	23.5	34.33	10.83
D. N.J.	131.83	195.33	63.5
E.D.N.Y.	39.33	36.33	-3
S.D.N.Y.	121.75	131.33	9.58
W.D. Pa.	19.5	25	5.5
W.D. Tenn.	6.42	16.67	10.25
E.D. Tex.	186.75	1389	1202.25
N.D. Tex.	46.42	65	18.58
$\delta_{\text{mean}} = 126.74$ $\delta_{\text{st. dev.}} = 312.71$ t statistic = 1.52			

Table VI.6. Compilation of average yearly pharmaceutical patent cases filed for the participating districts both pre- and post-PPP, including the resulting δ , δ_{mean} , $\delta_{\text{st. dev.}}$, and t statistic.

Districts $\alpha_{\pm 0.05} (n=14) = 2.16$	Average yearly pharmaceutical patent case filing pre-PPP	Average yearly pharmaceutical patent case filing post-PPP	δ
C.D. Cal.	4.92	3.33	-1.59
N.D. Cal.	3.25	4	0.75
S.D. Cal.	1.58	2.67	1.09
S.D. Fla.	6.17	4.33	-1.84
N.D. Ill.	6.17	6.67	0.5
D. Md.	3	1	-2
D. Nev.	1.25	2.67	1.42
D. N.J.	50.5	80.33	29.83
E.D.N.Y.	1.17	1	-0.17
S.D.N.Y.	16.67	21	4.33
W.D. Pa.	0.58	0.33	-0.25
W.D. Tenn.	0	0.33	0.33
E.D. Tex.	3.25	1.33	-1.92
N.D. Tex.	0.42	0.33	-0.09
$\delta_{\text{mean}} = 2.17$ $\delta_{\text{st. dev.}} = 8.14$ t statistic = 0.998			

Table VI.7. Compilation of average yearly medical device patent cases filed for the participating districts both pre- and post-PPP, including the resulting δ , δ_{mean} , $\delta_{\text{st. dev.}}$, and t statistic.

Districts $\alpha_{\pm 0.05} (n=14) = 2.16$	Average yearly medical device patent case filing pre-PPP	Average yearly medical device patent case filing post-PPP	δ
C.D. Cal.	1.58	3.33	1.75
N.D. Cal.	4.92	3.33	-1.59
S.D. Cal.	1.92	2.67	0.75
S.D. Fla.	0.17	2.33	2.16
N.D. Ill.	1.75	1.67	-0.08
D. Md.	0.33	0	-0.33
D. Nev.	0	0	0
D.N.J.	2.42	5.67	3.25
E.D.N.Y.	0.17	1.33	1.16
S.D.N.Y.	0.67	0.67	0
W.D. Pa.	0.42	0	-0.42
W.D. Tenn.	0.75	1	0.25
E.D. Tex.	3.91	4.33	0.42
N.D. Tex.	0.33	0.33	0
$\delta_{\text{mean}} = 0.52$ $\delta_{\text{st. dev.}} = 1.22$ t statistic = 1.60			

Table VI.8. Compilation of average yearly semiconductor-based patent cases filed for the participating districts both pre- and post-PPP, including the resulting δ , δ_{mean} , $\delta_{\text{st. dev.}}$, and t statistic.

Districts $\alpha_{\pm 0.05} (n=14) = 2.16$	Average yearly semiconductor-based patent case filing pre-PPP	Average yearly semiconductor-based patent case filing post-PPP	δ
C.D. Cal.	5.5	11.67	6.17
N.D. Cal.	19.08	37	17.92
S.D. Cal.	3	7.67	4.67
S.D. Fla.	0.67	3	2.33
N.D. Ill.	3.92	1	-2.92
D. Md.	0.58	0	-0.58
D. Nev.	0.33	1.33	1
D. N.J.	2.08	2.33	0.25
E.D.N.Y.	0.92	1.33	0.41
S.D.N.Y.	2	2	0
W.D. Pa.	0.5	0.33	-0.17
W.D. Tenn.	0.83	0	-0.83
E.D. Tex.	28.6	100	71.4
N.D. Tex.	1.42	3.67	2.25
$\delta_{\text{mean}} = 2.17$ $\delta_{\text{st. dev.}} = 8.14$ t statistic = 0.998			

Table VI.9. Compilation of average yearly software patent cases filed for the participating districts both pre- and post-PPP, including the resulting δ , δ_{mean} , $\delta_{\text{st. dev.}}$, and t statistic.

Districts $\alpha \pm 0.05$ (n=14) = 2.16	Average yearly software patent case filing pre-PPP	Average yearly software patent case filing post-PPP	δ
C.D. Cal.	2.33	3.67	1.34
N.D. Cal.	8.42	17.67	9.25
S.D. Cal.	0.92	0.67	-0.25
S.D. Fla.	0.42	0.33	-0.09
N.D. Ill.	1.33	3	1.67
D. Md.	0.33	0	-0.33
D. Nev.	0.33	0.67	0.34
D. N.J.	0.25	1.33	1.08
E.D.N.Y.	0.33	0	-0.33
S.D.N.Y.	0.75	1	0.25
W.D. Pa.	0.25	0	-0.25
W.D. Tenn.	0	0.33	0.33
E.D. Tex.	14.92	45.67	30.75
N.D. Tex.	0.75	0.67	-0.08
$\delta_{\text{mean}} = 3.12$	$\delta_{\text{st. dev.}} = 8.33$	t statistic = 1.40	



TEXAS A&M UNIVERSITY
SCHOOL OF LAW

**Legal Studies
Research Paper Series**

Research Paper No. 16–34

**Strategic Decision Making in Dual PTAB
and District Court Proceedings**

Saurabh Vishnubhakat

Arti K. Rai

Jay P. Kesan

STRATEGIC DECISION MAKING IN DUAL PTAB AND DISTRICT COURT PROCEEDINGS

Saurabh Vishnubhakat, Arti K. Rai & Jay P. Kesan[†]

The post-grant review proceedings set up at the U.S. Patent and Trademark Office's Patent and Trial Appeal Board (PTAB) by the America Invents Act of 2011 have transformed the relationship between Article III patent litigation and the administrative state. Not surprisingly, such dramatic change has itself yielded additional litigation possibilities: *Cuozzo Speed Technologies v. Lee*, a case addressing divergence between the manner in which the PTAB and Article III courts construe patent claims, will soon be decided by the U.S. Supreme Court.

Of the three major new PTAB proceedings, two have proven to be popular as well as controversial: *inter partes* review and covered business method review. Yet scholarly analysis of litigant behavior in these proceedings has been limited thus far to descriptive data summaries or specific policy perspectives on these types of post-grant challenges, such as their impact on the well-rehearsed patent troll debate. In this article, we present what is to our knowledge the first comprehensive empirical and analytical study of how litigants use these *inter partes* review and covered business method review proceedings relative to Article III litigation.

A major normative argument for administrative ex post review is that it should be an efficient, accessible, and accurate substitute for Article III litigation over patent validity. We assess the substitution hypothesis, using individual patents as our general unit of analysis as well as investigating patent-petitioner pairs and similar details in greater depth. Our data indicate that the “standard model” of explicit substitution—wherein a district court defendant subsequently brings an administrative challenge to patent validity—occurs for the majority (70%) of petitioners who bring *inter partes* review challenges. An important implication of this effect is that the PTAB should use a claim construction standard that mirrors that of the district court. With a uniform standard, PTAB claim constructions

DOI: <http://dx.doi.org/10.15779/Z38XG2G>

© Saurabh Vishnubhakat, Arti K. Rai & Jay P. Kesan.

[†] Saurabh Vishnubhakat is an Associate Professor of Law at the Texas A&M University School of Law, a Fellow at the Duke Law Center for Innovation Policy, and a former Expert Advisor to the Chief Economist of the United States Patent and Trademark Office. Arti K. Rai is the Elvin R. Latty Professor of Law at Duke Law School, Faculty Co-Director of the Duke Law Center for Innovation Policy, and the former Administrator for Policy and External Affairs of the USPTO. Jay P. Kesan is a Professor of Law and the H. Ross & Helen Workman Research Scholar at the University of Illinois College of Law and was an inaugural Thomas Alva Edison Distinguished Scholar at the USPTO. The arguments in this writing are the authors' and should not be imputed to the USPTO or to any other organization. For thoughtful questions and suggestions, we are grateful to workshop participants and commentators at the University of Pennsylvania Law School, the University of San Diego School of Law 6th Annual Patent Law Conference, the University of Illinois College of Law 4th Annual Empirical Patent Law Conference, and the Duke Law Innovation Policy Roundtable on the PTAB's Post-Grant Review Proceedings.

46 BERKELEY TECHNOLOGY LAW JOURNAL [Vol. 31:1

could be used by district courts in any subsequent proceedings, and the benefits of substituting administrative process for judicial process would thereby be most fully realized.

Notably, however, standard substitution is not the only use of the PTAB: particularly in the area of *inter partes* reviews, we also see a surprising percentage of cases (about 30%) where the petitioner is not the target of a prior suit on the same patent. The frequency of these nonstandard petitioners, as well as their tendency to join the same petitions as an entity that has been sued, varies by technology. Our data on nonstandard petitioners provide some insight into the extent to which patent challengers are engaging in collective action to contest the validity of patents. Depending on the details of how nonstandard petitioning and collective action are being deployed, this activity could provide a social benefit or constitute a form of harassment.

TABLE OF CONTENTS

I. INTRODUCTION	47
II. EX POST REVIEW OF PATENT VALIDITY	51
A. MOTIVATIONS FOR (AND CONCERNS REGARDING) ADMINISTRATIVE REVIEW	51
B. OPPOSITION MECHANISMS PRIOR TO THE AIA.....	56
1. <i>Ex Parte Reexamination</i>	56
2. <i>Inter partes Reexamination</i>	58
C. ADMINISTRATIVE OPPOSITION UNDER THE AIA	59
1. <i>Inter Partes Review</i>	60
2. <i>Covered Business Method Review</i>	61
3. <i>Intersection with the Courts</i>	63
III. AGENCY OR COURT: STRATEGIC CHOICES	66
A. LITIGANT BEHAVIOR.....	67
1. <i>IPR and CBM Petitions: Descriptive Statistics</i>	68
2. <i>Article III Litigation</i>	71
B. AGENCY DECISIONS	81
C. COURT DECISIONS.....	83
IV. DISCUSSION	84
V. CONCLUSION	87
APPENDIX A: DATA	88
A. PTAB DATA.....	88
B. DISTRICT COURT DATA	90
APPENDIX B: FIGURES	92
APPENDIX C: TABLES	118

I. INTRODUCTION

This is the first paper in a multipart project studying the new post-grant review proceedings set up at the U.S. Patent and Trademark Office (USPTO) Patent and Trial Appeal Board (PTAB) by the America Invents Act of 2011 (AIA).¹ These new administrative trial-type proceedings represent a significant change in the relationship between the system of patent litigation in Article III courts and the administrative state. One case involving this relationship, *Cuozzo Speed Technologies, LLC v. Lee*,² is already before the U.S. Supreme Court and others are in the pipeline.

Although PTAB proceedings have proved to be quite popular, scholarly analysis of litigant behavior has thus far been limited to descriptive data summaries or specific policy perspectives on post-grant challenges, such as their impact on the well-rehearsed patent troll debate.³ This Article is the first comprehensive empirical and analytical study of how litigants use these administrative procedures relative to Article III litigation. In addition to assessing the behavior of litigants, we analyze the behavior of both the PTAB and the courts.

Under the AIA, defendants, potential defendants, and third parties now confront the question of whether and when to challenge the validity of patents by filing one or more petitions for *inter partes* review (IPR) or, if applicable, petitions for covered business method (CBM) review. IPR petitions are filed against individual patents (and claims thereof), but multiple petitions against a patent may be filed by the same or different parties, and a single petition may be filed or joined by multiple parties. Similarly, CBM petitions are filed against individual patents and claims that are directed to eligible business method-related inventions.⁴

Meanwhile, patent owners still face the question of which patents to assert, when and where to assert them, and against whom to assert **them**. The AIA's anti-joinder provision for Article III litigation

1. Leahy-Smith America Invents Act, Pub. L. No. 112-29, 125 Stat. 284.

2. No. 15-446.

3. *E.g.*, Brian J. Love & Shawn Ambwani, *Inter Partes Review: An Early Look at the Numbers*, 81 U. CHI. L. REV. DIALOGUE 93 (2014).

4. In ongoing work, discussed in summary below, we are looking in detail at patents that are the subject of more than one petition. We are dividing these patents into two categories: those that are challenged by the same petitioner multiple times, and those that are challenged by different petitioners. We are further subdividing the two categories by claims and grounds.

48 BERKELEY TECHNOLOGY LAW JOURNAL [Vol. 31:1]

arguably increases complexity by substantially reducing owners' ability to sue multiple defendants in a single case.⁵ Thus, patent owners wishing to sue multiple defendants on a given patent generally have to sue them individually. More importantly for our purposes, the rise of the PTAB forces patent owners to factor in the strong possibility of retaliatory or even preemptive patent validity challenges at the PTAB. As a result, two complex frameworks of resolving patent disputes now coexist: ordinary infringement litigation and declaratory judgment actions in Article III courts, along with administrative invalidation actions in the PTAB.

Multiple proceedings with many potential parties offer a number of strategic possibilities. Two examples of ongoing litigation involving certain highly asserted and highly petitioned patents provide an illustration of the complexities and the correspondingly complicated strategic questions. Although these cases are hardly representative, they do provide clear examples of the multiple, perhaps even combinatorial, strategic possibilities.

In a set of seven cases filed between July 1 and July 9, 2013, Zond, a plasma discharge technology developer, asserted a suite of patents in Massachusetts district court against nine defendants.⁶ Intel, one of the defendants, responded by filing IPR petitions on all of the asserted patents.⁷ In April 2014, Intel persuaded the Massachusetts district court to grant a stay of the litigation.⁸ Within two months of the court granting a stay to Intel, all but one of the defendants had filed IPR petitions on the same claims and the same grounds.⁹ All of the petitioning defendants received stays, and the PTAB joined them to the Intel petitions. Although Intel ultimately settled, PTAB review

5. 35 U.S.C. § 299. *See generally* David O. Taylor, *Patent Misjoinder*, 88 N.Y.U. L. REV. 652 (2013) (discussing rationale for anti-joinder provision).

6. Zond, Inc. v. Gillette Co., No. 1-13-cv-11567 (D. Mass., July 1, 2013); Zond, LLC v. Advanced Micro Devices, Inc., No. 1-13-cv-11577 (D. Mass., July 2, 2013); Zond, LLC v. Intel Corp., No. 1-13-cv-11570 (D. Mass., July 2, 2013); Zond, Inc. v. SK Hynix Inc., No. 1-13-cv-11591 (D. Mass., July 3, 2013); Zond, Inc. v. Toshiba America Elec. Components, Inc., No. 1-13-cv-11581 (D. Mass., July 3, 2013); Zond, Inc. v. Renesas Elecs. Corp., No. 1-13-cv-11625 (D. Mass., July 8, 2013); Zond, Inc. v. Fujitsu Ltd., No. 1-13-cv-11634 (D. Mass., July 9, 2013).

7. The 27 *inter partes* review petitions filed by Intel are listed in Table 1 of Appendix C.

8. Order Granting Motion to Stay Pending Inter Partes Review, Case No. 1-13-cv-11570, Paper No. 120 (D. Mass. Apr. 18, 2014).

9. The 90 *inter partes* review petitions filed by defendants are listed in Table 2 of Appendix C.

of the challenged patents continues, albeit with a new lead petitioner.¹⁰

In another set of cases, e-Watch sued eleven firms on two digital signal transmission patents in the Eastern District of Texas.¹¹ A third-party firm filed the first PTAB petition related to those patents.¹² Subsequently, HTC, a defendant, instituted a petition, and the institution of the HTC petition triggered other petitions.¹³

A major normative argument for administrative ex post review is that it should be an efficient, accessible, and accurate substitute for Article III litigation over patent validity.¹⁴ In this paper, we assess the substitution hypothesis, using individual patents as our basic unit of analysis and also investigating patent-petitioner pairs and similar details in greater depth. **Our data indicate that the “standard model”** of substitution—wherein a district court defendant subsequently brings an administrative challenge to patent validity—is indeed occurring. The majority (about 70 percent) of petitioners who bring *inter partes* review challenges fit the standard model. In fact, our data indicate that both explicit substitution and potential settlement in the shadow of an IPR challenge might be occurring. This substitution effect would suggest that the PTAB should use a claim

10. Joint motions to terminate proceedings, all filed simultaneously on Sept. 12, 2014, settled the Intel-initiated IPR petitions on Zond’s patents. The settlement agreement between Intel and Zond that governs the termination of all these proceedings is confidential.

11. e-Watch, Inc. v. LG Elecs., Inc., No. 2-13-cv-01064 (E.D. Tex., Dec. 9, 2013); e-Watch, Inc. v. Samsung Elecs. Co., No. 2-13-cv-01062 (E.D. Tex., Dec. 9, 2013); e-Watch, Inc. v. Apple Inc., No. 2-13-cv-01061 (E.D. Tex., Dec. 9, 2013); e-Watch, Inc. v. HTC Corp., No. 2-13-cv-01063 (E.D. Tex., Dec. 9, 2013); e-Watch Inc. v. BlackBerry Ltd., No. 2-13-cv-01078 (E.D. Tex., Dec. 10, 2013); e-Watch Inc. v. Sharp Corp., No. 2-13-cv-01074 (E.D. Tex., Dec. 10, 2013); e-Watch Inc. v. ZTE Corp., No. 2-13-cv-01071 (E.D. Tex., Dec. 10, 2013); e-Watch Inc. v. Sony Corp., No. 2-13-cv-01073 (E.D. Tex., Dec. 10, 2013); e-Watch Inc. v. Nokia Corp., No. 2-13-cv-01075 (E.D. Tex., Dec. 10, 2013); e-Watch Inc. v. Huawei Tech. Co., No. 2-13-cv-01076 (E.D. Tex., Dec. 10, 2013); e-Watch Inc. v. Kyocera Commc’ns, Inc., No. 2-13-cv-01077 (E.D. Tex., Dec. 10, 2013).

12. Petition for Inter Partes Review by Iron Dome LLC, No. IPR2014-00439 (P.T.A.B. Feb. 18, 2014).

13. The twelve *inter partes review* petitions filed are listed in Table 3 of Appendix C.

14. Others (including one of us) have argued that to the extent the procedures set up by the AIA resemble formal adjudications, they could serve as a vehicle not simply for error correction but also for legal and policy development. *See, e.g.*, Arti K. Rai, *Patent Validity Across the Executive Branch: Ex Ante Foundations for Policy Development*, 61 DUKE L.J. 1237 (2012); Melissa F. Wasserman, *The Changing Guard of Patent Law: Chevron Deference for the PTO*, 54 WM. & MARY L. REV. 1959 (2013). In this Article, however, we focus on error correction.

50 BERKELEY TECHNOLOGY LAW JOURNAL [Vol. 31:1]

construction standard that mirrors that of district courts. With a uniform standard, PTAB claim constructions could be used by district courts in any subsequent proceedings, and the benefits of substituting administrative process for judicial process would thereby be most fully realized.

Notably, however, standard substitution is not the only use of the PTAB: particularly in the area of IPRs, we also see a surprising percentage of cases (about 30 percent) where the petitioner is *not* the target of a prior suit on the same patent. The frequency of these nonstandard petitioners, as well as their tendency to join the same petitions as an entity that has been sued, varies by technology. Our data on nonstandard petitioners thus provide some insight into the extent patent challengers are engaging in collective action to challenge patents.

Depending on the details of how nonstandard petitioning and collective action are being deployed, this activity could provide a social benefit or constitute a form of harassment. As we discuss in Part II, many commentators have noted that challenging an invalid patent, particularly in expensive Article III litigation, represents a collective action problem. Administrative alternatives may ease the collective action problem, but they may also provide opportunities for harassing patent owners.¹⁵ As another indicator of potential harassment and delay, we also look at the frequency of serial petitioning on a given patent.

Of course, substitution of any sort (as contrasted with duplication) can occur only if administrative review is accurate and efficient, and courts generally stay any related Article III litigation pending administrative review. In the case of declaratory judgment (DJ) litigation, the AIA both bars a DJ litigant from bringing a subsequent administrative review and provides for automatic stays of any subsequent DJ actions.¹⁶ So the issue of duplication primarily arises in the context of infringement litigation brought by the patent owner. Although a full answer to the duplication issue awaits further

15. *E.g.*, Gregory Dolin, *Dubious Patent Reform*, 56 B.C. L. REV. 881 (2015); Jay P. Kesan, *Carrots and Sticks to Create a Better Patent System*, 17 BERKELEY TECH L.J. 145, 165 (2002) (discussing the dangers of delay and harassment in post-issuance patent office proceedings); Raymond A. Mercado, *Ensuring the Integrity of Administrative Challenges to Patents: Lessons from Reexamination*, 14 COLUM. SCI. & TECH. L. REV. 558 (2013).

16. Perhaps not surprisingly, since patents became available for PTAB review, DJ actions have fallen both in absolute terms and as a percentage of case filings.

decision making in cases currently before the PTAB and the courts, we provide some initial data on the question.

In this Article, Part II discusses the normative arguments for and against administrative *ex post* validity review as a substitute for judicial review. It reviews these arguments as they developed in earlier incarnations of administrative review and as they developed in the far more robust AIA proceedings. Part III provides the large-scale empirical data we have gathered. It discusses various indicia of a general substitution effect in the context of particular technologies and in particular district courts. We also discuss the phenomenon of nonstandard petitioners and the collective action in which they sometimes engage. Additionally, Part III presents data regarding multiple IPR petitions filed against the same patent. Based on these data, Part III examines agency and court decision-making in the face of strategic behavior by the parties before them. Part IV discusses our major findings, suggests directions for further research, and outlines our ongoing agenda to advance these research goals.

I. EX POST REVIEW OF PATENT VALIDITY

This Part discusses the normative arguments that have motivated administrative review of patent validity, particularly as a substitute for litigation in the federal courts. Against the backdrop of this normative framing, we then evaluate *ex parte* and *inter partes* reexamination (the latter now defunct) as well as the new *ex post* review procedures introduced by the AIA.

A. MOTIVATIONS FOR (AND CONCERNS REGARDING) ADMINISTRATIVE REVIEW

The initial patent examination process will inevitably produce some improper patent grants. To the extent improperly granted patents impose unnecessary costs and call into question the credibility of the patent system,¹⁷ these improper grants ought to be

17. See generally Mark D. Janis, *Rethinking Reexamination: Toward a Viable Administrative Revocation System for U.S. Patent Law*, 11 HARV. J.L. & TECH. 1, 7–36 (1997) (considering USPTO's role in patent revocation via administrative reexamination). For purposes of this article, we need not engage the robust academic debate over the level of error the initial examination process should tolerate.

corrected.¹⁸ The importance of error correction remains a dominant theme in ex post patent review, especially in evaluating the success of the AIA.¹⁹ Perhaps even more important, however, is the recurring **theme of institutional design: the USPTO's examination errors** should not merely be corrected, but should be corrected outside the federal courts.

Several interrelated arguments counsel in favor of administrative review. Most obviously, Article III litigation is quite costly. The biennial economic survey of the American Intellectual Property Law Association indicates that even for the lowest-stakes category of patent lawsuits (in which less than \$1 million was at risk), median litigation costs have risen from \$650,000 in 2005 to \$700,000 in 2013.²⁰ And for the highest-stakes lawsuits (in which more than \$25 million was at risk), median litigation costs rose over the same time period from \$4.5 million to \$5.5 million.²¹

The high cost of litigation would be less problematic if these great expenditures yielded great accuracy in judicial outcomes. As standard economic accounts of procedure note, the goal of procedure is the minimization of litigation costs and error costs.²² But decisions

18. Ex post review as a means for correcting USPTO examination errors has been a consistent theme in institutional discussions of patent quality. *See, e.g., In re Swanson*, 540 F.3d 1368, 1375 (Fed. Cir. 2008) (“Congress intended reexaminations to provide an important ‘quality check’ on patents that would allow the government to remove defective and erroneously granted patents.”); *In re Recreative Techs. Corp.*, 83 F.3d 1394, 1396–97 (Fed. Cir. 1996) (“The reexamination statute’s purpose is to correct errors made by the government . . . and if need be to remove patents that never should have been granted.”); *Patlex Corp. v. Mossinghoff*, 758 F.2d 594, 603 (Fed. Cir. 1985) (“The legislative history of the reexamination statute makes clear that its purpose is to cure defects in administrative agency action with regard to particular patents and to remedy perceived shortcomings in the system by which patents are issued.”).

19. The degree to which the AIA ex post administrative review procedures are actually capturing and correcting *ex ante* examination errors is the focus of related large-scale empirical research relying on much of the same data as the present project. *See* Saurabh Vishnubhakat, David L. Schwartz & Alan C. Marco, *What Ex Post Review Has Revealed About Patents* (forthcoming).

20. AM. INTELL. PROP. LAW ASS’N, REPORT OF THE ECONOMIC SURVEY 34 (2013) [hereinafter AIPLA SURVEY 2013].

21. *Id.*

22. *See generally* Louis Kaplow & Steven Shavell, *Accuracy in the Determination of Liability*, 37 J.L. & ECON. 1 (1994) (modeling the relationship between the design of legal rules and the likelihood of reaching accurate outcomes); Louis Kaplow & Steve Shavell, *Accuracy in the Assessment of Damages*, 39 J.L. & ECON. 191 (1996) (modeling the relationship between the design of legal rules and the likelihood of imposing accurate monetary sanctions).

reached in Article III litigation may not be particularly accurate.²³ Because patent law often uses science-based proxies such as “ordinary skill in the art” to tackle relevant legal and policy goals, the subject matter of patent law can be highly complex as a scientific matter.²⁴ And even if a case is not highly complex as a scientific matter, the manner in which factual findings interact with law and policy can be complex.²⁵ With the possible exception of Federal Circuit judges, judges in the federal courts tend to be generalists who may not be equipped to tackle complex questions at the intersection of law, science, and policy.²⁶ Moreover, district courts have to contend with juries, which may be even less equipped than federal judges to address complex questions of law and science.²⁷ In

23. *E.g.*, David L. Schwartz, *Practice Makes Perfect? An Empirical Study of Claim Construction Reversal Rates in Patent Cases*, 107 MICH. L. REV. 223 (2008) (finding high reversal rate for district court claim construction). *See generally* Anup Malani & Jonathan S. Masur, *Raising the Stakes in Patent Cases*, 101 GEO. L.J. 637, 659 (2013) (offering a brief survey of scholarly proposals to improve judicial accuracy in patent adjudication).

24. For example, a patent may be challenged as being invalid because the invention that it claims was obvious under 35 U.S.C. § 103 in light of the prior technical knowledge available to those in the field at the time of invention. Whether a claimed invention is obvious is a question of law reviewed de novo on appeal. But the legal determination is based on predicate findings of fact regarding the prior art and the level of skill in the art. These findings are supposed to be reviewed deferentially on appeal. *See, e.g., In re Kubin*, 561 F.3d 1351, 1355 (Fed. Cir. 2009) (concerning review from PTO patent denial); *see also* *Graham v. John Deere*, 383 U.S. 1, 17 (1966) (explaining factual findings made by district court are subject to clearly erroneous review). Meanwhile, the USPTO’s factual findings in granting a patent are presumed correct and must be rebutted by clear and convincing evidence in the courts. *Microsoft Corp. v. i4i Ltd. P’ship*, 131 S. Ct. 2238 (2011). *See generally* Arti K. Rai, *Engaging Facts and Policy: A Multi-Institutional Approach to Patent System Reform*, 103 COLUM. L. REV. 1035, 1068–75 (2003) (discussing the technical complexity often involved in applying patent law’s fact-based standards).

25. For example, the practical probative value of factual findings toward obviousness analysis may vary by the inherent unpredictability of the given technology: whereas mechanical inventions operate in relatively predictable and well-understood ways, small technical changes may lead to dramatic and unexpected results in biochemistry. *Pfizer, Inc. v. Apotex, Inc.*, 480 F.3d 1348, 1364 (Fed. Cir. 2007).

26. Peter Lee, *Patent Law and the Two Cultures*, 120 YALE L.J. 2, 4–6 (2010).

27. *See* Mark Lemley, *Why Do Juries Decide If Patent Are Valid?*, 99 VA. L. REV. 1673, 1705 (2013) (noting that as far back as the 1950s, modern technology was already “judged too complex for a jury to understand, so it made no sense to give them the patent questions” where avoidable).

54 BERKELEY TECHNOLOGY LAW JOURNAL [Vol. 31:1]

contrast, administrative patent judges have long been required to be “persons of competent legal knowledge and scientific ability.”²⁸

Empirical research bears out concerns about the capacity of judges to resolve patent disputes. The generalist background of most district judges has led many plaintiffs to seek out specific districts,²⁹ with the natural result being a certain amount of de facto specialization.³⁰ A few districts see a disproportionate number of patent cases, and some have reputations as “rocket docket” for resolving them quickly.³¹ Empirical evidence suggests that, among the subset of judges who preside over patent cases regularly, increased experience may produce more efficient and accurate case outcomes.³² Yet this private ordering toward certain districts only underscores the overall lack of expertise among district court judges.³³ Moreover, some commentators have argued that aggressive attempts to specialize in patent disputes by judges whose districts are found outside traditional technology centers lead to overly plaintiff-friendly procedures rather than accurate adjudication.³⁴

28. 35 U.S.C. § 6 (requiring that “administrative patent judges shall be persons of competent legal knowledge and scientific ability”).

29. Commentators have long discussed forum shopping at both the appellate and district court level. *E.g.*, Scott Atkinson, Alan C. Marco & John H. Turner, *The Economics of a Centralized Judiciary: Uniformity, Forum Shopping, and the Federal Circuit*, 52 J.L. & ECON. 411 (2009) (forum shopping prior to the creation of the Federal Circuit); Kimberly A. Moore, *Forum Shopping in Patent Cases: Does Geographic Choice Affect Innovation?*, 79 N.C. L. REV. 889 (2001) (early discussion of forum shopping at district court level).

30. Jay P. Kesan & Gwendolyn G. Ball, *Judicial Experience and the Efficiency and Accuracy of Patent Adjudication: An Empirical Analysis of the Case for a Specialized Patent Trial Court*, 24 HARV. J.L. & TECH. 393, 447 (2011) (showing in Table III that the distribution of how many cases judges hear is highly skewed such that most judges hear fewer than ten patent cases each whereas roughly the top fifth of high-volume judges hear over three-fifths of all patent cases).

31. Saurabh Vishnubhakat, *Reconceiving the Patent Rocket Docket: An Empirical Study of Infringement Litigation 1985–2010*, 11 J. MARSHALL REV. INTELL. PROP. L. 58 (2011).

32. Kesan & Ball, *supra* note 30, at 423–43.

33. This argument is particularly compelling when offered by judges themselves. *See, e.g.*, Judge James F. Holderman, *Judicial Patent Specialization: A View from the Trial Bench*, 2002 U. ILL. J.L. TECH. & POL’Y 425, 430–31 (2002); Judge James F. Holderman & Halley Guren, *The Patent Litigation Predicament in the United States*, 2007 U. ILL. J.L. TECH. & POL’Y 1, 5–6 (2007); The Hon. Ed Kinkeade, *Point-Counterpoint: Two Judges’ Perspectives on Trial by Jury*, 12 TEX. WESLEYAN L. REV. 497, 498 (2006).

34. *See, e.g.*, J. Jonas Anderson, *Court Competition for Patent Cases*, 163 U. PA. L. REV. 631 (2015); Jeanne C. Fromer, *Patentography*, 85 N.Y.U. L. REV. 1444

Another reason to favor low-cost administrative review, rather than high-cost Article III review, is that patent plaintiffs and defendants have asymmetric incentives. Supreme Court case law builds into the patent doctrine asymmetric incentives to litigate. **Under the law's estoppel provisions, a challenger who successfully invalidates a patent provides a public good—the challenger benefits not only itself but also all other potential challengers.**³⁵ By contrast, the challenger who loses is uniquely estopped from challenging the patent again.³⁶

Although the public-good-type incentive may exist in the administrative context as well³⁷ (and, indeed, exists in both pre-AIA and post-AIA *inter partes* proceedings as a consequence of the congressional decision to implement relatively strong statutory estoppel provisions), the significantly lower cost of the administrative proceeding presumably reduces its scale. In other words, although a challenger may still be reluctant to provide a public good, a public good that costs a few hundred thousand dollars is quite different from one that costs several million dollars. Moreover, the absence of a standing requirement in IPR proceedings

(2010); Daniel Klerman & Greg Reilly, *Forum Selling*, 88 S. CAL. L. REV. (forthcoming 2016), <http://www.ssrn.com/abstract=2538857> [<http://perma.cc/528U-TJS8>].

35. *See* *Blonder-Tongue Labs., Inc. v. Univ. of Ill. Found.*, 402 U.S. 313, 350 (1971) (stating a patent invalidity finding creates nonmutual defensive collateral estoppel, so that a patent that is invalid as against one party is invalid as against the world); *see also* Joseph Farrell & Robert P. Merges, *Incentives to Challenge and Defend Patents: Why Litigation Won't Reliably Fix Patent Office Errors and Why Administrative Patent Review Might Help*, 19 BERKELEY TECH. L.J. 943 (2004) (noting that, in addition to public good problem, disincentives to challenge may be created in certain situations involving oligopolistic competition between licensee that pay sales-based royalties to the patentee).

36. Interestingly, some practitioners have suggested that the pre-AIA tendency of so-called patent trolls to sue multiple defendants in one suit might have facilitated some collective action through informal or formal joint defense agreements. *See* Daniel Bream & Lee Cheng, *Benefits of a Coordinated Joint Defense in Patent Cases*, LAW360 (Nov. 27, 2012). Whether or not that was the case, the AIA's anti-joinder provision may limit this potential nudge towards collective action. *Id.*

37. *See* John R. Thomas, *Collusion and Collective Action in the Patent System: A Proposal for Patent Bounties*, 2001 U. ILL. L. REV. 305 (2001). *But see* Stuart M. Benjamin & Arti K. Rai, *Who's Afraid of the APA? What the Patent System Can Learn From Administrative Law*, 95 GEO. L.J. 269, 323–27 (2007) (noting that administrative review that relied on *Chevron* deference by the courts rather than estoppel against the patent challenger could substantially reduce collective action problems).

56 BERKELEY TECHNOLOGY LAW JOURNAL [Vol. 31:1]

creates possibilities for additional entities, including entities that represent groups of potential defendants in a given industry, to challenge patents.

For these reasons, a less costly, more expert, and more widely accessible institution has long been thought desirable. On the other hand, even advocates of an administrative mechanism have noted the potential for harassment of patent owners that might arise in such administrative review.³⁸ Harassment potential exists as the obvious flip side of access created by low cost and the absence of an Article III standing requirement.³⁹ Moreover, to the extent that courts do not believe that administrative review will in fact be accurate and efficient, and thus do not stay any related Article III litigation, such review may create costly duplication rather than efficiency.

B. OPPOSITION MECHANISMS PRIOR TO THE AIA

In 1980 Congress created a mechanism for USPTO *ex parte* reexamination of patent validity,⁴⁰ and in 1999 Congress created a mechanism for *inter partes* reexamination.⁴¹ These procedures have realized their error-correction and efficiency goals to varying degrees and have interacted in important ways with federal court litigation.

1. Ex Parte Reexamination

As the Federal Circuit recognized in a contemporaneous opinion, the *ex parte* reexamination system was an effort to reap

three principal benefits. First, the new procedure could settle validity disputes *more quickly and less expensively*

38. *E.g.*, Kesan, *supra* note 15 (noting the potential for delay and harassment in patent office proceedings); Jonathan Masur, *Patent Inflation*, 121 YALE L.J. 470, 522 (2011) (recognizing that “inter partes review could potentially be abused by parties interested only in delaying and harassing competitors”); Joe Matal, *A Guide to the Legislative History of the America Invents Act: Part II of II*, 21 FED. CIR. B.J. 539, 550 (2012) (noting that the AIA’s own statutory text directs the USPTO to penalize abuses of administrative validity challenge proceedings “such as to harass or to cause unnecessary delay or an unnecessary increase in the cost of the proceeding”).

39. That said, the challenger who loses at the administrative level may have to meet Article III standing requirements in order to appeal. *See* *Consumer Watchdog v. Wis. Alumni Research Found.*, 753 F.3d 1258 (Fed. Cir. 2014).

40. Bayh-Dole Act, Pub. L. No. 96-517, 94 Stat. 3015 (1980).

41. American Inventors Protection Act, Pub. L. No. 106-113, 113 Stat. 1501 (1999).

than the often protracted litigation involved in such cases. Second, the procedure would allow courts to refer patent validity questions to the *expertise of the Patent Office*. Third, reexamination would reinforce investor confidence in the certainty of patent rights by affording the USPTO a *broader opportunity to review* doubtful patents.⁴²

The parameters of this reexamination procedure reflect its twin goals: to correct those USPTO examination errors that improperly allowed patents to issue, and to do so more cheaply, accurately, and accessibly than the federal courts could.

Cost-wise, the USPTO's *ex parte* reexamination fee has grown from \$1,500 in the early 1980s⁴³ to \$12,000 at present,⁴⁴ and attorney costs have risen to approximately \$20,000 at the mean and \$15,000 at the median.⁴⁵ Even today, the expense of *ex parte* reexamination tends to be below \$35,000—some twentyfold less costly than the lowest-stakes category of litigation.⁴⁶ Moreover, when the USPTO decides to deny a request for *ex parte* reexamination, the agency refunds most of the fee to the requester, further lowering the financial hurdle, and risk, to a patent validity challenge.⁴⁷ Consistent with its mandate to correct examination errors, *ex parte* reexamination requires a “substantial new question of patentability” as to one or more of the challenged patent claims, and this standard may be met by reargument of information that was previously before the patent examiner.⁴⁸ Access to reexamination is also unconstrained by traditional Article III standing requirements. Anyone at any time may seek reexamination of a patent, including the patent owner and

42. *See* Patlex Corp. v. Mossinghoff, 758 F.2d 594, 602 (Fed. Cir. 1985) (internal quotations and citations omitted) (emphasis added).

43. Revision of Patent Fees, 50 Fed. Reg. 31818-01 (Aug. 6, 1985), codified in various parts of 37 C.F.R. Part 1.

44. 37 C.F.R. § 1.20(c)(1).

45. *See* AIPLA SURVEY 2013, *supra* note 20, at I-112 (tabulating attorney costs reported for *ex parte* reexamination); AM. INTELL. PROP. LAW ASS'N, REPORT OF THE ECONOMIC SURVEY I-136 (2011); AM. INTELL. PROP. LAW ASS'N, REPORT OF THE ECONOMIC SURVEY I-114 (2009); AM. INTELL. PROP. LAW ASS'N, REPORT OF THE ECONOMIC SURVEY I-76 (2007).

46. Janis, *supra* note 17.

47. *See* 35 U.S.C. § 303(c); 37 C.F.R. § 1.26(c).

48. 35 U.S.C. § 303(a).

58 BERKELEY TECHNOLOGY LAW JOURNAL [Vol. 31:1

the USPTO itself,⁴⁹ and courts narrowly construe agreements not to challenge patent validity, in favor of access to reexamination.⁵⁰

However, for all its intended benefits, the reexamination procedure introduced in 1980 has long been criticized for its *ex parte* nature, which excludes any third-party participation beyond filing the initial request.⁵¹ **According to the PTO's statistics,**⁵² 29 percent of the *ex parte* reexaminations filed between July 1981 and September 2014 were filed by the patent owner itself, presumably as a potential mechanism for strengthening the patent.⁵³

2. Inter Partes *Reexamination*

To improve public participation in the administrative review of patent validity, in 1999 Congress created a new procedure: *inter partes* reexamination.⁵⁴ Designed to coexist with the old *ex parte* procedure, *inter partes* reexamination conferred significant rights upon third-party requestors to participate in the USPTO's review of patent validity. A requestor could comment on every substantive response by the patent owner to an examiner action and could appeal the examiner's decision to the USPTO's administrative review board.

However, *inter partes* reexamination also posed significant barriers. One was a strong estoppel provision, barring the challenger

49. 35 U.S.C. §§ 302, 303(a).

50. *See, e.g., Joy Mfg. Co. v. Nat'l Mine Serv. Co., Inc.*, 810 F.2d 1127 (Fed. Cir. 1987).

51. Janis, *supra* note 17, at 6 n.12 (citing Shannon M. Casey, *The Patent Reexamination Reform Act of 1994: A New Era of Third Party Participation*, 2 J. INTELL. PROP. L. 559 (1995)); Marvin Motsenbocker, *Proposal to Change the Patent Reexamination Statute to Eliminate Unnecessary Litigation*, 27 J. MARSHALL L. REV. 887, 898 (1994); Gregor N. Neff, *Patent Reexamination—Valuable, But Flawed: Recommendations for Change*, 68 J. PAT. & TRADEMARK OFF. SOC'Y 575 (1986).

52. *See* USPTO, *Ex parte* Reexamination Filing Data—September 30, 2014, <http://www.uspto.gov/learning-and-resources/statistics/reexamination-information> [<http://perma.cc/WP77-V8T8>].

53. Certain Federal Circuit cases have indicated that patents that survive reexamination should be viewed even more deferentially by the courts than ordinary patents. *E.g., Gould v. Control Laser Corp.*, 705 F.2d 1340, 1342 (Fed. Cir. 1983) (explaining that reexamination ought to “facilitate trial of [the reexamined] issue by providing the district court with the *expert view of the PTO* (when a claim survives the reexamination proceeding)”) (emphasis added).

54. *See generally* Kenneth L. Cage & Lawrence T. Cullen, *An Overview of Inter Partes Reexamination Procedures*, 85 J. PAT. & TRADEMARK OFF. SOC'Y 931 (2003) (explaining the structural details and concerns motivating the 1999 *inter partes* reexamination procedures).

from raising in Article III litigation any issues it raised or could have raised during the *inter partes* reexamination.⁵⁵ Even more significant was the prolonged duration of reexamination. The reexaminations themselves took an average of 39.5 months, and then had to be appealed to the Board of Patent Appeals and Interferences.⁵⁶ From its creation in 1999 through 2012, when it was subsumed under the new administrative review system established by the AIA, *inter partes* reexamination was never widely used as a means for challenging the validity of patents.⁵⁷

C. ADMINISTRATIVE OPPOSITION UNDER THE AIA

The America Invents Act of 2011⁵⁸ (AIA), which created four new procedures for reevaluating the validity of patents, significantly strengthened the U.S. system for administrative review of patent validity. One procedure, post-grant review, is just beginning its operation as it only applies to patents that issue from applications **filed under the AIA's new first-inventor-to-file regime**.⁵⁹ Another procedure, supplemental examination, allows patent owners themselves to provide new information that helps fortify the validity of their patents.⁶⁰ Thus far, the opportunity for robust public participation in challenging pre-existing patents has arisen in the two remaining procedures: *inter partes* review (IPR) and the transitional program for covered business method (CBM) review.

55. 35 U.S.C. § 317(b) (2000); *see, e.g.*, M. Patricia Thayer et al., *Examining Reexamination: Not Yet an Antidote to Litigation*, 5 SEDONA CONF. J. 23, 24 (2004) (noting that estoppel makes “*inter partes* reexamination something of a double-or-nothing gamble”).

56. This average included some outlier cases, but the median was a lengthy 34.1 months. *See Inter Partes Reexamination Filing Data*, USPTO, <http://www.uspto.gov/learning-and-resources/statistics/reexamination-information> [<http://perma.cc/82NT-8L67>].

57. From November 29, 1999, through the abolition of *inter partes* reexamination effective September 16, 2012, fewer than 2,000 requests were filed, and in most years the usage of *inter partes* reexamination represented only a fraction of *ex parte* reexamination. *See Reexamination Statistics*, USPTO, <http://www.uspto.gov/learning-and-resources/statistics/reexamination-information> [<http://perma.cc/82NT-8L67>].

58. Leahy-Smith America Invents Act, Pub. L. No. 112-29, 125 Stat. 284.

59. As of October 31, 2015, only thirteen post-grant review petitions have been filed in the USPTO. *See* USPTO, PATENT REVIEW PROCESSING SYSTEM (Oct. 31, 2015) at 2, <http://www.uspto.gov/sites/default/files/documents/2015-10-31%20PTAB.pdf> [<http://perma.cc/V2N8-EJT9>].

60. 35 U.S.C. § 257.

60 BERKELEY TECHNOLOGY LAW JOURNAL [Vol. 31:1]

Before turning to the specifics of these proceedings, we note the **AIA's desire to promote administrative review is probably clearest in the situation where the petitioner is a prior district court defendant. In the case of *inter partes* review, this "standard model" is endorsed,** at least implicitly, by several features we discuss in detail below. One feature is the requirement that IPR review occur within one year of a prior district court lawsuit. The congressional decision to include a strong estoppel provision, and thus potentially set up in the administrative context the Article III collective action problem for challengers,⁶¹ may also reflect congressional embrace of the standard model.

In the case of CBM review, Congress embraced the standard model even more fully. CBM review explicitly requires the petitioner **to be "charged with infringement," language the PTO has interpreted** as requiring the petitioner to prove standing necessary to bring a declaratory judgment action in district court.⁶²

That said, in the case of IPRs, the statutory language certainly does not preclude petitioners that are outside the standard model. IPR proceedings have no standing requirement, and the AIA also provides for potential collective action by allowing joinder to existing petitions.

Thus far, the new AIA proceedings do appear substantially cheaper than district court litigation. According to the 2015 AIPLA Economic Survey, the median cost of an IPR through a PTAB hearing was \$275,000 and through appeal was \$350,000.⁶³ Although the AIPLA survey does not differentiate between IPRs based on amount of money at risk, these figures are substantially lower than the median cost of district court litigation even for the lowest stakes cases.⁶⁴

1. Inter Partes *Review*

IPR challenges are available to anyone, other than the patent owner,⁶⁵ who has not previously sought to invalidate the patent

61. *See supra* text accompanying notes 37–41.

62. 37 C.F.R. § 42.302(a) ("Charged with infringement means a real and substantial controversy regarding infringement of a covered business method patent exists such that the petitioner would have standing to bring a declaratory judgment action in Federal court.").

63. AM. INTELL. PROP. LAW ASS'N, REPORT OF THE ECONOMIC SURVEY 38 (2015).

64. *See supra* Section I.A.

65. 35 U.S.C. § 311(a).

through a civil action⁶⁶ and who has not been sued more than one year earlier for infringing the patent in question.⁶⁷ An IPR petition may not be filed anonymously: the petitioner must disclose all its real parties in interest.⁶⁸ For any patent that issued under the old first-to-invent regime, an IPR petitioner may file a challenge immediately.⁶⁹

For a patent that issues under the new first-inventor-to-file regime, an IPR petitioner may file a challenge only after nine months **from the patent's date of grant or after the termination of any post-grant review** that has been instituted as to the patent, whichever is later.⁷⁰ An IPR may challenge patent claims only on the grounds that they fail to satisfy the novelty requirement⁷¹ or the nonobviousness requirement,⁷² and may only argue on the basis of prior patents or printed publications.⁷³ To decide that an IPR petition warrants **institution of an IPR proceeding, the USPTO must find a "reasonable likelihood that the petitioner would prevail with respect to at least [one] of the claims challenged in the petition."**⁷⁴

2. Covered Business Method Review

CBM challenges are available only to parties who have previously been sued for infringing, or charged with infringing, the patent in question.⁷⁵ Like IPR petitions, CBM review petitions may not be filed anonymously—they must disclose real parties in interest.⁷⁶ Through rulemaking, the PTO has interpreted **the statutory "charged with infringement" language to mean "a real and substantial controversy regarding infringement . . . exists such that the petitioner would have**

66. *See* 35 U.S.C. §§ 315(a)(1), (3) (providing that a counterclaim challenging the validity of a patent claim in an infringement action is not a civil action).

67. 35 U.S.C. § 315(b).

68. This disclosure is necessary because the constraints on who can petition also apply to all legal privies and real parties in interest of the would-be petitioner. *See* 35 U.S.C. §§ 315(a)(1), (b).

69. 35 U.S.C. § 311(c).

70. *Id.*

71. 35 U.S.C. § 102.

72. 35 U.S.C. § 103.

73. 35 U.S.C. § 311(b).

74. 35 U.S.C. § 314(a).

75. Leahy-Smith America Invents Act, Pub. L. No. 112-29, § 18(a)(1)(B), 125 Stat. 330 (stating the prior infringement suit may be one that targeted the CBM petitioner itself or its privies or real parties in interest).

76. *See id.*

62 BERKELEY TECHNOLOGY LAW JOURNAL [Vol. 31:1

standing to bring a declaratory judgment action in Federal Court.”⁷⁷ Congressional creation of a standing requirement in a CBM review proceeding contrasts with the absence of such a requirement in an IPR proceeding. In general, to the extent that IPR and CBM review provisions differ (and we detail other differences below), these differences may arise because CBM review was inserted into the AIA relatively late in the day, and the members of Congress most responsible for the review saw CBM patents as categorically suspect.⁷⁸

For any eligible business method patent⁷⁹ that issued under the old first-to-invent regime, a CBM petitioner may file a challenge at any time after the procedure was established on September 16, 2012.⁸⁰ For an eligible business method patent that issues under the

77. 37 C.F.R. § 42.302(a).

78. Senators Schumer and Kyl, who proposed a version of the CBM provision as part of a floor managers' amendment on March 1, 2011, were highly suspicious of all business method patents. In his March 2011 Senate floor testimony, Senator Schumer described business method patents as “the bane of the patent world” and castigated the decision the Federal Circuit in *State Street Bank* to allow such patents. 157 CONG REC. S1363 (Mar. 8, 2011) (statement of Sen. Schumer). Among many Senators on the Republican side, positions were equally strong. The Senate Republican Policy Committee's summary of § 18, introduced into the Congressional Record by Senator Kyl, stated (somewhat inaccurately):

Recent court decisions, culminating in last year Supreme Court decision in *Bilski v. Kappos*, have sharply pulled back on the patenting of business methods, emphasizing that these “inventions” are too abstract to be patentable. In the intervening years, however, PTO was obliged to issue a large number of business-method patents, many or possibly all of which are no longer valid. The Schumer proceeding offers a relatively cheap alternative to civil litigation for challenging these patents, and will reduce the burden on the courts of dealing with the backwash of invalid business-method patents.

157 CONG. REC. S1367 (Mar. 8, 2011) (statement of Sen. Kyl).

79. The AIA defines an eligible “business method” patent as: “a patent that claims a method or corresponding apparatus for performing data processing or other operations used in the practice, administration, or management of a financial product or service, except that the term does not include patents for technological inventions.” Leahy-Smith America Invents Act, Pub. L. No. 112-29, § 18(d)(1), 125 Stat. 331. USPTO regulations further define a “technological invention” based on “whether the claimed subject matter as a whole recites a technological feature that is novel and unobvious over the prior art; and solves a technical problem using a technical solution.” 37 C.F.R. § 42.301(b).

80. CBM challenges became available one year from the enactment of the AIA, which was signed into law on September 16, 2011. Leahy-Smith America Invents Act, Pub. L. No. 112-29, § 18(a)(1), 125 Stat. 329.

new first-inventor-to-file regime, a CBM petitioner may file a **challenge only after nine months from the patent's date of grant or** after the termination of any post-grant review that has been instituted as to the patent, whichever is later.⁸¹ A CBM petition may challenge patent claims on essentially the complete range of patentability criteria, including subject-matter eligibility,⁸² novelty,⁸³ nonobviousness,⁸⁴ utility,⁸⁵ single invention,⁸⁶ enablement,⁸⁷ written description,⁸⁸ definiteness,⁸⁹ and others.⁹⁰ To decide that a CBM petition warrants institution of a CBM review, the **USPTO must find that "it is more likely than not that at least [one] of the claims challenged in the petition is unpatentable,"**⁹¹ or that **"the petition raises a novel or unsettled legal question that is important to other patents or patent applications."**⁹²

3. *Intersection with the Courts*

Both IPR and CBM review proceedings generate estoppel effects, though not in the same way. The estoppel generated by IPR is quite strong. An IPR resulting in a final written decision precludes the petitioner⁹³ from asserting any claim in either the USPTO, the federal courts, or the International Trade Commission (ITC) that the petitioner raised, or could have raised, in the IPR proceeding.⁹⁴

81. *See* Leahy-Smith America Invents Act, Pub. L. No. 112-29, § 18(a)(1), 125 Stat. 329 (incorporating into CBM review the same standards that apply to post-grant review proceedings as codified in 35 U.S.C. §§ 321–329).

82. 35 U.S.C. § 101.

83. 35 U.S.C. § 102.

84. 35 U.S.C. § 103.

85. 35 U.S.C. § 101.

86. *See* 35 U.S.C. § 101 (allowing an inventor or discoverer to "obtain a patent") (emphasis added).

87. 35 U.S.C. § 112(a).

88. 35 U.S.C. § 112(a).

89. 35 U.S.C. § 112(b).

90. *See* 35 U.S.C. § 321(b) (allowing challenges on any invalidity defense available under 35 U.S.C. § 282(b)(2) and § 282(b)(3), and under 35 U.S.C. § 251). Additional constraints also apply to novelty- or nonobviousness-based challenges based on pre-AIA § 102 or § 103. *See* Leahy-Smith America Invents Act, Pub. L. No. 112-29, § 18(a)(1)(C), 125 Stat. 330.

91. 35 U.S.C. § 324(a).

92. 35 U.S.C. § 324(b).

93. **The same estoppel effects bind the petitioner's privies and** real parties in interest.

94. 35 U.S.C. § 315(e).

64 BERKELEY TECHNOLOGY LAW JOURNAL [Vol. 31:1]

By contrast, a CBM review that results in a final written decision creates full estoppel within the USPTO only—it precludes the petitioner⁹⁵ from asserting any claim in the USPTO that the petitioner raised, or could have raised, in the CBM review proceeding.⁹⁶ With respect to the courts, CBM petitioners are not estopped from invoking those invalidity grounds that they raised at the USPTO.⁹⁷

Both IPR and CBM review proceedings trigger automatic stays of co-pending declaratory judgment litigation. Just as a would-be petitioner cannot challenge a patent in an IPR if it has previously challenged that patent in a civil action,⁹⁸ if a petitioner files such a civil action *after* the IPR petition, then that civil action is automatically stayed.⁹⁹ The stay may be lifted only if the patent owner requests it, if the patent owner claims or counterclaims infringement against the petitioner, or if the petitioner dismisses its civil action.¹⁰⁰ Likewise, if a petitioner files a civil action challenging the patent after filing a CBM petition on the same patent, then that civil action must automatically be stayed.¹⁰¹ As with IPR, an automatic CBM stay may be lifted only if the patent owner requests it, if the patent owner claims or counterclaims infringement against the petitioner, or if the petitioner dismisses its civil action.¹⁰²

Meanwhile, courts still have the discretion to stay existing infringement litigation brought by a patent owner pending the outcome of an IPR or CBM review proceeding. For IPRs, where the AIA does not specify the standard for such stays, prior standards pertaining to *ex parte* and *inter partes* reexamination remain

95. **The same estoppel effects bind the petitioner's privies and real parties in interest.**

96. 35 U.S.C. § 325(e)(1). In general, the provisions of post-grant review, which apply to patents filed under the first-inventor-to-file system, also apply to CBM review, unless Section 18 of the AIA otherwise specifies.

97. 35 U.S.C. § 325(e)(2) generally estops the relitigation in court of arguments that were raised or could have been raised in the USPTO, but AIA § 18 provides that § 325(e)(2) does not apply to CBM proceedings—meaning that patent validity challengers are free to raise those arguments again in the courts.

98. *See* 35 U.S.C. §§ 315(a)(1), (3) and *supra* text accompanying note 66.

99. 35 U.S.C. § 315(a)(2).

100. *Id.*

101. 35 U.S.C. § 325(a)(2).

102. *Id.*

valuable, though not conclusive, precedent.¹⁰³ Drawing on the reexamination case law, courts continue to consider the familiar three factors in deciding whether to issue stays: the potential for prejudice or tactical disadvantage; the timing of the desired stay relative to that of the administrative proceeding itself; and the likelihood that resolution of the administrative proceeding may simplify the pending litigation.¹⁰⁴

Notably, the AIA specifies a four-factor test for CBM-related stays. This four-factor test encompasses three factors courts previously used in determining contested motions for stay under the old reexamination system and adds a fourth factor—**“whether a stay, or the denial thereof, would reduce the burden of litigation on the parties and on the court.”**¹⁰⁵ Moreover, for purposes of **“ensur[ing] consistent application of established precedent,”** the AIA provides for **immediate interlocutory appeal of the district court’s decision** regarding stays.¹⁰⁶ It also states the Federal Circuit’s standard of review on appeal from a district court decision **“may be de novo.”**¹⁰⁷ Using this standard, the Federal Circuit has held that district courts have limited discretion to deny CBM-related stays when all claims asserted in litigation are also under CBM review.¹⁰⁸

In general, the AIA’s legislative history indicates Congress wanted both IPRs and CBM reviews to serve as a substitute for Article III litigation over patent validity. However, for those defendants who are charged with infringement of a patent that falls within the “covered business method” designation, the broader number of grounds available for challenge, less onerous estoppel

103. See Matthew R. Frontz, *Staying Litigation Pending Inter Partes Review and Effects on Patent Litigation*, 24 FED. CIR. B.J. 469, 469 (2015) (“The courts have precedent in reviewing motions to stay litigation pending the reexamination procedure; however, the newly enacted statutory limitations have made this issue ripe for judicial review.”).

104. *Id.* at 473 (citing *Universal Elecs., Inc. v. Universal Remote Control, Inc.*, 943 F. Supp. 2d 1028, 1030–33 (C.D. Cal. 2013)); see also 35 U.S.C. § 311(b) and accompanying text.

105. Leahy-Smith America Invents Act, Pub. L. No. 112-29, § 18(b)(1), 125 Stat. 284.

106. Leahy-Smith America Invents Act, Pub. L. No. 112-29, § 18(b)(2), 125 Stat. 331.

107. *Id.*

108. *VirtualAgility Inc. v. Salesforce.com, Inc.*, 759 F.3d 1307, 1309–10, 1320 (Fed. Cir. 2014).

66 BERKELEY TECHNOLOGY LAW JOURNAL [Vol. 31:1]

provisions, and a codified stay provision likely make CBM review even more attractive than IPR.

II. AGENCY OR COURT: STRATEGIC CHOICES

To describe more fully how these doctrinal frameworks operate in practice, we offer here the largest-scale empirical study to date of ex post administrative scrutiny of patent validity. Our analysis is based on a new dataset of all IPR and CBM petitions filed in the USPTO since the creation of these procedures under the AIA, as well as data on Article III patent cases filed contemporaneously with IPR and CBM petitions, and on requests for litigation stays pending the outcome of administrative challenges to patent validity. Our findings provide a comprehensive view of ex post administrative review that assimilates the more localized findings of prior empirical studies.¹⁰⁹ We begin with the individual patent as our basic unit of analysis and further explore patent-petitioner pairs and other details. Unless otherwise specified, our time period is from September 16, 2012 through June 30, 2015.

Our analysis can be replicated using data from the DocketNavigator service, which provides free and low-cost access to coded metadata about patent cases in the U.S. federal courts as well as the PTAB.¹¹⁰ Like LexMachina¹¹¹ and other widely used patent litigation data services, DocketNavigator obtains its underlying **litigation data from the federal judiciary's Public Access to Court Electronic Records (PACER) service**,¹¹² which is the principal data source of many innovation studies.¹¹³ Neither PACER nor the

109. *E.g.*, Love & Ambwani, *supra* note 3.

110. DOCKETNAVIGATOR, <http://home.docketnavigator.com/ourstory> [<http://perma.cc/B4AP-SB4M>].

111. LEXMACHINA, <https://lexmachina.com/what-we-do/how-it-works> [<http://perma.cc/WA5J-UEDV>].

112. PACER, <http://www.pacer.gov> [<http://perma.cc/YP39-UJZ3>]; *see* Judy L. Heier, *Researching Patent Litigation Made Easy*, RECORDER (May 13, 2013), <http://home.docketnavigator.com/wp-content/uploads/2013/08/The-Recorder-Article.pdf> [<http://perma.cc/3ERK-XS3T>] (stating that DocketNavigator obtains litigation data from PACER).

113. *E.g.*, John R. Allison, Mark A. Lemley & David L. Schwartz, *Understanding the Realities of Modern Patent Litigation*, 92 TEX. L. REV. 1769, 1772 (2014) (identifying Lex Machina, which obtains and cleans original PACER information, as the data source); Christopher A. Cotropia & Mark A. Lemley, *Copying in Patent Law*, 87 N.C. L. REV. 1421, 1440–41 (2009) (identifying PACER as the data source); Jay P. Kesan & Gwendolyn G. Ball, *How Are Patent Cases*

commercial services that rely on it permit researchers to disclose significant portions of their database. Accordingly, we describe the DocketNavigator data we used with the understanding that other researchers can readily access it to replicate our study.¹¹⁴

A. LITIGANT BEHAVIOR

Like the administrative ex post validity challenge mechanisms that preceded the AIA, the IPR and CBM review procedures were established to provide more affordable, more expert, and more accessible adjudication than litigation. However, what would-be patent challengers regard as barriers¹¹⁵ to contesting validity, are safeguards from the perspective of patent owners. We are quite interested, therefore, in discovering whether and under what circumstances IPR and CBM reviews are serving as defensive tools for defendants previously charged in district court with infringement; as tools for preemptive attacks upon patent owners; as mechanisms for harassment and abuse; or as a mix of these functions.

In general, we show that most patents challenged in the PTAB are also challenged in Article III litigation. However, there is no clear relationship between the number of times a patent is challenged in the PTAB and the numbers of times it is asserted in district court. Additionally, while Chemical patents are disproportionately likely to be the subject of a PTAB-only challenge, Computers and Communications (CCM) patents are disproportionately *unlikely* to be challenged only in the PTAB.

We also studied behavior at the level of the individual petitioner. For both CBM reviews and IPRs, the standard substitution model describes the majority of cases. Notably, however, in the context of IPRs, the percentage of petitioners who fall outside the standard model because they have not *themselves* previously been sued on the

Resolved? An Empirical Examination of the Adjudication and Settlement of Patent Disputes, 84 WASH. U. L. REV. 237, 266 (2006) (identifying PACER as the data source).

114. *See infra* Appendix A.

115. Such barriers include, for example, potential estoppel in the federal courts from initiating an administrative validity challenge in the USPTO. *Supra* Section I.C.3. More generally, as discussed in detail in Part II, patent challengers face a significant collective action problem. *See* Thomas, *supra* note 37, at 333 (noting that third parties to a successful validity challenge “may readily free ride from the efforts of the former patentee and the opponent, employing the teachings of the invalidated patent to practice the invention without compensation to anyone”).

68 BERKELEY TECHNOLOGY LAW JOURNAL [Vol. 31:1

patent in question is surprisingly substantial, on the order of 30 percent. This percentage is particularly high with respect to Drugs and Medical patents. Also notable is the extent to which petitioners that have not previously been sued join the same petitions as those that have been sued. In the case of Drugs and Medical patents, for example, petitioners that have not previously been defendants disproportionately appear to be engaged in collective action with those that are defendants.

1. IPR and CBM Petitions: Descriptive Statistics**a) IPR Petitions**

Through the end of June 2015, petitioners have filed 3,157 petitions for *inter partes* review. As Figure 1 shows, 116 these filings began slowly in September 2012, when the IPR procedure became available, and have risen from twenty petitions per month to roughly 140 petitions per month.

These petitions have been distributed unevenly across technology areas. The National Bureau of Economic Research (NBER) categorizes patents into six different technology areas: (1) Chemical (excluding Drugs); (2) Computers and Communications (CCM); (3) Drugs and Medical; (4) Electrical and Electronics; (5) Mechanical; and (6) Others.¹¹⁷ As Figure 2 shows, IPR petitions disaggregated by NBER's six-part category scheme have predominantly challenged CCM-related patents, which account for just over half (50.4%) of all IPR petitions. Figure 3 confirms this trend has persisted from the start, with cumulative filings in CCM-related IPR petitions rising considerably faster than those in all other technology areas.

Although IPR petitions may challenge patent claims as to either novelty or nonobviousness, nonobviousness challenges predominate across all major technology areas. As Figure 4 shows, nearly all IPR petitions include a nonobviousness challenge, whereas the proportion of IPR petitions that include a novelty challenge varies considerably by technology. The preference for including

116. Figures are presented in Appendix B

117. *See generally* Bronwyn H. Hall, Adam B. Jaffe & Manuel Trajtenberg, *The NBER Patent Citations Data File: Lessons, Insights and Methodological Tools* 13 (Nat'l Bureau of Econ. Research, Working Paper No. 8498, 2001), <http://www.nber.org/patents> [<http://perma.cc/NY76-VHVV>] (articulating and defining the NBER classification system and its concordance with the U.S. Patent Classification system).

nonobviousness as a basis for challenge is not surprising. While a novelty-based challenge must rest on a single reference, a nonobviousness-based challenge can presumably take advantage of the ability of PTAB judges to engage in complex reasoning that combines multiple references.¹¹⁸

b) CBM Petitions

Compared to IPR petitions, usage of the CBM procedure has been considerably smaller in scale. Through the end of May 2015, petitioners have filed 362 petitions for CBM review. As Figure 5 shows, these filings have averaged between ten and fifteen petitions per month. Moreover, because CBM proceedings are oriented by definition toward business-method-related technologies such as information and communications, it is unsurprising that an overwhelming majority (82.2%) of CBM petitions challenge Computers and Communications-related patents. Mechanical-related patents make up another 15.9% of CBM petitions, and only a negligible share of CBM petitions fall in any other category. Figure 6 illustrates these trends.

Unlike IPR petitions, CBM petitions may challenge patent claims on a fuller range of patentability requirements: in addition to novelty and nonobviousness, subject-matter eligibility, enablement, written description, and indefiniteness are available grounds. Across this range of options, however, petitioners have focused their attention primarily on subject-matter eligibility and nonobviousness. As Figure 7 shows, 68.6% of CBM petitions challenged the subject-matter eligibility of the patent in dispute, and 71.1% challenged the nonobviousness of the patent. Just under half (48.3%) challenged novelty. By contrast, challenges as to enablement, written description, and indefiniteness each arose in fewer than 20% of petitions.

As with IPR petitions, the relative preference for nonobviousness challenges over novelty challenges in CBM petitions is rational given the greater availability of combining prior art references in evaluating nonobviousness. In addition, the strong preference for

118. John Schroeder, *First Ever Inter Partes Review Decision Finds Claims Not Patentable*, LEXOLOGY (Nov. 25, 2013), <http://www.lexology.com/library/detail.aspx?g=d699d660-d5da-4953-af0f-a88e3d3152d2> [perma.cc/CW4C-DGK6] (noting “the general consensus that *inter partes* review may yield better results [than juries in district court litigation] when relying on complex invalidity arguments hinging on a combination of prior art references”).

subject-matter eligibility challenges is consistent with the widespread view among critics of business method patents that such patents are not just narrowly problematic for inadequate disclosure in the patent specification or lack clarity in the claims—problems that are more the purview of enablement, written description, and indefiniteness—but instead are outside the scope of what should be eligible for patent protection in the first place.¹¹⁹

Beyond these basic PTAB filing trends, we find that a number of patents have been targets of serial challenges spread across both multiple petitions and multiple challengers in IPR petitions. Patents in the Chemical, CCM, and Electrical areas are particularly prone to multiple petitions. As Figure 8 shows, a majority of patents in each of these fields were the subject of multiple IPR petitions: 60.6% of Chemical patents, 50.9% of CCM patents, and 58.4% of Electrical patents. Figure 9 shows how these serial challenges are distributed within technology categories, notably that the highest volume of serial challenges is in the CCM area. We are currently studying the precise nature of these serial challenges (for example, whether they are being brought by the same petitioner) to determine whether they could represent harassment and therefore are problematic from a

119. This view was held by Senators Schumer and Kyl, who proposed a version of the CBM provision as part of a floor managers' amendment on March 1, 2011. In his March 2011 Senate floor testimony, Senator Schumer described business method patents as “the bane of the patent world” and castigated the decision the Federal Circuit in *State Street Bank* to allow such patents. 157 CONG. REC. S1363 (March 8, 2011) (statement of Senator Schumer). Among many Senators on the Republican side, positions were equally strong. The Senate Republican Policy Committee's summary of § 18, introduced into the Congressional Record by Senator Kyl, stated (somewhat inaccurately):

Recent court decisions, culminating in last year Supreme Court decision in *Bilski v. Kappos*, have sharply pulled back on the patenting of business methods, emphasizing that these “inventions” are too abstract to be patentable. In the intervening years, however, PTO was obliged to issue a large number of business-method patents, many or possibly all of which are no longer valid. The Schumer proceeding offers a relatively cheap alternative to civil litigation for challenging these patents, and will reduce the burden on the courts of dealing with the backwash of invalid business-method patents.

157 CONG. REC. S1367 (Mar. 8, 2011) (statement of Sen. Kyl); *see also* eBay Inc. v. MercExchange, L.L.C., 547 U.S. 388, 396–97 (2006) (Kennedy, J., concurring) (emphasizing the “nature of the patent” as a newly relevant consideration in enforcement and accusing business method patents in particular of “potential vagueness and suspect validity”).

policy perspective. The frequency of serial challenge to a patent may also be related to the number of defendants against whom the patent is asserted in court.

We turn next to the general question of the relationship between patent challenges at the PTAB and patent litigation in the district courts.

2. Article III Litigation

Contemporaneous with petitions for IPR and CBM review in the USPTO, patent litigation in the federal courts has continued apace. To investigate the interaction between these two fora, we collected data on all 24,162 patent cases filed between September 16, 2011, and June 30, 2015, in the federal district courts.¹²⁰

Many of these cases involved multiple patents-in-suit, and we observed a total of 47,764 patent assertions across these cases,¹²¹ or an average of 1.98 assertions per patent case. Figure 10 shows the trend in patent cases over this period rising from 150 case filings per month in September 2011 to an average of over 500 case filings per month by June 2015. These petitions have also been distributed unevenly across technology areas. Figure 11 shows that patent cases have predominantly involved CCM-related patents, which far outpace all other technology areas, and that this trend has persisted from the start, with cumulative filings in CCM-related patent cases rising considerably faster than in all other technology areas.¹²²

During this time, a total of 14,218 patents were either challenged in an IPR or CBM petition, asserted in litigation, or both. A subset of

120. We chose September 16, 2011 as our starting date for district court litigation because it represents the first date on which patents asserted in litigation could become the subject of a PTAB filing. Consistent with our interest in examining the interaction between assertion by patent owners and PTAB petitions, we excluded declaratory judgment actions. In any event, as discussed in the text, the AIA essentially makes declaratory judgment actions unavailable to those who file PTAB petitions. *See supra* Part I.

121. Though the data that we collected include cases where design and plant patents were asserted (either exclusively or together with utility patents), we focus our analysis on utility patents.

122. Because district court cases can (and frequently do) involve multiple-patents in a single suit—unlike IPR or CBM petitions, which are necessarily limited to a single patent—we **calculate technology trends by aggregating a technology's** relative share among the patents that were asserted in each case. For example, a patent case involving three CCM patents and two Electrical patents would have been counted as 0.6 of a CCM case and 0.4 of an Electrical case.

11,787 patents were involved in litigation alone; 324 patents were involved in a USPTO proceeding alone; and 2,107 patents were involved in both. Accordingly, about 15.2% of litigated patents are also being challenged in the PTAB,¹²³ and about 86.7% of IPR- or CBM-challenged patents are also being litigated in the federal courts.¹²⁴

These measures suggest validity challenges in the USPTO are, indeed, connected with the threat or fact of infringement litigation, for a large majority of challenged patents are also asserted in court. Indeed, our measures may *understate* the connection between Article III litigation and assertion at the PTAB. According to Lex Machina analytics, of the patent cases filed in the U.S. district courts during the time period that we studied, 70.2% were likely settled. Moreover, three-quarters of those likely settlements occurred within 9.9 months. This pattern of likely settlement may have been prompted, at least in part, by a defendant's threat to file a challenge at the PTAB. In addition, typically only 10% of patent lawsuits reach the stage at which they would receive a claim construction ruling. This 10% figure is in line with our finding that 15.2% of litigated patents are being challenged in the PTAB. It is worth noting that a patent challenged at the PTAB would receive an early claim construction at the institution stage in the IPR/CBM process. That said, we do not imply that the same 10% of patent cases that reach the claim construction stage in district court are also the same patents that are the subject of a challenge at the PTAB.

Our data indicate that patents challenged in the PTAB are, on average, also asserted at least three times in court. As Figure 12 indicates, however, this average reflects considerable variation (as shown by the error bars representing one standard deviation of the mean). At least when the group of patents involved in IPR and CBM proceedings is considered as a whole—that is, without disaggregation by technology and district court—the relationship between the number of IPR or CBM petitions that were filed on a patent and the number of times that the patent was asserted in district court is not monotonic. Finally, of course, most patents asserted in district court are not challenged at the PTAB.

123. This is calculated as $2107 / (2107 + 11787) = 15.2\%$.

124. This is calculated as $2107 / (2107 + 324) = 86.7\%$.

To further investigate the relationship between PTAB challenges and Article III assertions, we evaluated a series of measures constructed from the underlying data.

a) IPR and CBM Reviews with Litigation in the Offing

In light of the intended uses of IPR and CBM review as substitutes for federal court litigation, notably, in a number of cases, a given patent was challenged in a PTAB petition *before* that patent was asserted in litigation. This is a relatively rare occurrence. As of June 30, 2015, 2107 patents have been the subjects of both a PTAB challenge (either in IPR or CBM) and of district court litigation. Only fifty-eight of these patents (2.75%) were challenged in district court litigation simultaneously with or after the first PTAB challenge, rather than before.

Their small number notwithstanding, these cases arguably represent a challenge to the standard model of a PTAB challenge as a substitute for ongoing litigation. However, a relatively small variation to that standard model could encompass the case where litigation was actually imminent. In other words, in these circumstances the filing of a petition in the PTAB was similar to a declaratory judgment action. That is, indeed, what we find. Of the fifty-eight patents that were challenged in the PTAB before any litigation, forty-seven patents (81.0%) were challenged by petitioners who were subsequently named as defendants in federal court litigation over the same patents.

b) IPR and CBM Reviews with No Related Litigation

Another phenomenon that must be reconciled with the standard model is that some patents are challenged in the PTAB but have not been observed in litigation at all, either before or after the petition for IPR or CBM review. Though a PTAB validity challenge is a reasonable substitute for litigation that has already begun or is imminent, it may be a potentially counterproductive approach for anyone else:¹²⁵ particularly in the case of an IPR (where, as

125. For example, the filing fees for IPR are \$9,000 at the petition stage and \$14,000 at the post-institution stage. 37 C.F.R. § 42.15(a). The filing fees for CBM review are even higher: \$12,000 at the petition stage and \$18,000 at the post-institution stage. 37 C.F.R. § 42.15(b). Contemporaneous estimates of average attorney costs were over \$130,000. Olga Berson, *Challenging Patent Validity Under the AIA: Strategic and Tactical Considerations When Deciding Whether to Pursue Ex parte Reexamination or Inter Partes Review As Part of the Overall Litigation Strategy*, 2012 WL 6636452, *12 (2012).

contrasted with the CBM review, the petitioner does not have to be charged in any way with infringement), such a challenger might simply raise unwanted attention to its potentially infringing activities. Indeed, IPRs or CBM reviews with no related litigation are a somewhat rare occurrence. As of June 30, 2015, only 324 patents (13.3% of all patents challenged in the PTAB) have been challenged in the PTAB with no related litigation observed in the federal courts. But even the existence of such a subset might be considered peculiar.

There are several potential reasons for this unexpected subset. One is statistical censoring: the PTAB challenges are simply so recent that the patent owner has not filed responsive litigation yet, but may do so in the relatively near term. Censoring, however, does not **appear to explain the subset fully. Petitions on such “PTAB-only”** patents have been filed from the earliest days of IPR and CBM review in September 2012. Of the 324 patents challenged in the PTAB with no related litigation, 163 (50.3%) had been challenged in petitions filed more than one year before June 30, 2015 – that is, in or before June 2014. In other words, many of the patent owners have had ample time to bring infringement actions against the petitioners who filed for IPR or CBM review and have not yet done so. So it is still possible, but increasingly unlikely, that a patent owner who has not asserted a patent against an IPR or CBM challenger will do so now.

A second possible reason for this phenomenon is statistical selection, including technology-specific selection: where a PTAB **validity challenge is sufficiently strong, and a patent owner’s** countervailing infringement claim against the PTAB challenger is sufficiently weak, an invalidity challenge might arise without any corresponding infringement assertion. This kind of selection effect, however, would require that both parties have information *ex ante* about the **relative merits of each other’s case, i.e., about the** boundaries and legal viability of the patent in dispute, that is both adequate and roughly symmetric. Such *ex ante* clarity may be possible for Chemical and Drugs and Medical patents, where technical nomenclature is standardized and the boundaries of the invention are amenable to delineation.¹²⁶ *Ex ante* clarity may even be possible for Electrical and Mechanical patents if the patent discloses sufficiently detailed structural information. However, patents on

126. Peter S. Menell & Michael J. Meurer, *Notice Failure and Notice Externalities*, 5 J. LEGAL ANALYSIS 1, 36 (2013). Indeed, in the case of certain drugs (so-called small molecule drugs), patents asserted to cover the drug are specifically on the FDA “Orange Book.”

CCM inventions that are claimed in functional terms would be much less likely to provide enough ex ante clarity that a PTAB challenge would be so plainly strong, and a retaliatory infringement suit so plainly weak, as to produce an IPR or CBM review with no litigation in response.

Additionally, in at least some technology areas, the number of **patents that are clearly “important” as a matter of potential litigation risk** may be relatively small and easy to identify. Particularly in the context of IPRs (which can be filed even without any assertion of infringement on the part of the patentee), the high volume of CCM-related patents may make it unclear which patents are most important.

The data are consistent with technology-specific selection effects across the three subsets of (1) patents that were only challenged in the PTAB, (2) patents that were only asserted in litigation, and (3) patents that were both challenged in the PTAB and asserted in litigation as summarized in Figure 13. Comparing PTAB-only patents with district court-only patents, the technology distributions were mostly similar. In both subsets, CCM patents accounted for about a third (32.8% and 37.1%, respectively); Drugs and Medical patents about a fifth (20.6% and 19.7%, respectively); Electrical patents a little less than a seventh (13.9% and 11.3%, respectively); and Mechanical patents a little more than a tenth (11.5% and 10.1%, respectively).¹²⁷ Only Chemical patents occupied a significantly greater share of PTAB-only patents (12.5%) than of district court-only patents (4.9%).¹²⁸

The most notable difference was for patents that were both challenged in the PTAB and asserted in district court. A majority of these PTAB-and-district-court patents (54.7%) were in the CCM technology area, as compared with 32.8% of PTAB-only patents.¹²⁹ This underrepresentation of CCM patents in the PTAB-only group is consistent with the expected lower likelihood that CCM patents offer enough ex ante clarity and evidence of importance to produce PTAB challenges in situations where there is no federal court litigation.

127. These differences were not statistically significant ($p > 0.05$ using a two-tailed test of proportions).

128. **Conversely, “Other” patents occupied a greater share** of district court-only patents (16.9%) than of PTAB-only patents (8.8%).

129. This difference was highly statistically significant ($p < 0.0001$ using a two-tailed test of proportions).

Having considered the special cases of PTAB validity challenges that either precede a district court litigation or have no related litigation at all, we now turn to the standard model of PTAB validity challenge as a direct response by a defendant in prior infringement litigation.

c) CBM and IPR Challenges As Direct Self Interest

As we have discussed, a defendant that challenges a patent's validity in the USPTO *after* the patent has been asserted in litigation is the **standard use of CBM and IPR petitions. The USPTO's expertise** substitutes for the generalist orientation of the courts. We find that, overall, CBM and IPR petitions are in fact predominantly assertions **of the petitioners' own direct interests with respect to** infringement liability on the particular patent being challenged.

In the majority of cases, petitioners for CBM review have previously been defendants in federal court litigation where the same patent was asserted. Two related measures support this finding. One is the share of CBM *petitioners* (77.9%) who have previously been defendants in district court litigations involving the patents they later challenge in CBM review. The other is the share of CBM *petitions* (82.7%) in which at least one petitioner was previously a defendant as to the patent now being challenged. These results are perhaps unsurprising, as CBM petitions can only be brought by those sued for, or charged with, infringement. Additionally, though it is not particularly meaningful to speak of technology differences among CBM petitions,¹³⁰ Figures 14a and 14b show that the finding also persists for each NBER technology category.

Similarly, in the case of IPRs, the majority (70%) of IPR petitioners have previously been defendants in district court litigations involving the patents they now challenge. The remaining 30% of cases in which petitioners are not prior defendants do, however, represent an interesting puzzle, particularly if one looks across technologies, and also at the percentage of petitions in which at least one petitioner was previously a defendant. We turn next to this puzzle.

130. This is because the availability of CBM review is defined, and limited, by technology, and as a result, CCM patents have accounted for 82.2% of all CBM Petitions, with 15.9% coming from Mechanical patents and 1.9% from Other patents. *See infra* Figure 6.

d) IPR Challenges by Entities That Were Not Prior Defendants

As Figure 15a shows, the percentage of IPR petitioners who were not prior defendants varies substantially across technologies. Notably, because only about 48% of petitioners in the Drugs and Medical area have previously been sued, over half of all petitioners in this technology are non-standard. In some cases, generic firms may be filing even prior to being sued in order to clear the path toward eventual entry into the market. In other cases, we know from reading IPR petitions to identify petitioners that third parties have been active. One active third party is J. Kyle Bass, the principal of Hayman Capital Management and of the Coalition for Affordable Drugs, who, as of June 30, 2015, had filed at least twenty-eight petitions.¹³¹ Another is Erich Spangenberg, the chief executive of the IP Navigation Group and of nXn Partners, who is a co-petitioner on those twenty-eight petitions.¹³² Both Mr. Bass and Mr. Spangenberg have thus far focused their validity challenges entirely on Drugs and Medical-related patents.

Figures 15a and 15b also reveal substantial disparities in certain technology areas between the share of *petitioners* who were previously sued and the share of IPR *petitions* with at least one petitioner who was previously a defendant on the challenged patent. Specifically, the petitioner vs. petition disparities are quite substantial in the categories of Drugs and Medical (48.5% vs. 70.8%), Mechanical (53.1% vs. 70.2%), and Other (65.5% vs. 82.6%). The disparities reveal that, in each of these technology areas, petitioners who are not prior defendants are joining petitions filed by prior defendants.

Arguably, this collective action is socially beneficial, as it directly addresses the general collective action problem in challenging invalid patents.¹³³ However, to the extent collective action takes the form of serial petitions that are joined later to the petition of a prior

131. Joseph Walker & Rob Copeland, *New Hedge Fund Strategy: Dispute the Patent, Short the Stock*, WALL ST. J., Apr. 7, 2015, <http://www.wsj.com/articles/hedge-fund-manager-kyle-bass-challenges-jazz-pharmaceuticals-patent-1428417408> [<http://perma.cc/X26M-53QM>].

132. David Segal, *Has Patent, Will Sue: An Alert to Corporate America*, N.Y. TIMES, July 13, 2013, <http://www.nytimes.com/2013/07/14/business/has-patent-will-sue-an-alert-to-corporate-america.html> [<http://perma.cc/R2X6-8D49>].

133. *See supra* text accompanying notes 36–38.

78 BERKELEY TECHNOLOGY LAW JOURNAL [Vol. 31:1

defendant, it could be seen as harassment and delay. Currently, our data do not allow us to determine exactly *when* nondefendant petitioners are joining the petitions of defendants. PTO regulations do require, however, that a joinder request be filed no later than one month after the institution date of any *inter partes* review for which joinder is requested.¹³⁴ In ongoing research, we are parsing the joinder data more finely to look at timing and how the regulations are being applied.

In this regard, it bears mention that fostering collective action is the explicit mission of organizations such as Unified Patents, which files patent validity challenges on behalf of its member companies in order to reduce their patent litigation risk.¹³⁵ We expect that, in order to be effective, such member-based organizations would likely file significant numbers of IPR petitions and focus their efforts largely on a single technology area. During the time period of our study, Unified Patents had, for example, has filed at least twenty-four petitions of which seventeen (71%) are against CCM-related patents.

e) Timing Between the Courts and the USPTO

Closely related to the “non-standard” petitioner issue is the question of time lag between Article III assertion and PTAB challenge. Unless the petition includes a request for joinder, a petitioner cannot file an IPR challenge more than a year after it has been sued for infringing a particular patent.¹³⁶ As a result, administrative validity challenges filed more than one year after the last federal court lawsuit prior to a petition are likely to reflect either non-standard petitioners and/or petitioners seeking joinder to earlier petitions.

To investigate these issues further, we measured the time lag between the first IPR petition on a given patent and the federal court litigation on that patent filed *most recently prior* to the first IPR petition. (By definition, the first IPR petition cannot request joinder.) As an additional frame of reference for these results, we calculated the lag between the first IPR petition on a given patent and the *earliest* observed federal court litigation on that patent. The latter measure takes a broad view of how court-agency lags are distributed and is likely to contain a small, but non-trivial, number of instances

134. 37 C.F.R. § 42.122(b).

135. UNIFIED PATENTS INC., <http://www.unifiedpatents.com/faq> [http://perma.cc/K4XC-4Y23].

136. *See* 35 U.S.C. § 315(b).

where the lag is greater than one year. The reason is that, for repeatedly-asserted patents, the first defendant sued need not be the one that mounts a validity challenge in the USPTO.

As Figure 17 shows, quite a few patents fit this latter profile: nearly a quarter of the distribution (23.4%) exceeds the one-year lag from the earliest observed federal court litigation on a given patent, reaching upwards of three years for some patents. Notably, a small share of patents, roughly 3.3%, shows a negative lag indicating the first IPR petition against the patent *preceded* the first federal court assertion of the patent.¹³⁷ For these patents, administrative validity challenges are not defensive in the traditional sense, as no offensive litigation has yet been observed; rather, they are, at most, preemptive. Most IPR petitions, however, fall within the zero-to-one-year range, distributed symmetrically about a median lag of six months, with a modal spike at the one-year deadline.

Meanwhile, measuring from the *last* pre-IPR federal court lawsuit to the first IPR petition is likely to capture not only non-standard petitioners but also cases where earlier lawsuits against **others have revealed useful information about the patent owner's** enforcement strategy so that less time is needed to decide whether and how to prepare an IPR challenge. This is, in fact, what the data reveal in Figure 18. The majority of cases fall again within the zero-to-one-year range, but with a median lag roughly four months less than in Figure 17. A far smaller share of the distribution (11.4%) exceeds one year—presumably this 11.4% comprises non-standard petitioners only. As before, a modal spike near and at a one-year lag indicates that litigants wait for the statutory deadline.

These direct and indirect measures suggest that challenges to patent validity through *inter partes* review are primarily—though not exclusively—a defensive response to existing litigation. In most cases, a prior defendant files an administrative challenge. Other entities, acting on this revealed information, may also respond with petitions for validity review.

We now turn to another aspect of strategic behavior in patent litigation that has previously presented policy concerns: the tendency of patent cases to be filed disproportionately in a few judicial districts, so much so that these districts are now widely identified with patent litigation.

137. As we have discussed, these preemptively-challenged patents may reflect litigation in the offing or else no related litigation. *See supra* Sections III.A.2.a–b.

f) District-Specific Effects

Skewed distribution of patent litigation toward particular high-volume judicial districts and litigant forum-shopping, which not only results from this skew but also contributes to it, are well documented.¹³⁸ It is likely, then, that such leading patent courts should send commensurately greater numbers of patents into PTAB validity challenges as well. Yet in this regard, the data show a surprising effect. Of the eight leading district courts—which together account for nearly 70% of litigated patents during the observed time period—the top three courts were *over*represented in sending patents into PTAB validity challenges, and the remaining five were *under*represented.

Figure 16 depicts the fraction of *all litigated patents* that were litigated at least once in a given court and the fraction of all *IPR-challenged patents* that were litigated at least once in the same court, across the top eight districts for patent litigation. The latter fraction was significantly higher than the former for the District of Delaware (41.1% vs. 34.4%), the Eastern District of Texas (41.4% vs. 28.5%), and the Northern District of California (21.6% vs. 15.2%),¹³⁹ indicating that patents litigated in those districts were unusually likely to be challenged in *inter partes* review. The effect was reversed for the other high-volume patent districts, including the Central District of California (14.1% vs. 16.0%), the District of New Jersey (10.0% vs. 13.0%), and the Northern District of Illinois (4.8% vs. 9.6%).¹⁴⁰

The great disparity we see in the Eastern District of Texas is unsurprising—the court’s strong pro-patentee reputation¹⁴¹ would be expected to drive defendants to a more strategically favorable forum. This effect is likely in spite of the apparently low likelihood of defendants either filing or being granted stays in the Eastern District of Texas.¹⁴² In the cases of the District of Delaware and the Northern

138. *See generally* notes 29–34 and accompanying text.

139. These differences were highly significant ($p < 0.0001$ using a two-tailed test of proportions).

140. These differences were all significant as well ($p < 0.05$ using a two-tailed test of proportions).

141. *See, e.g.*, Vishnubhakat, *supra* note 31, at 65 (discussing the reputation of the Eastern District of Texas for producing pro-patentee outcomes).

142. *PTAB Stay Stats: 2012 to May 31, 2015*, WINSTON & STRAWN LLP, <http://www.winston.com/en/thought-leadership/winston-publishes-stats-on-ptab-stays.html> [<https://perma.cc/3W7H-Y3Q4>].

District of California, the reasons for disproportionately high IPR filings are less clear. Defendants may be encouraged, however, by the high rate of stay grants in these districts.¹⁴³

B. AGENCY DECISIONS

When petitioned, the PTAB must decide whether to institute an IPR or CBM review on the grounds petitioned. If it decides to institute a review, the PTAB must then adjudicate the case on its merits. Decisions on institution and on the merits are interdependent in that the legal standard for instituting an IPR is whether the petitioner is reasonably likely to succeed as to at least one claim, and the legal standard for instituting a CBM review is whether the petitioner is more likely than not to prevail as to at least one claim.¹⁴⁴ Therefore, the rates of institution are particularly important because the very fact of institution is, by statutory design, a credible signal about the ultimate outcome of the validity challenge.

In the case of IPR, an early study that examined petitions filed as of March 31, 2014 found that, of those petitions that had reached an **institution decision by the time of the authors' analysis** in late 2014, 84.0% had been granted as to at least one challenged claim.¹⁴⁵ Our analysis, which runs through June 30, 2015, confirms this point estimate but reveals a slow and consistent decline in the institution rate. Figure 19 compares over time (1) the running total number of IPR petition filings, (2) the running total number of institution decisions, and (3) the running total number of institution decisions granting at least one challenged claim. Calculating the institution rate as (3) divided by (2) over time, Figure 20 shows that the rate has been declining and is currently 74.8%.

The earlier study also found that 74.0% of at-least-partially instituted petitions were fully instituted. Our data conflict on this point. We find that 41.2% of at-least-partially instituted decisions made on petitions filed by March 31, 2014 were fully instituted.¹⁴⁶ As

143. *Id.*

144. *See* 35 U.S.C. § 324(b), *supra* note 91; LEXMACHINA, *supra* note 110, and accompanying text.

145. Love & Ambwani, *supra* note 3, at 100.

146. With respect to petitions filed by March 31, 2014, we observed 851 IPR institution decisions (roughly similar to the 823 in the earlier study) and 699 decisions granting at-least-partial institution (roughly similar to the 691 in the earlier study). These small discrepancies may arise in part because we had the benefit of observing PTAB actions on petitions over a longer time horizon.

82 BERKELEY TECHNOLOGY LAW JOURNAL [Vol. 31:1

of June 30, 2015, 51.4% of at-least-partially instituted petitions were fully instituted, and 38.4% of petitions that received an institution decision were fully instituted. These trends are summarized in Figure 21.

In addition to general institution rates, we also disaggregate institution rates by technology area and by the grounds on which patent validity was challenged. Figure 22 shows the rates at which institutions are granted and denied across technologies for petitions arguing a lack of novelty. Petitions on Drugs and Medical-related patents have a 59.9% likelihood of being denied,¹⁴⁷ and in all other technologies, petitions are as likely as not to be instituted ($p > 0.05$). Figure 23 shows the rates at which institutions are granted and denied across technologies for petitions arguing a lack of nonobviousness. Perhaps not surprisingly, given the ability of expert judges to combine multiple references, nonobviousness petitions are more likely than not to be instituted across all technology areas. Nonobviousness challenges to Chemical patents are particularly likely to be granted, with an institution rate of 68.5%.¹⁴⁸

Meanwhile, for CBM petitions, comparing technology categories is not particularly meaningful, as the definition of covered business method patents in practice overlaps substantially with CCM-related patents. Instead, because CBM review allows the full range of legal grounds on which to challenge validity¹⁴⁹ and because petitioners themselves have availed themselves of these grounds to varying degrees,¹⁵⁰ comparing the rates at which CBM petitions have been instituted with respect to each of these grounds is more meaningful.

Figure 7 previously showed that subject-matter eligibility under § 101, novelty under § 102, and nonobviousness under § 103 were the major grounds on which CBM petitions have been filed whereas the enablement, written description, and definiteness requirements of § 112 have been employed relatively infrequently. Because CBM review arose out of categorical resistance to business methods as

Truncation does not, however, explain our disparate findings on rates of full institution.

147. The differences between respective likelihoods of grant and denial are highly significant ($p < 0.001$ using a two-tailed test of proportions).

148. The differences between respective likelihoods of grant and denial are significant ($p < 0.05$) for Mechanical-related petitions, and highly significant for all other technologies ($p < 0.005$). Comparisons use a two-tailed test of proportions.

149. *See* 35 U.S.C. § 315(a)(2); Frontz, *supra* note 103; *supra* note 108.

150. *See infra* Figure 7.

patent-eligible subject matter, and inception of CBM review coincided with Supreme Court decisions substantially strengthening patent eligibility requirements, we expected that subject-matter challenges would be the most fertile ground for decisions to institute CBM petitions. We expected that the remaining grounds would be likely to garner fewer PTAB institutions, though in the particular case of nonobviousness, the higher standard imposed by the Supreme Court's 2007 decision in *KSR Int'l Co. v. Teleflex Inc.*¹⁵¹ might have an impact.

Figure 24 confirms our hypothesis that subject matter eligibility would dominate the CBM procedure. Subject matter eligibility-based CBM petitions are overwhelmingly instituted, at a rate of 70.9%.¹⁵² For all other grounds, decisions *not to institute* predominate by large margins: challenges based on novelty were denied at a rate of 59.3%; nonobviousness, 56.9%; enablement, 100%; written description, 71.7%; and definiteness, 64.7%.¹⁵³

C. COURT DECISIONS

While the USPTO evaluates and decides invalidity petitions, federal courts must decide how to manage ongoing patent infringement litigation on which these validity challenges can have considerable impact. The most frequent decision for courts is when to issue a stay. The ability of defendants to obtain litigation stays pending the outcome of validity challenges is a powerful strategic consideration in managing both the immediate cost of litigation and the eventual threat of liability. Conversely, the tendency of courts to grant such stays is a powerful strategic consideration for patent owners to enforce their rights effectively and deflect potential harassment and abuse by challengers.

Table 1. Results of Motions to Stay Pending *Inter Partes* Review

<i>Inter Partes</i> Review	Fully Denied	Denied without prejudice	Denied in part granted in part	Granted
Motion to Stay Pending <i>Inter Partes</i> Review	67	47	22	113

151. 550 U.S. 398 (2007).

152. The difference between likelihoods of grant and denial is highly significant ($p < 0.0001$ using a two-tailed test of proportions).

153. The differences between likelihoods of grant and denial were all significant ($p < 0.05$) and in many cases highly significant ($p < 0.005$) using a two-tailed test of proportions.

84 BERKELEY TECHNOLOGY LAW JOURNAL [Vol. 31:1

Renewed Motion to Stay Pending <i>Inter Partes</i> Review	2	0	2	11
Stipulated/Agreed Motion to Stay Pending <i>Inter Partes</i> Review	0	2	2	1
Sua Sponte Motion to Stay Pending <i>Inter Partes</i> Review	0	0	0	1
Subtotal	69	49	26	126
Share	25.6%	18.2%	9.63%	46.7%

Table 2. Results of Motions to Stay Pending Covered Business Method Review

CBM Review	Denied	Denied without prejudice	Denied in part granted in part	Granted
Motion to Stay Pending CBM Review	12	7	9	26
Renewed Motion to Stay Pending CBM Review	1	0	0	7
Sua Sponte Motion to Stay Pending CBM Review	0	0	0	1
Subtotal	13	7	9	34
Share	20.6%	11.1%	14.3%	54.0%

Tables 1 and 2 provide basic statistics regarding motions for stays pending IPR and CBM proceedings, as well as federal court adjudications of such motions. As the statistics indicate, full denials of motions to stay (as contrasted to the combined total of “denials without prejudice,” partial grants, and grants) are relatively rare, particularly in the context of CBM reviews.

III. DISCUSSION

Our analysis yields several “top-line” findings regarding strategic choices by parties in PTAB proceedings. Most patents challenged at the PTAB are also in Article III litigation—PTAB petitions on patents that are not being litigated by any entity in an Article III court are relatively rare. Moreover, the standard substitution model – wherein a petitioner files a patent challenge at the PTAB after it has been sued on that patent in district court is operative not only in the CBM context but also in the majority (70%) of PTAB IPR cases. The high

prevalence of standard substitution has clear implications for how the PTAB should conduct claim construction. In those cases where a patent claim is upheld by the PTAB, a claim construction standard that parallels that of the district court would increase efficiency, as the district court could rely on the PTAB claim construction in any subsequent proceedings.¹⁵⁴ Our findings on substitution are thus directly relevant to the claim construction dispute currently being litigated at the Supreme Court in *Cuozzo Speed Technologies v. Lee*.

If there is no Article III litigation, CCM patents are *particularly* unlikely to be challenged at the PTAB. In this area of technology, district court assertion may be necessary to force parties to overcome several technology-specific barriers to a petition. These barriers may include an absence of clarity regarding the merits of a validity challenge created by lack of boundary notice, as well as informational hurdles created by the sheer volume of CCM patents.

Just as Article III litigation disproportionately accompanies PTAB petitions on CCM patents, IPR petitions in the CCM field appear to be brought largely by the same entities that are defendants in Article III litigation. Both the share of CCM petitions involving at least one prior Article III defendant (81.5%) and the share of CCM petitioners who are themselves prior defendants (76.3%) are quite high. This result suggests that non-standard petitioners are, at least thus far, playing a relatively modest role in IPR petitions brought against CCM patents. Thus, to the extent we see a substantial amount of serial petitioning in the CCM area, this is being generated by prior defendants.

The most significant role for non-standard petitioners is in the Drugs and Medical area. For Drugs and Medical-related challenges, previously sued defendants make up only a minority of petitioners (48.5%). Non-standard petitioners also appear to be engaging in

154. Indeed, if the claim construction standards used by the PTAB and the district court were the same, and the parties involved in the two fora were the same, the doctrine of issue preclusion might *mandate* district court reliance upon the prior PTAB claim construction. In *B&B Hardware, Inc. v. Hargis*, 135 S.Ct. 1293 (2015), the Supreme Court recently held that issue preclusion applied when the same parties were **litigating in district court a “likelihood of confusion” issue that had previously been decided at the USPTO’s Trademark Trial and Appeal Board**. Identical claim construction standards could also mean that if the district court had issued a claim construction prior to the PTAB, the PTAB could rely on the district court construction. As a practical matter, however, because of the time that generally elapses before district court claim construction, and because PTAB claim construction occurs at the time of the institution decision, district court claim construction is unlikely to precede claim construction by the PTAB.

86 BERKELEY TECHNOLOGY LAW JOURNAL [Vol. 31:1

significant collective action with standard petitioners. A substantial majority (70.8%) of petitions in this area contains at least one petitioner who has previously been sued. Litigation defendants in the Drugs and Medical field are clearly bringing aboard entities that have not yet been sued. In order to address policy implications (e.g., whether it is socially beneficial collective action or possible harassment), we are currently investigating the important policy question of precisely *when* these other entities are getting on board.

In addition to technology-specific effects, we see district-specific effects. To a statistically significant degree, patents litigated in the “**top three**” district courts—the Eastern District of Texas, the District of Delaware, and the Northern District of California—are more likely to be the subject of an IPR than patents litigated in other districts. The statistically and numerically significant results for the Eastern District of Texas are unsurprising. Whether or not judges in the Eastern District grant stays for ongoing litigation (and the available data suggest defendants are less likely to seek or be granted stays than in other districts), the Eastern District’s “**pro-plaintiff**” reputation makes filing a PTAB petition an obvious choice for any defendant. In the case of Delaware and the Northern District of California, the reasons for disproportionately high IPR filings are less clear. Defendants in those districts may be encouraged, however, by the high rate of stay grants in these districts.

Agency decision-making also exhibits some interesting patterns. Perhaps because high early rates of institution spurred petitioners to challenge somewhat stronger patents, the overall institution rate has decreased over time. Agency decision-making also exhibits differential patterns across technology: specifically, IPR institution rates are significantly higher for CCM patents than for Drug and Medical patents. Meanwhile, nonobviousness represents a stronger ground for securing a favorable institution decision on an IPR than novelty. As for CBM reviews, § 101 is clearly the best route for challengers.

In current ongoing work, we are investigating both more intensively and more formally the interrelated questions of collective action and potential harassment. Specifically, we are investigating the precise nature and timing of the collective action undertaken both by petitioners that are prior defendants and those that are not prior defendants. We are also interested in whether non-defendant petitioners do in fact become defendants at a later point in time. Additionally, we are developing regression models that assess,

conditional on assertion in litigation, what factors influence the likelihood and frequency of a patent being challenged at the PTAB.

IV. CONCLUSION

Our data indicate that PTAB petitions on patents that are not being litigated by *any* entity in an Article III court are relatively rare, particularly in the CCM area. Additionally, the “standard model” of prior district court defendants bringing PTAB petitions on the patents asserted against them in district court explains 70% of IPR cases and an even greater percentage of CBM cases.

Given the dominance of prior federal district court litigation involving the same parties in patents challenged through IPRs and CBMs, **the PTAB’s approach** to claim construction should be one upon which district courts can rely in subsequent proceedings. With identical standards, district courts will be able to reap significant efficiency gains from PTAB claim construction decisions.

That said, a significant minority of IPRs are being brought by entities that were not prior defendants in lawsuits over the patents that they are now challenging. Non-standard petitioners are particularly prevalent in the Drugs and Medical area. In ongoing research, we are examining the precise role of these non-standard petitioners to examine whether they are engaging in beneficial collective action or in non-beneficial harassment.

Finally, at least thus far, the relative reluctance of the Eastern District of Texas to grant stays does not appear to have impeded **entities’ disproportionate desire to seek IPRs for patents asserted in** the Eastern District. Perhaps more surprisingly, patents asserted in the Northern District of California and in the District of Delaware also see a disproportionate number of IPR petitions.

APPENDIX A: DATA

Our analysis can be replicated using data from DocketNavigator, which provides free and low-cost access to coded metadata about patent cases in the U.S. federal courts and the USPTO Patent Trial and Appeal Board.¹⁵⁵ In this Appendix, we describe the DocketNavigator data with the understanding that other researchers can readily access it to replicate our study.

A. PTAB DATA

DocketNavigator’s search interface allows minimal queries that can yield large result sets. Thus, to obtain all case information on all petitions filed in the PTAB, we used only one search term: “Patent Trial and Appeal Board (PTAB)” for the “Court/Agency” field. Because the total number of PTAB cases in the DocketNavigator database recently passed 4,000 and search results are displayed one hundred at a time, the results are distributed across forty pages. Detailed party information about cases is bulk-downloadable on a page-by-page basis, i.e., each download contains detailed party information about the cases displayed on the given page of results. Similarly, detailed information about the patents involved in the cases is bulk-downloadable on a page-by-page basis as well. Both sets of case information include multiple variables:

Party Information	Patent Information
Case name	Case name
Court abbreviation	Court abbreviation
Case number	Case number
Case filing date	Case filing date
Party name	Patent
Party roles	Patent title
Firm name	Parties
Attorney name	USPTO class codes
	Cooperative patent class codes

Importantly, case-identifying variables appear in both sets of downloads, allowing them to be merged. To construct our data set, we downloaded this detailed party information as well as patent

155. DOCKETNAVIGATOR, <http://www.docketnavigator.com> [<http://perma.cc/QLY4-LJT7>].

information for all PTAB petitions and merged them by PTAB case number. The merged results yielded a comprehensive set of filing, party, and patent information for each IPR and CBM review petition at the PTAB.

In addition to petition data, DocketNavigator provides searchable data on PTAB institution decisions. As the earliest PTAB institution decisions came in December 2012, a date-based search for decisions issued on or after November 1, 2012 (or any similarly early date), returns a set of all decisions. As with petition data, these results are accessible one hundred at a time on a page-by-page basis. To this end, the **“Print Friendly” feature in the search result interface** generates a simple formatted table to copy directly into spreadsheet software. The institution decision data contain the following variables:

Institution Decision Information
Patent number
Case name
Case number
Substantive ground for petition
Institution decision on that ground
Relevant patent claims to which the decision pertains
Order filing date

Finally, DocketNavigator provides searchable data on final determinations by the PTAB. Searching for **“Patent Trial and Appeal Board (PTAB)”** in the **“Court/Agency”** field returns a set of all determinations. These results, too, are accessible one hundred at a time on a page-by-page basis and available in a simple formatted table through the **“Print Friendly” feature in the search result interface**. The final determinations data contain the following variables:

Final Determination Information
Patent number
Case name
Case filing date
Determination
Judge
Order filing date

90 BERKELEY TECHNOLOGY LAW JOURNAL [Vol. 31:1

Because this institution decision data and final determination data also contain case-identifying variables that overlap with the filing, party, and patent data, we readily merged this additional information into our data set as well.

B. DISTRICT COURT DATA

We obtained case information on patent litigations filed in the U.S. district courts with a similarly minimal search query in **DocketNavigator’s primary search interface: “U.S. District Courts (and all districts)” for the “Court/Agency” field. The total number of patent cases in the DocketNavigator database exceeded 55,000 results.** Because IPR petitions are generally time-barred one year from the date when a would-be petitioner has been sued on the same patent in U.S. district court,¹⁵⁶ we determined that a reasonably complete set of federal patent litigation would not need to extend more than one year before the IPR mechanism became available. Therefore, we narrowed our search to cases, other than declaratory judgment cases, filed on or after September 16, 2011, one year prior to the enactment of IPR and CBM review mechanisms in the PTAB.

As with PTAB cases, detailed party and patent information about U.S. district court patent cases is bulk-downloadable on a page-by-page basis. Both sets of case information include multiple variables:

Party Information	Patent Information
Case name	Case name
Court abbreviation	Court abbreviation
Case number	Case number
Case filing date	Case filing date
Party name	Patent
Party roles	Patent title
Firm name	Parties
Attorney name	USPTO class codes
	Cooperative patent class codes

To construct our data set, we downloaded this detailed party and patent information for all relevant patent lawsuits and merged them on the case number, producing a comprehensive set of filing, party, and patent information on each patent lawsuit in the U.S. district courts.

156. 35 U.S.C. § 315(b).

2016]

STRATEGIC DECISION MAKING

91

APPENDIX B: FIGURES

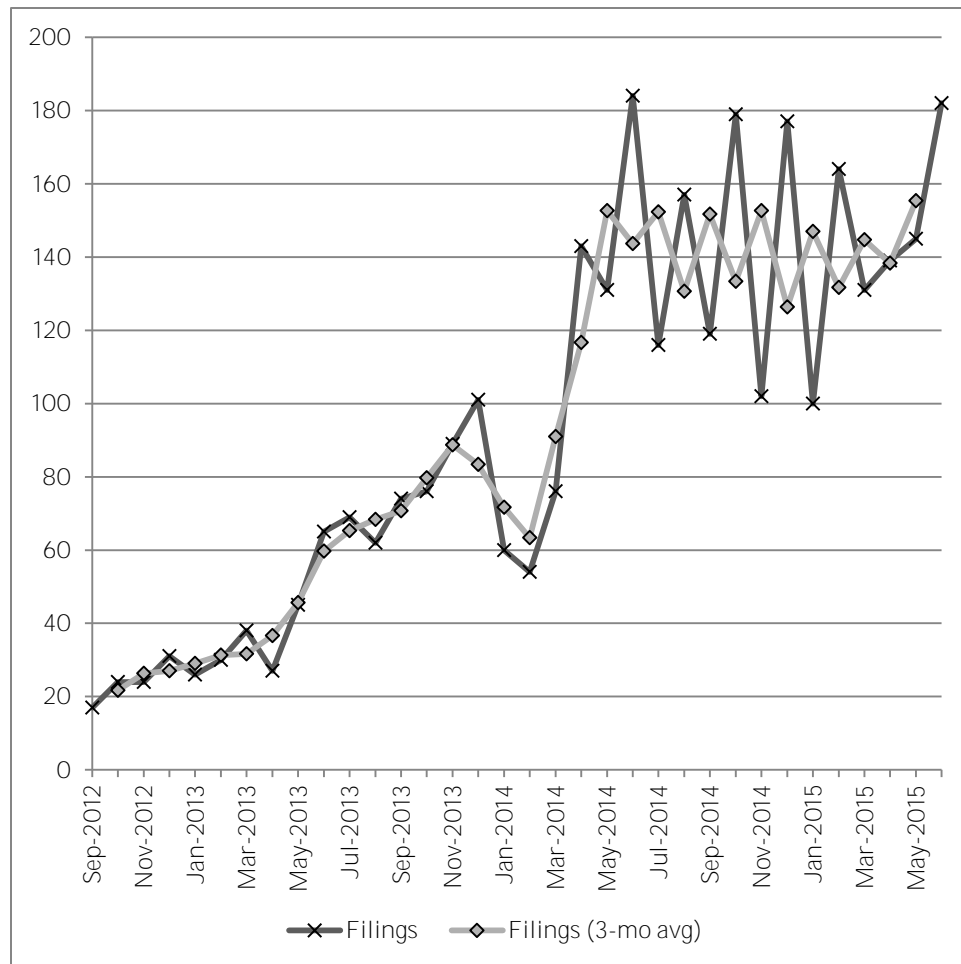


Figure 1: IPR Petition Filings by Month

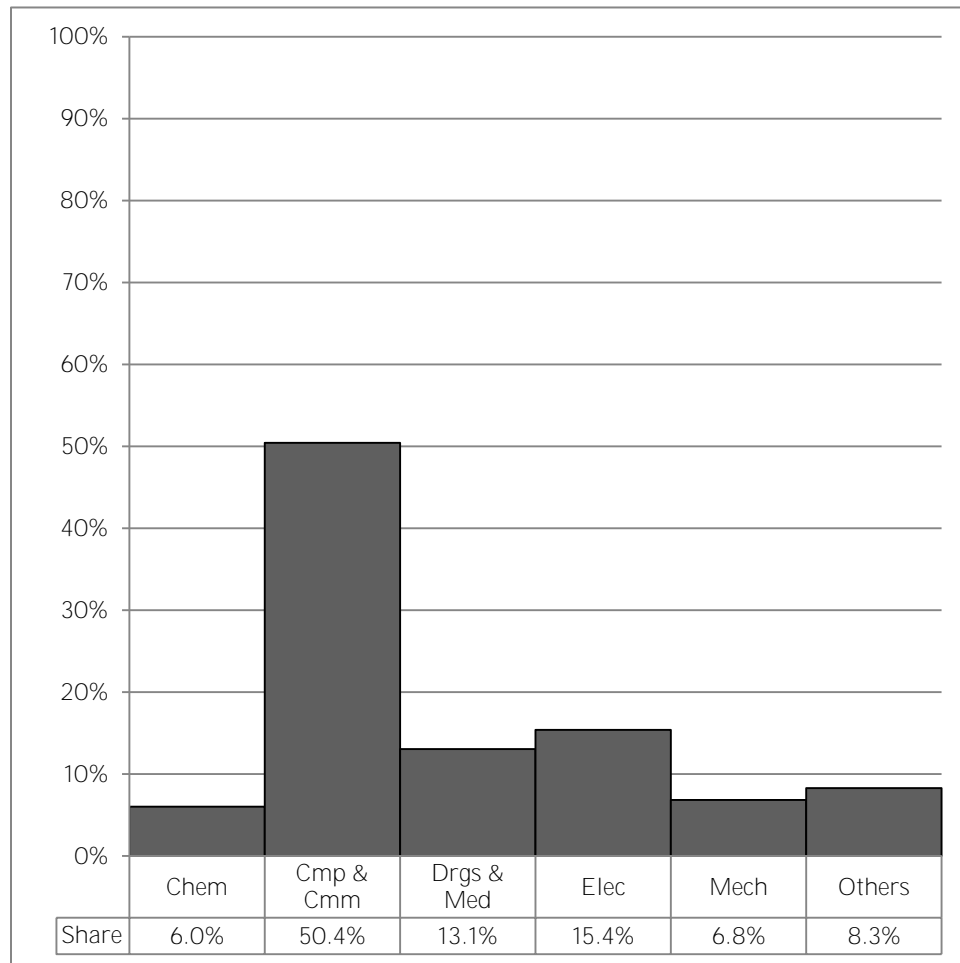


Figure 2: IPR Petition Filings Across Technology

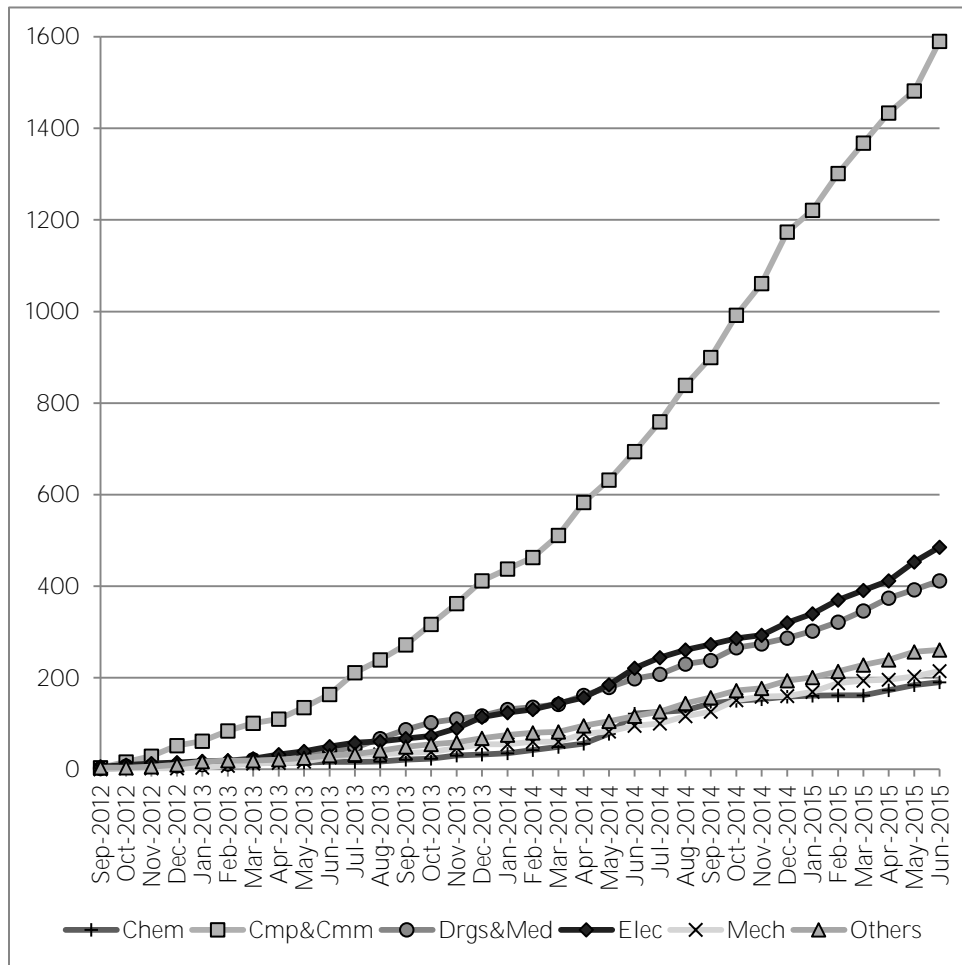


Figure 3: Cumulative IPR Petition Filings Across Technology

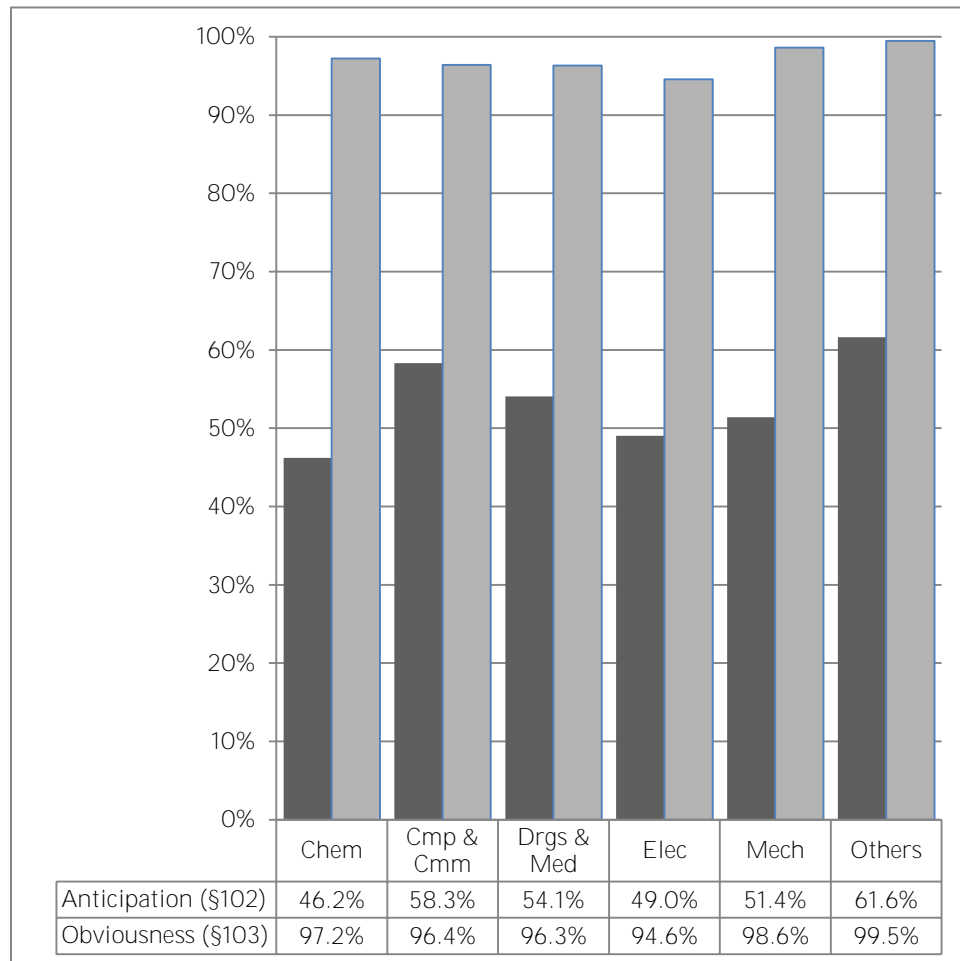


Figure 4: Proportions of IPR Petitions Containing Each Grounds for Challenge, Across Technology Area

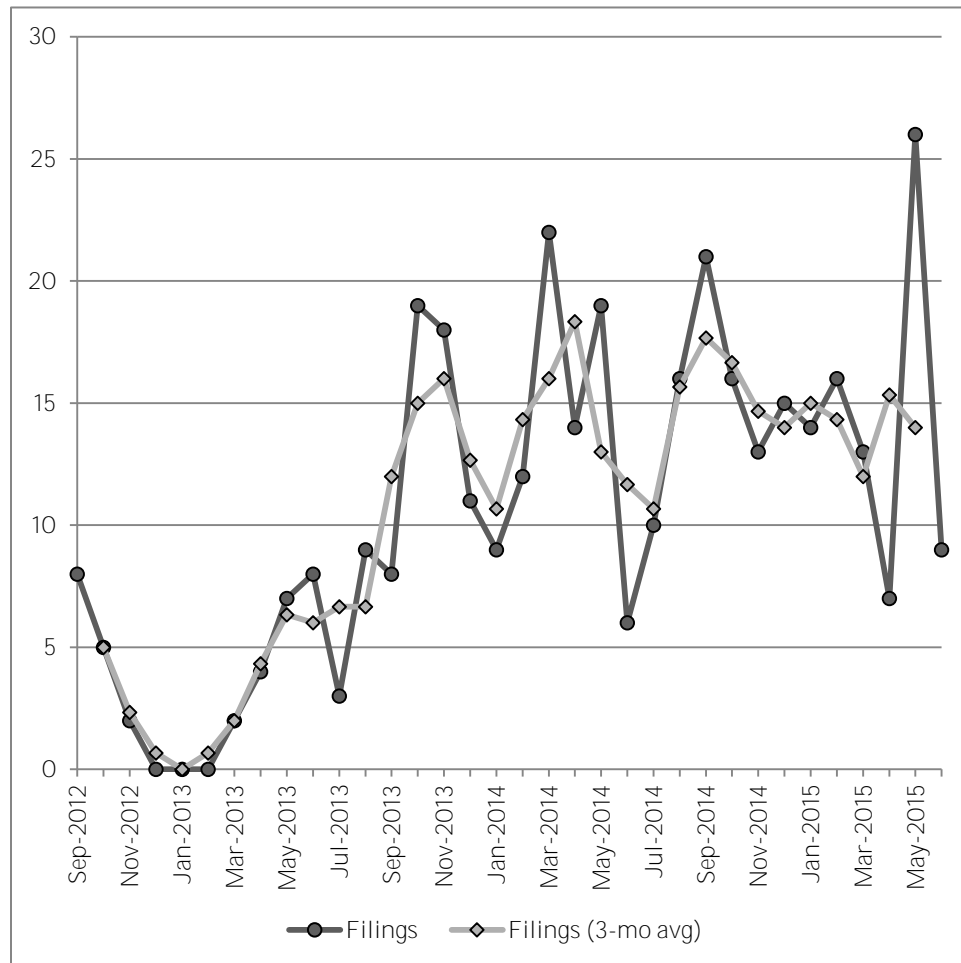


Figure 5: CBM Petition Filings by Month

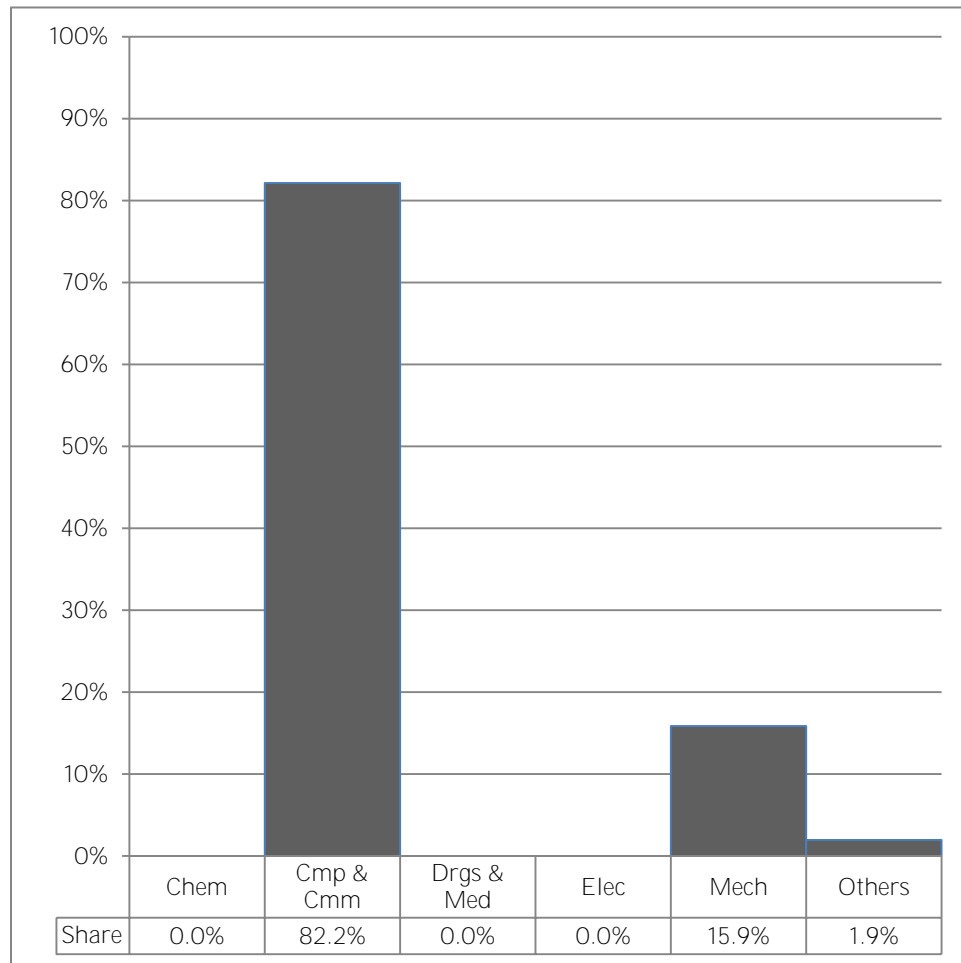


Figure 6: CBM Petition Filings Across Technology

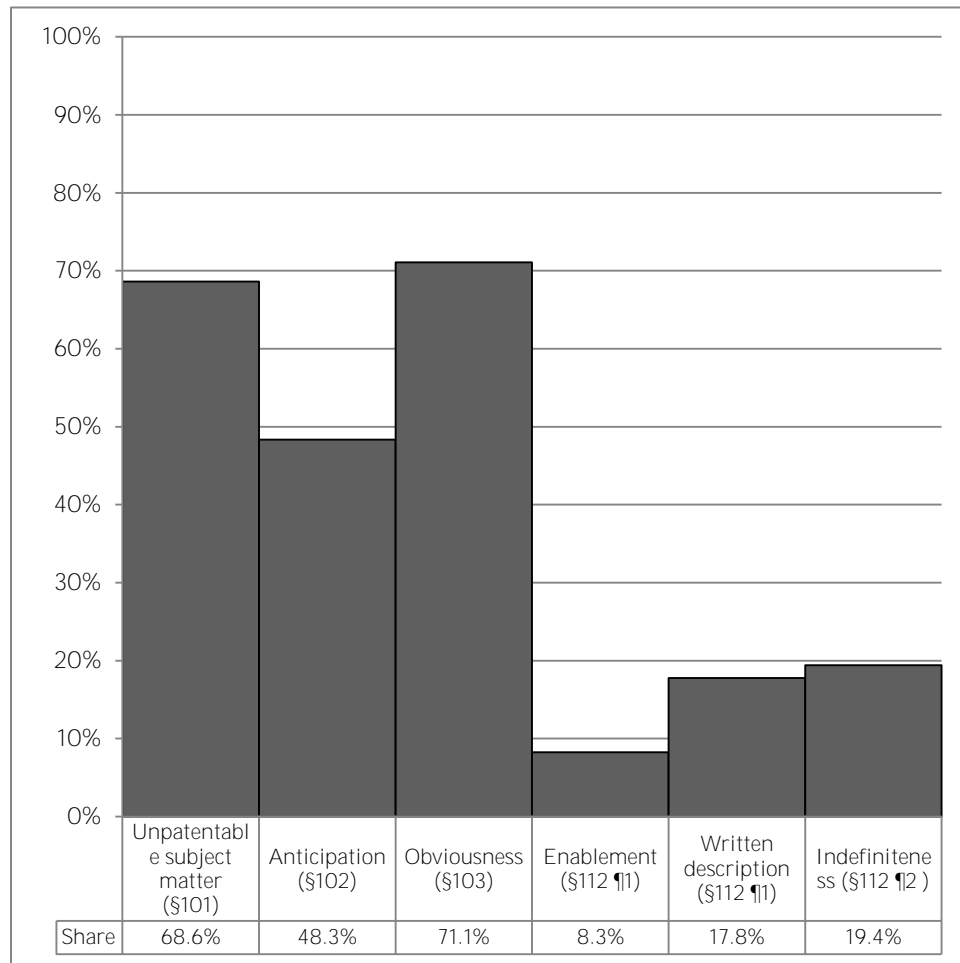


Figure 7: Proportions of CBM Petitions Containing Each Grounds for Challenge

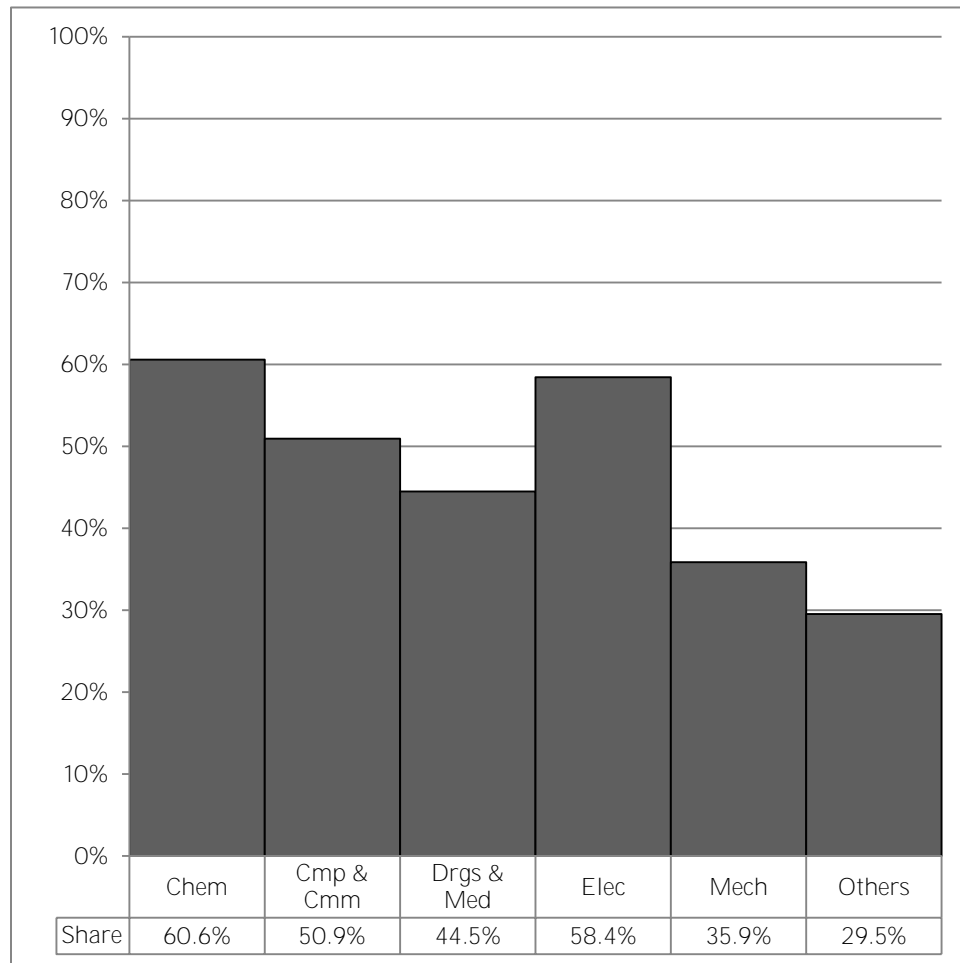


Figure 8: Share of IPR-Challenged Patents in Each Technology Area That Were the Subject of Multiple Petitions

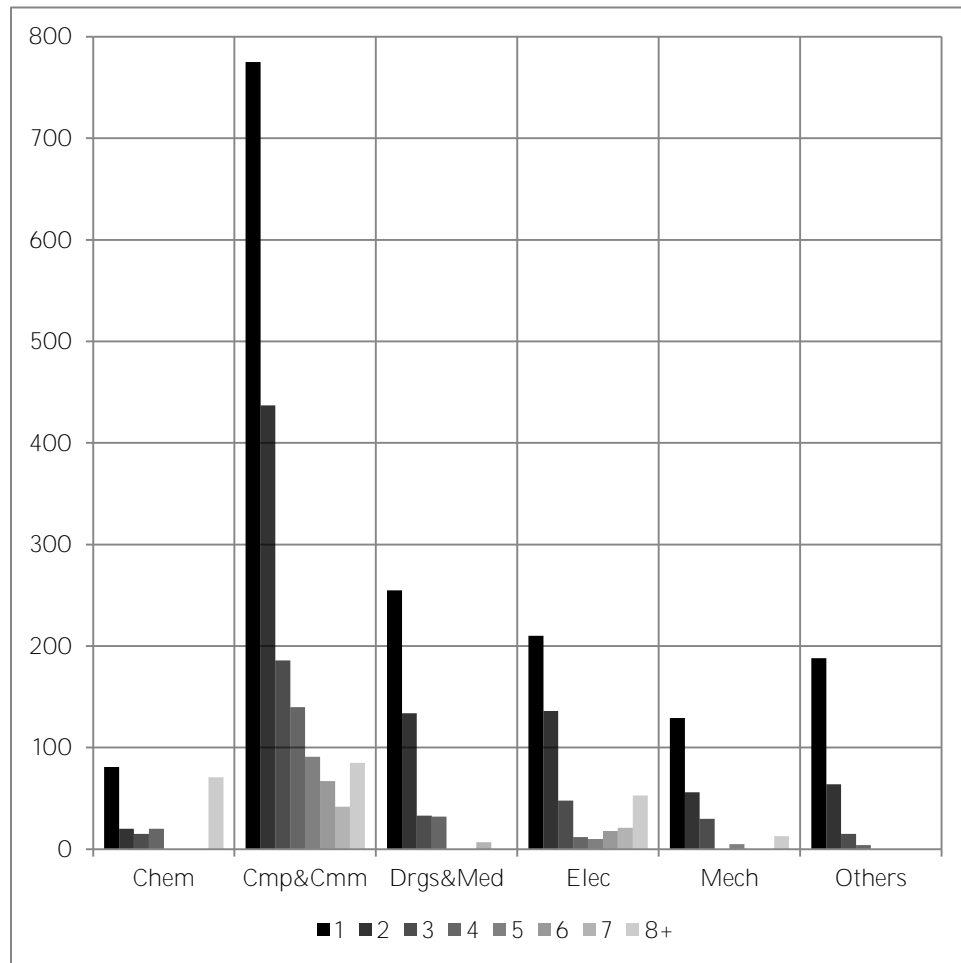


Figure 9: Number of IPR-Challenged Patents Across Technology Area, by Number of IPR Petitions

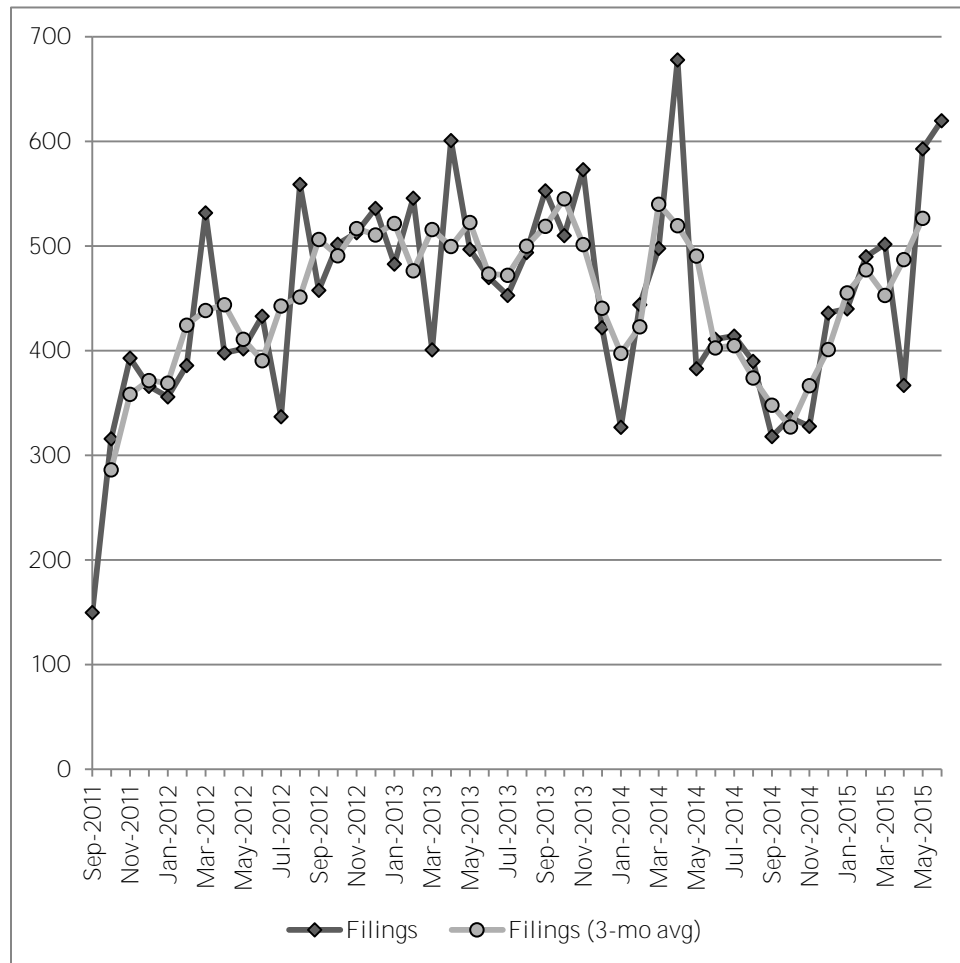


Figure 10: Patent Case Filings by Month

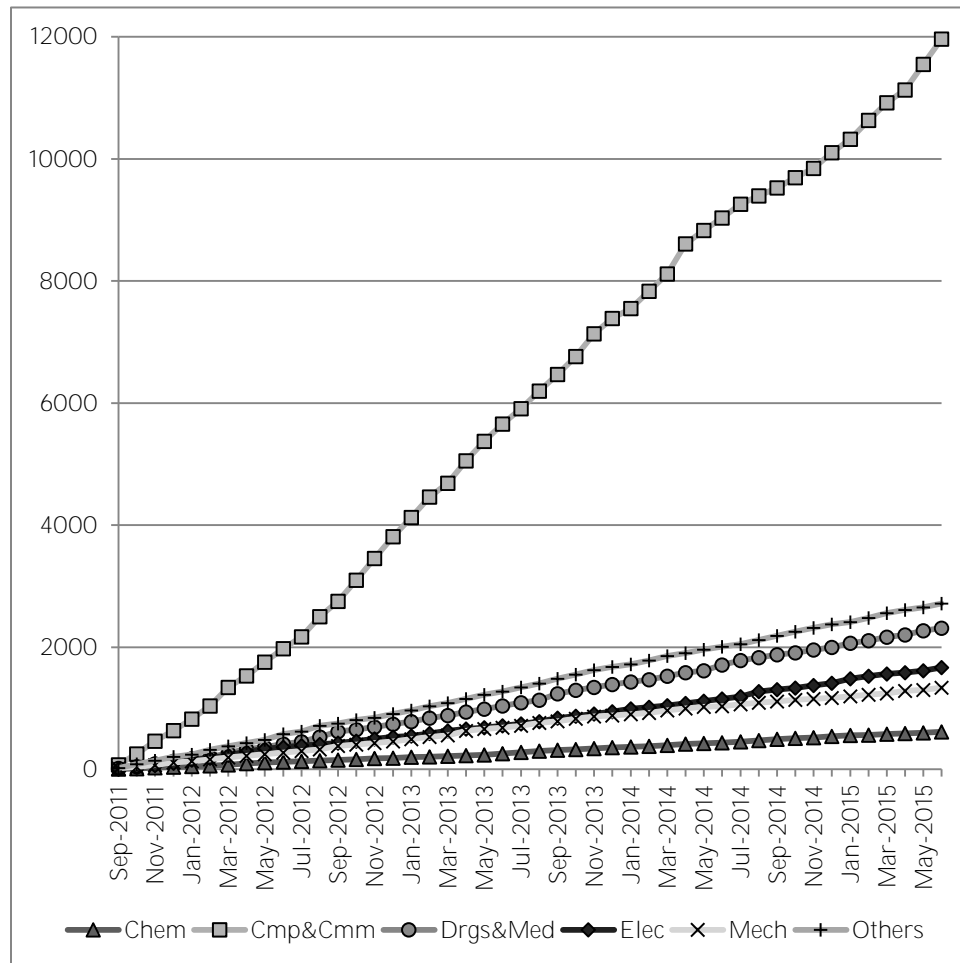


Figure 11: Cumulative Patent Case Filings Across Technology

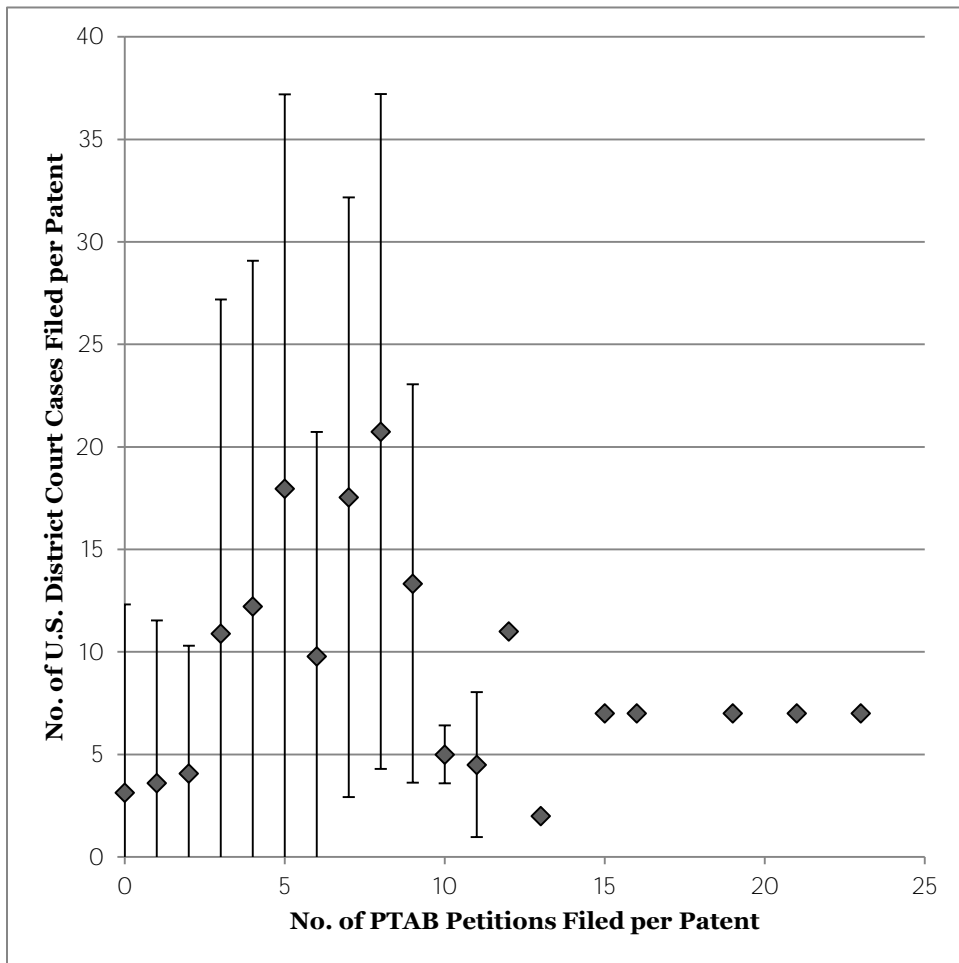


Figure 12: Average Number of Federal-Court Assertion of Patents Challenged in IPR or CBM Petitions

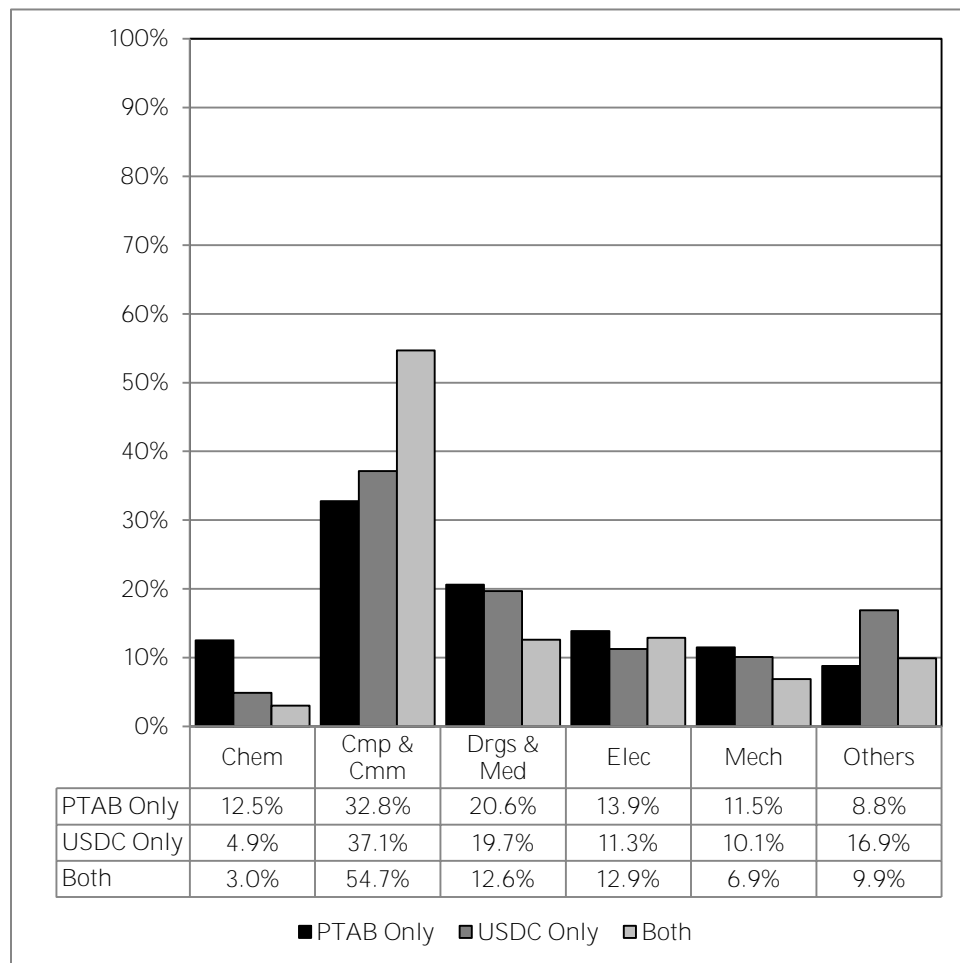


Figure 13: Technology Proportions Among PTAB-Only, Federal Court-Only, and PTAB-and-Federal Court Patents

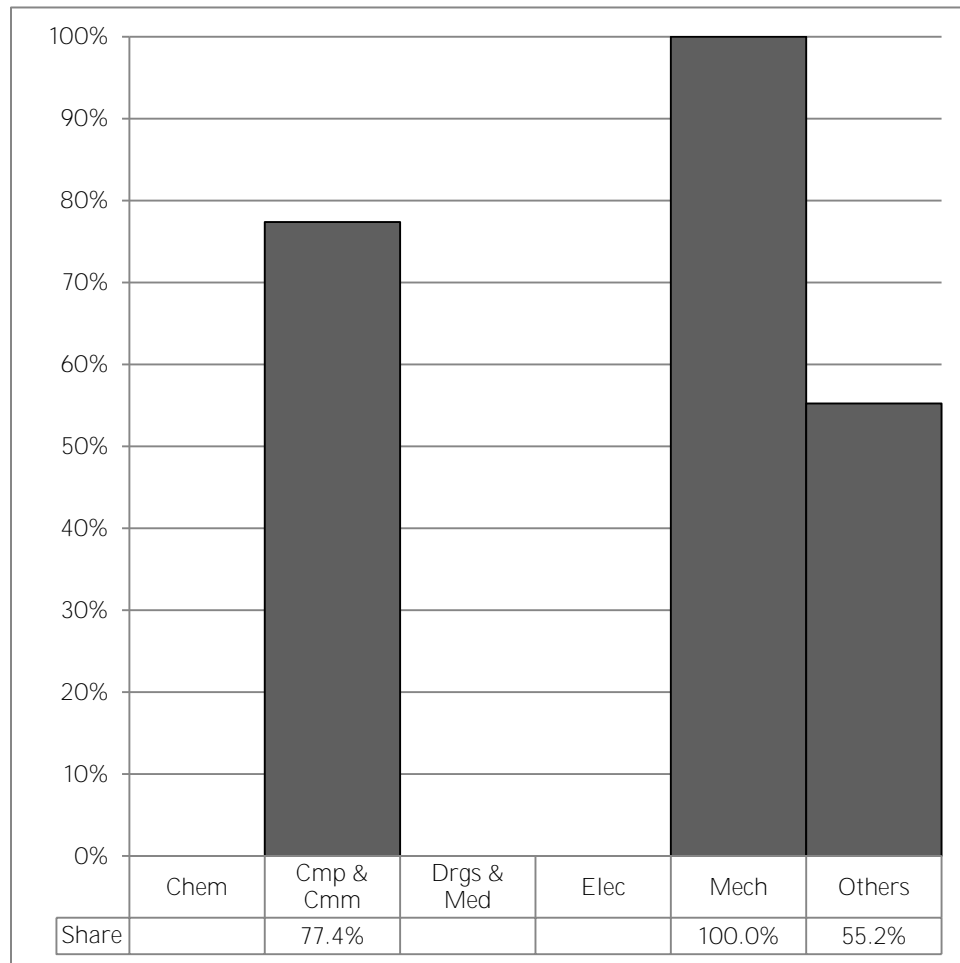


Figure 14a: Share of CBM Petitioners That Were Defendants in a Prior Suit on the Same Patent, by Technology

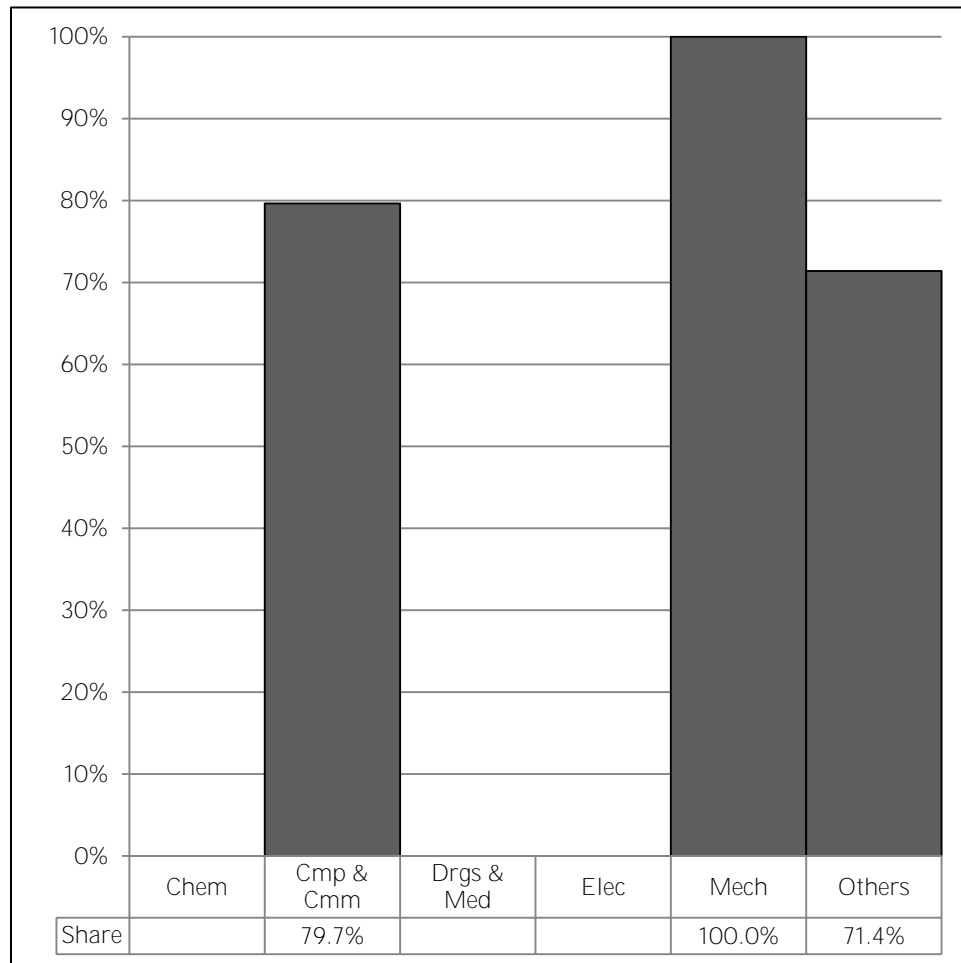


Figure 14b: Share of CBM Petitions in Which At Least One Petitioner Was a Defendant in a Prior Suit on the Same Patent, by Technology

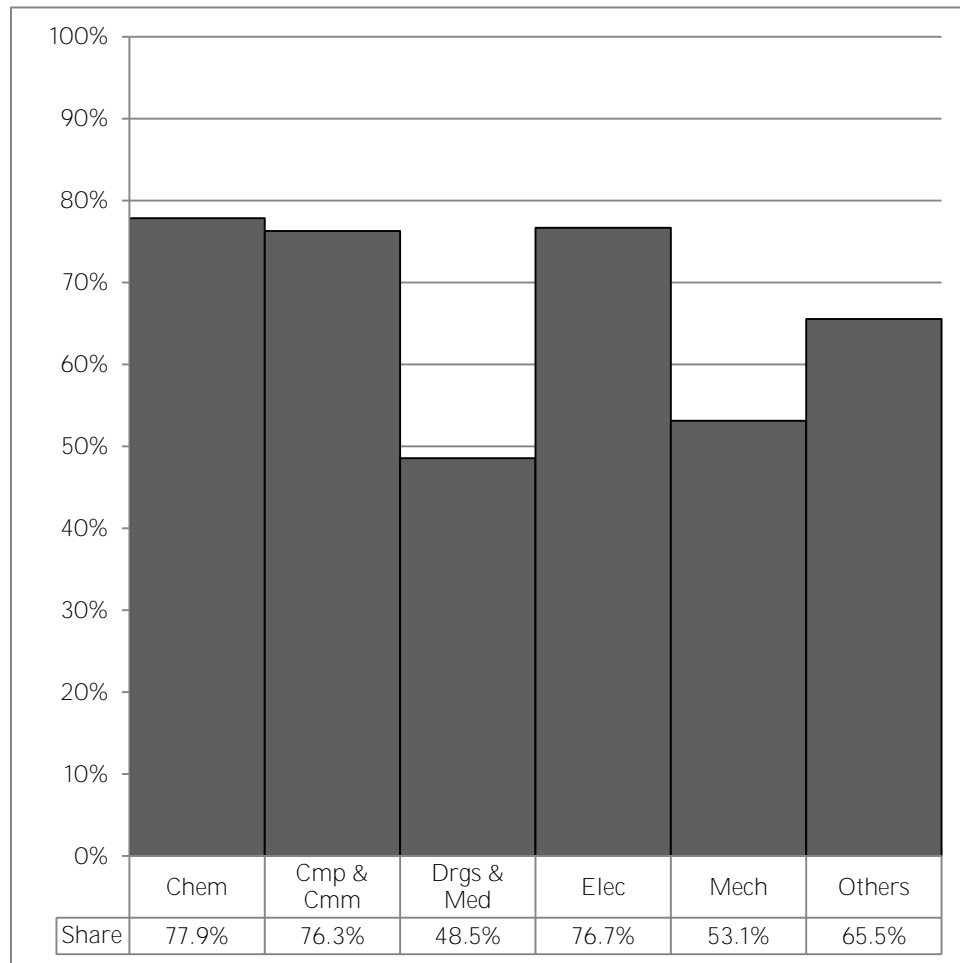


Figure 15a: Share of IPR Petitioners That Were Defendants in a Prior Suit on the Same Patent, by Technology

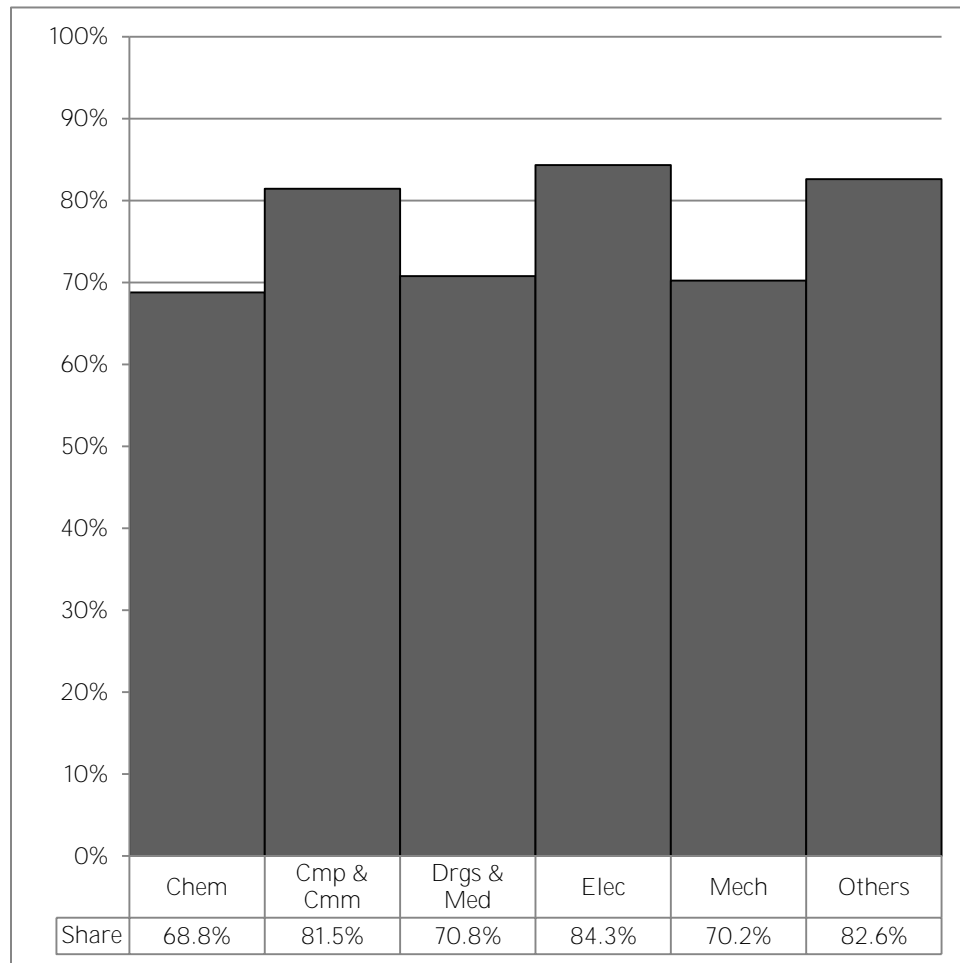


Figure 15b: Share of IPR Petitions in Which At Least One Petitioner Was a Defendant in a Prior Suit on the Same Patent, by Technology

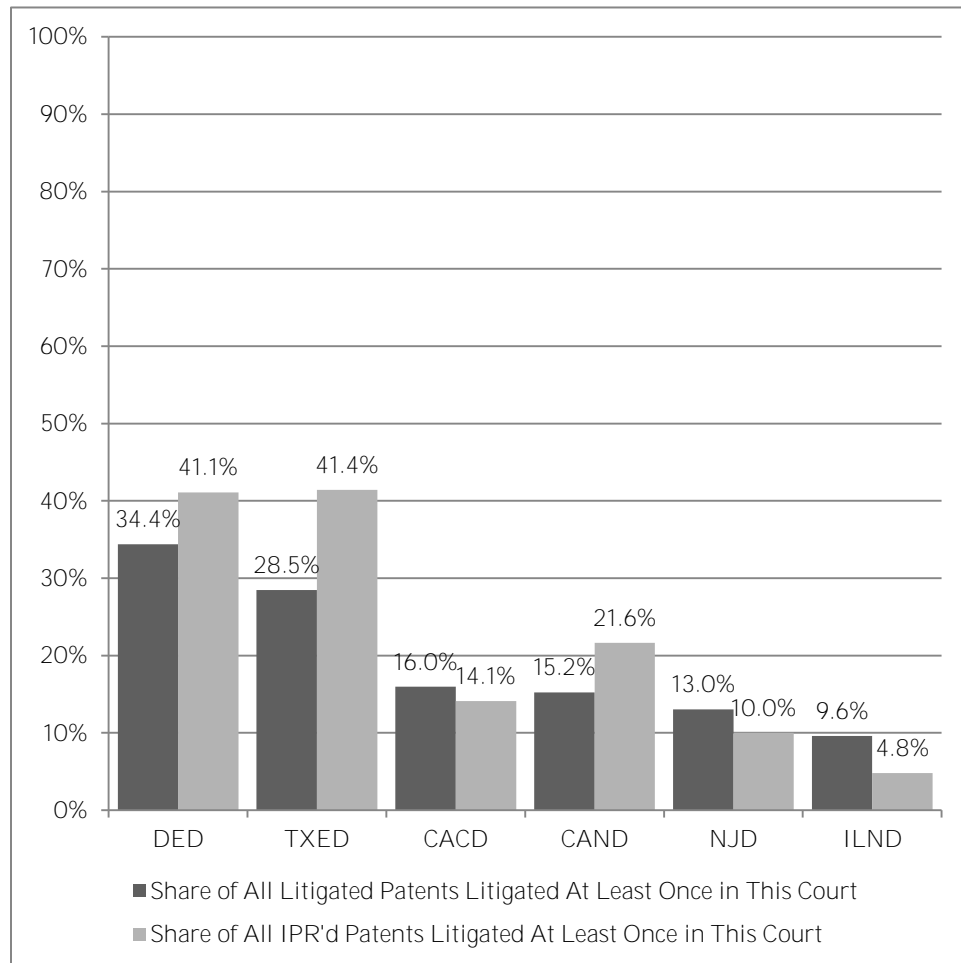


Figure 16: District-Specific Effects

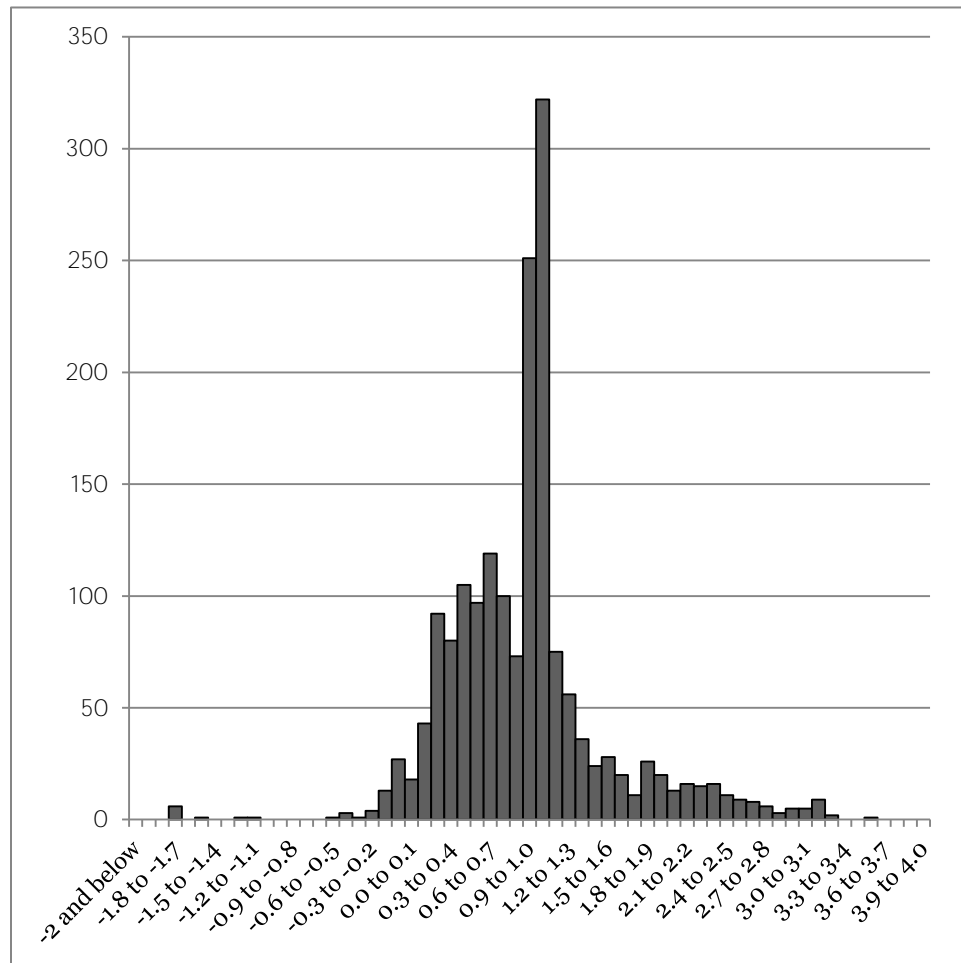


Figure 17: Distribution of Lag Between First IPR Petition and First Federal Court Litigation, in Years

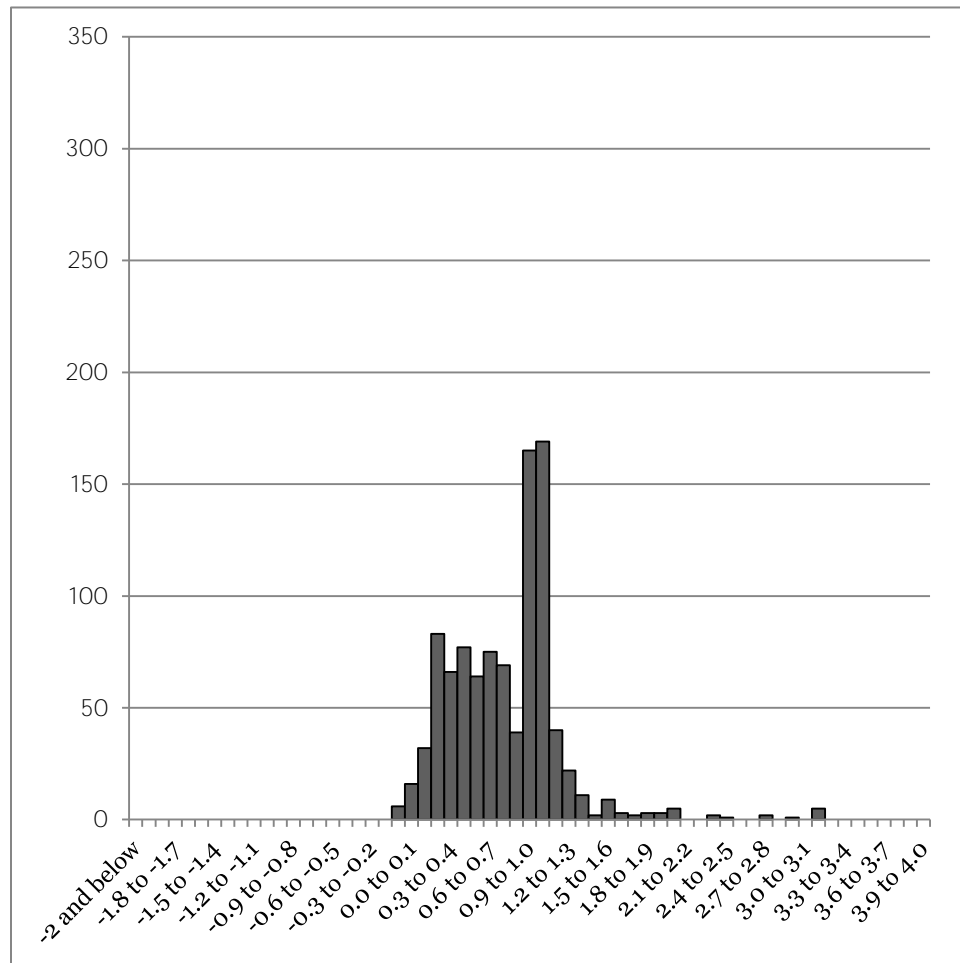


Figure 18: Distribution of Lag Between First IPR Petition and Last Federal Court Filing Prior to Petition, in Years

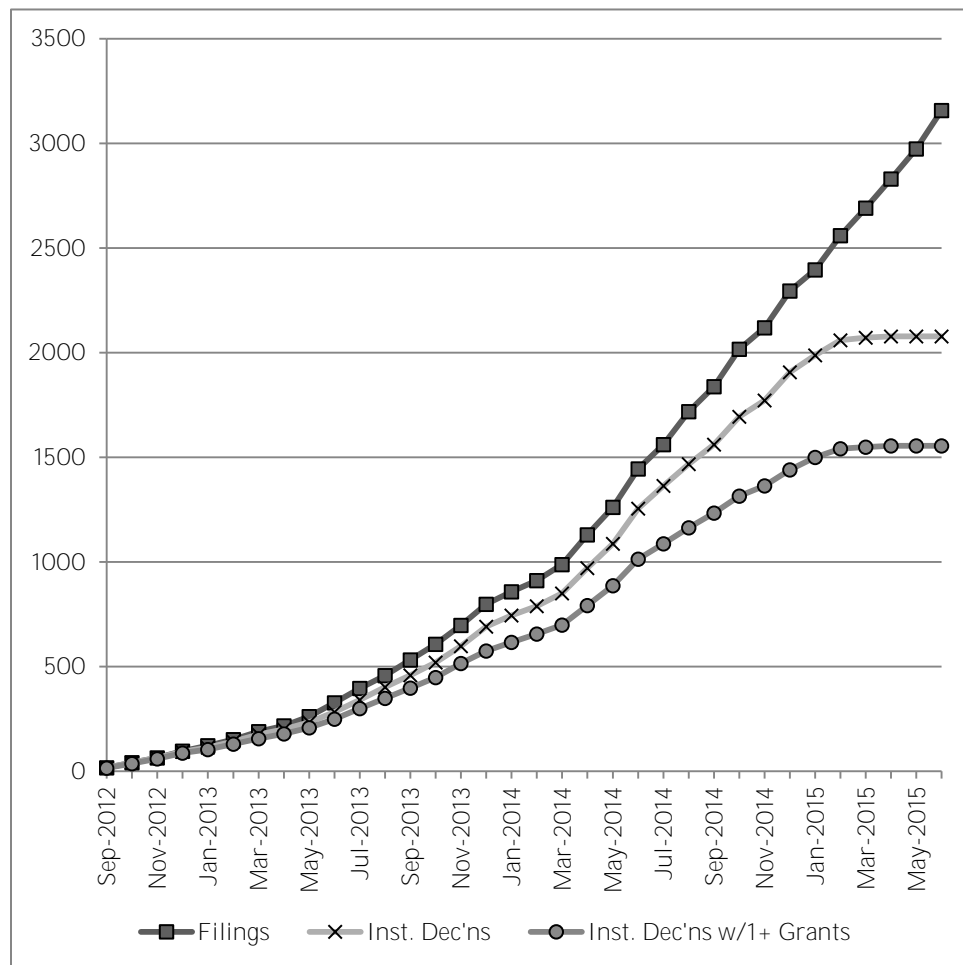


Figure 19: IPR Filings, Institution Decisions, and Institution Decisions Granting At Least One Challenged Claim

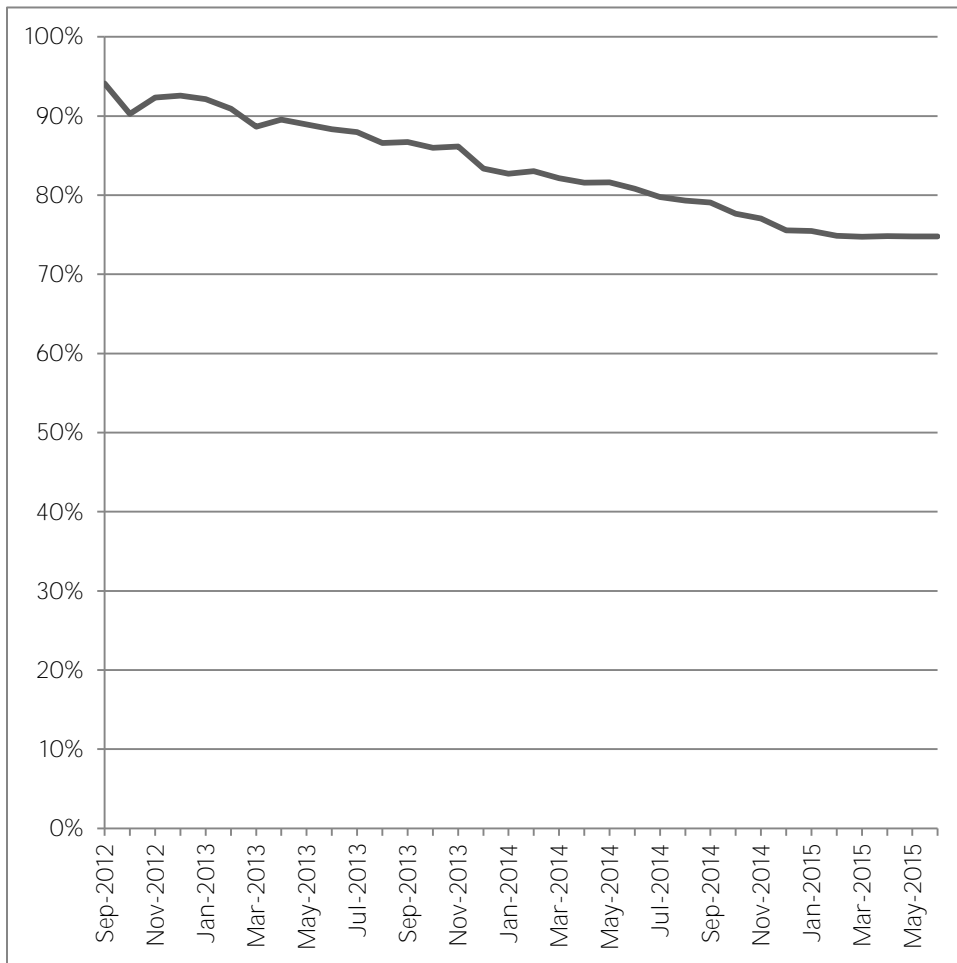


Figure 20: Rate of IPR Institution over Time, by Month

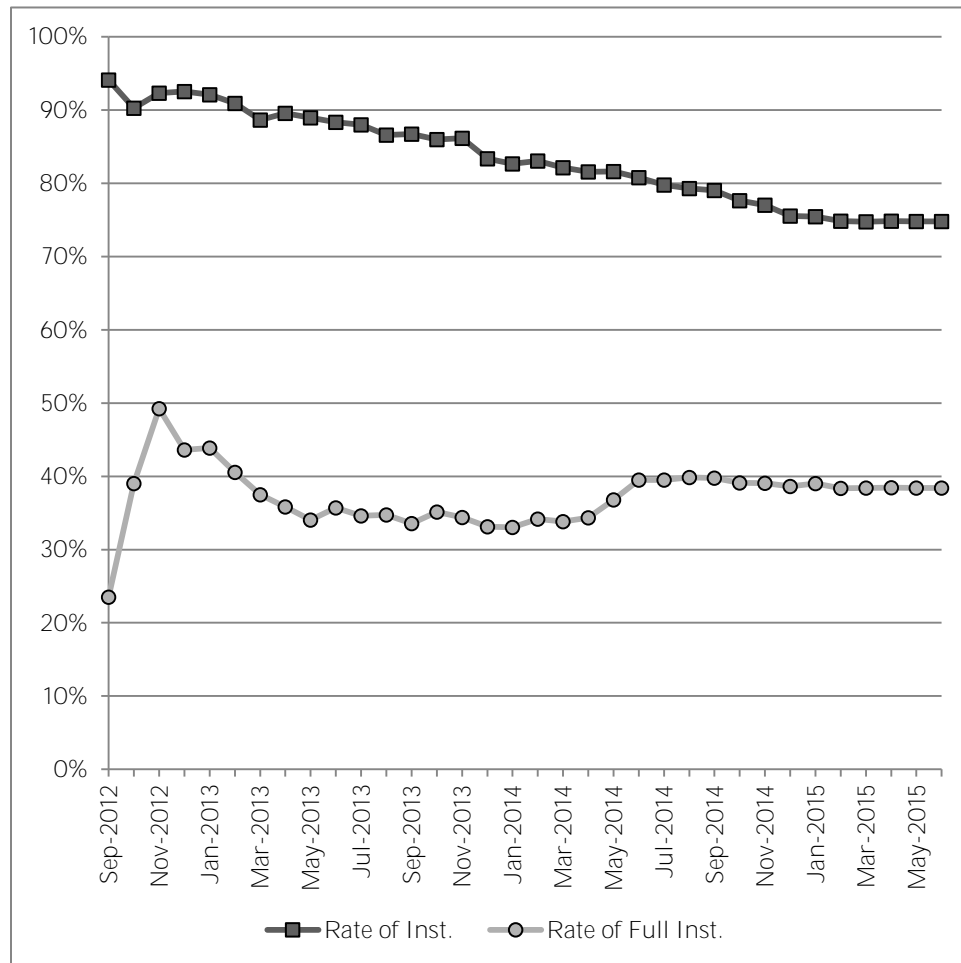


Figure 21: Rate of At-Least-Partial Institution and Full Institution of IPR Petitions over Time, By Month

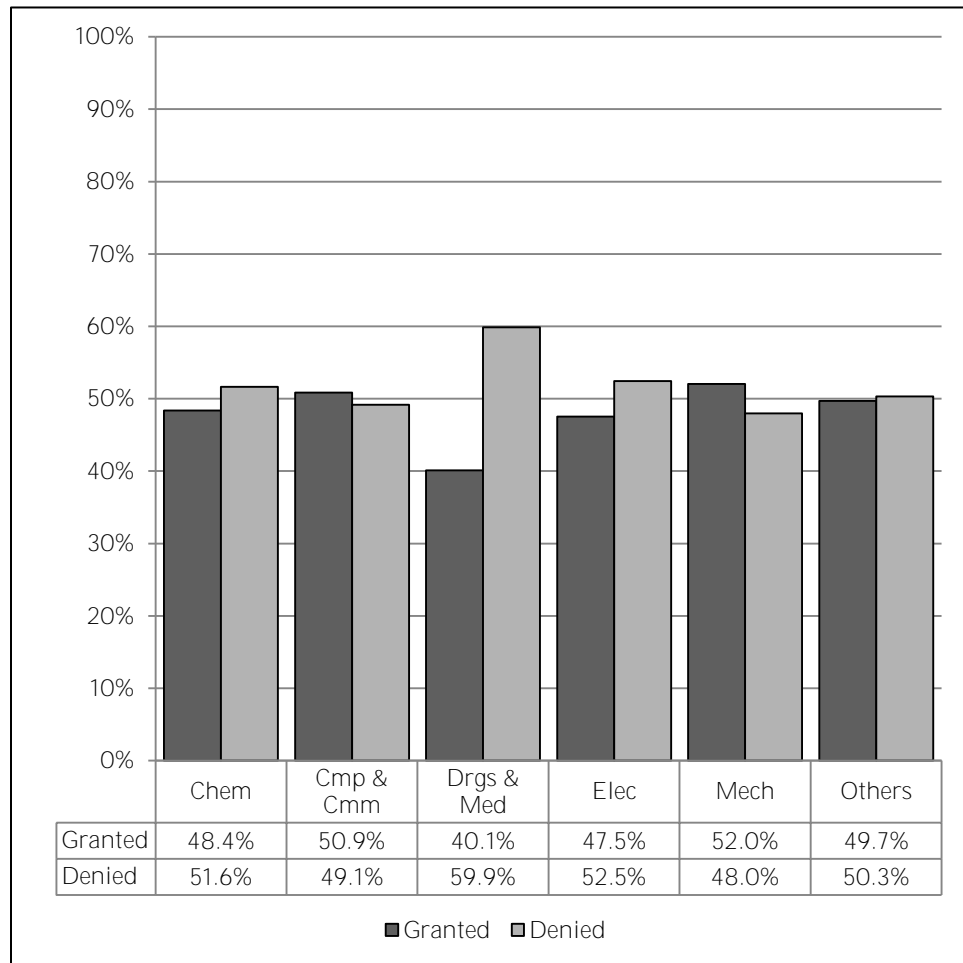


Figure 22: Institutions of IPR Petitions Based on Novelty, by Technology

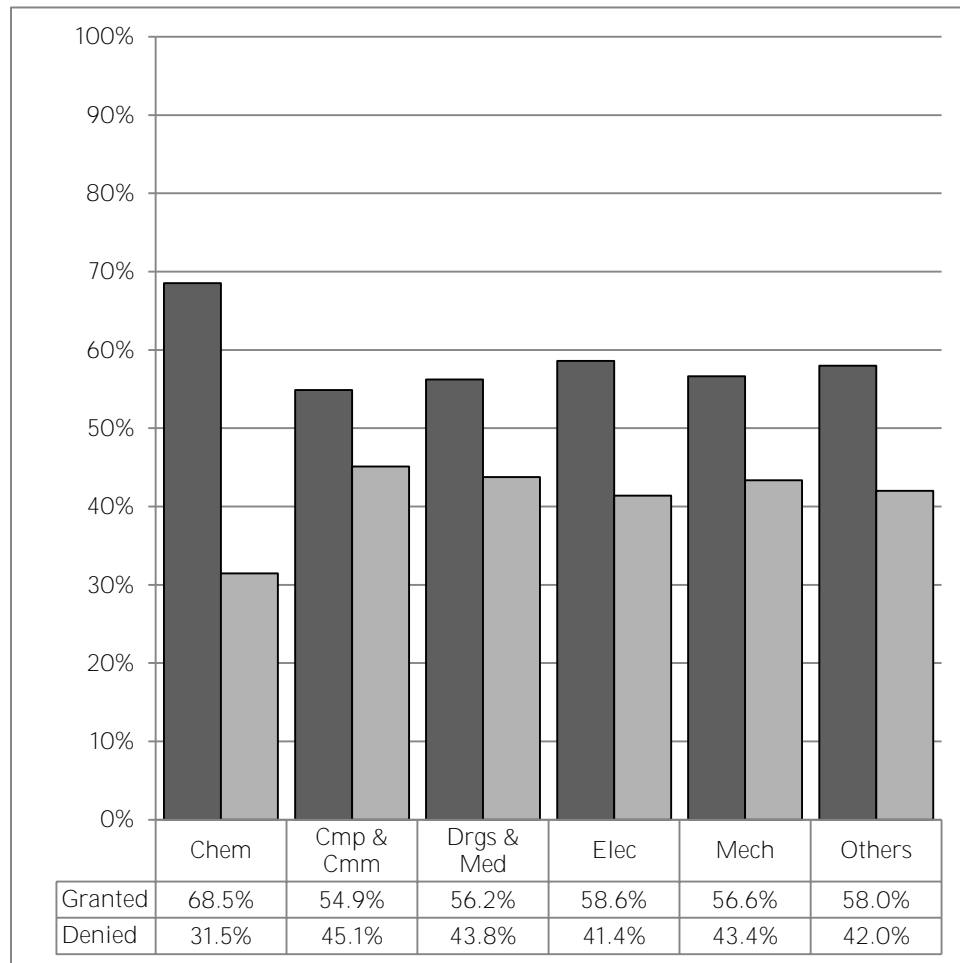


Figure 23: IPR Institutions of Petitions Based on Nonobviousness, by Technology

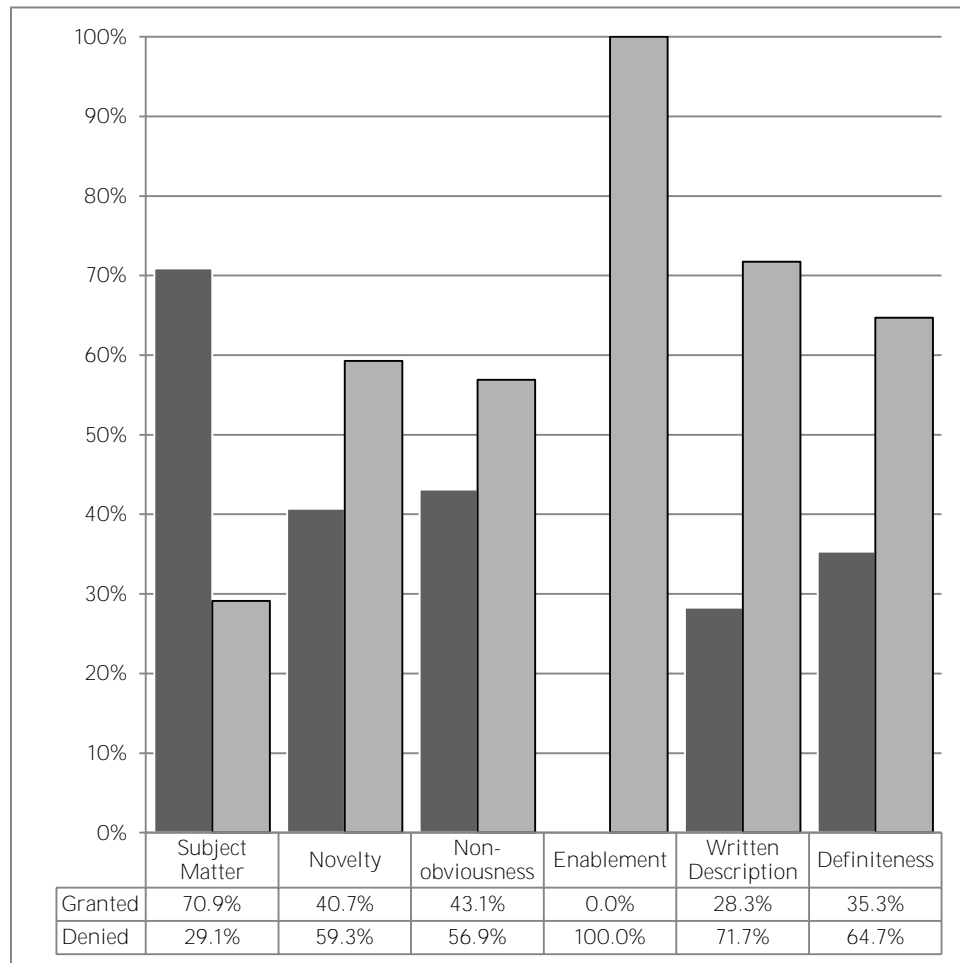


Figure 24: CBM Institutions of Petitions, by Grounds

APPENDIX C: TABLES

Table 1: *Inter Partes* petitions filed by Intel in the *Zond* cases

Petition For	IPR Number	Filing Date
Intel Corporation	IPR2014-00443	Feb. 20, 2014
Intel Corporation	IPR2014-00444	Feb. 20, 2014
Intel Corporation	IPR2014-00445	Feb. 20, 2014
Intel Corporation	IPR2014-00446	Feb. 20, 2014
Intel Corporation	IPR2014-00447	Feb. 20, 2014
Intel Corporation	IPR2014-00455	Feb. 27, 2014
Intel Corporation	IPR2014-00456	Feb. 27, 2014
Intel Corporation	IPR2014-00468	Feb. 28, 2014
Intel Corporation	IPR2014-00470	Mar. 7, 2014
Intel Corporation	IPR2014-00473	Mar. 7, 2014
Intel Corporation	IPR2014-00494	Mar. 13, 2014
Intel Corporation	IPR2014-00495	Mar. 13, 2014
Intel Corporation	IPR2014-00496	Mar. 13, 2014
Intel Corporation	IPR2014-00497	Mar. 13, 2014
Intel Corporation	IPR2014-00498	Mar. 13, 2014
Intel Corporation	IPR2014-00520	Mar. 27, 2014
Intel Corporation	IPR2014-00521	Mar. 27, 2014
Intel Corporation	IPR2014-00522	Mar. 27, 2014
Intel Corporation	IPR2014-00523	Mar. 27, 2014
Intel Corporation	IPR2014-00598	Apr. 9, 2014
Intel Corporation	IPR2014-00686	Apr. 24, 2014
Intel Corporation	IPR2014-00765	May 16, 2014
Intel Corporation	IPR2014-00820	May 27, 2014
Intel Corporation	IPR2014-00843	May 29, 2014
Intel Corporation	IPR2014-00913	Jun 6, 2014
Intel Corporation	IPR2014-00923	Jun 10, 2014
Intel Corporation	IPR2014-00945	Jun 12, 2014

2016]

STRATEGIC DECISION MAKING

119

Table 2: *Inter Partes* Review Petitions filed by Defendants in Zond cases

Petition For	IPR Number	Filing Date
Advanced Micro Devices, Inc.	IPR2014-01037	June 30, 2014
Advanced Micro Devices, Inc.	IPR2014-01075	June 30, 2014
Advanced Micro Devices, Inc.	IPR2014-01071	June 30, 2014
Advanced Micro Devices, Inc.	IPR2014-01069	June 30, 2014
Fujitsu Semiconductor Limited	IPR2014-00848	May 29, 2014
Fujitsu Semiconductor Ltd.	IPR2014-00850	May 29, 2014
Fujitsu Semiconductor Ltd.	IPR2014-00844	May 29, 2014
Fujitsu Semiconductor Ltd.	IPR2014-00846	May 29, 2014
Fujitsu Semiconductor Ltd.	IPR2014-00845	May 29, 2014
Fujitsu Semiconductor Ltd.	IPR2014-00849	May 29, 2014
Fujitsu Semiconductor Ltd.	IPR2014-00855	May 30, 2014
Fujitsu Semiconductor Ltd.	IPR2014-00866	May 30, 2014
Fujitsu Semiconductor Ltd.	IPR2014-00851	May 30, 2014
Fujitsu Semiconductor Ltd.	IPR2014-00865	May 30, 2014
Fujitsu Semiconductor Ltd.	IPR2014-00856	May 30, 2014
Fujitsu Semiconductor Ltd.	IPR2014-00859	May 30, 2014
Fujitsu Semiconductor Ltd.	IPR2014-00858	May 30, 2014
Fujitsu Semiconductor Ltd.	IPR2014-00863	May 30, 2014
Fujitsu Semiconductor Ltd.	IPR2014-00864	May 30, 2014
Fujitsu Semiconductor Ltd.	IPR2014-00867	May 30, 2014
Fujitsu Semiconductor Ltd.	IPR2014-00918	June 09, 2014
GlobalFoundries U.S., Inc.	IPR2014-01042	June 27, 2014
GlobalFoundries U.S., Inc.	IPR2014-01059	June 27, 2014
GlobalFoundries U.S., Inc.	IPR2014-01047	June 27, 2014
GlobalFoundries U.S., Inc.	IPR2014-01083	June 30, 2014
GlobalFoundries U.S., Inc.	IPR2014-01086	June 30, 2014
GlobalFoundries U.S., Inc.	IPR2014-01076	June 30, 2014
GlobalFoundries U.S., Inc.	IPR2014-01061	June 30, 2014
GlobalFoundries U.S., Inc.	IPR2014-01087	June 30, 2014
GlobalFoundries U.S., Inc.	IPR2014-01073	June 30, 2014
GlobalFoundries U.S., Inc.	IPR2014-01088	July 01, 2014
GlobalFoundries U.S., Inc.	IPR2014-01098	July 01, 2014
GlobalFoundries U.S., Inc.	IPR2014-01099	July 01, 2014
GlobalFoundries U.S., Inc.	IPR2014-01089	July 01, 2014

120 BERKELEY TECHNOLOGY LAW JOURNAL [Vol. 31:1

Petition For	IPR Number	Filing Date
GlobalFoundries U.S., Inc.	IPR2014-01100	July 01, 2014
Renesas Electronics Corp.	IPR2014-01057	June 27, 2014
Renesas Electronics Corp.	IPR2014-01046	June 27, 2014
Renesas Electronics Corp.	IPR2014-01066	June 30, 2014
Renesas Electronics Corp.	IPR2014-01063	June 30, 2014
Taiwan Semiconductor Mfg. Co.	IPR2014-00805	May 23, 2014
Taiwan Semiconductor Mfg. Co.	IPR2014-00782	May 19, 2014
Taiwan Semiconductor Mfg. Co.	IPR2014-00781	May 19, 2014
Taiwan Semiconductor Mfg. Co.	IPR2014-00800	May 22, 2014
Taiwan Semiconductor Mfg. Co.	IPR2014-00799	May 22, 2014
Taiwan Semiconductor Mfg. Co.	IPR2014-00803	May 22, 2014
Taiwan Semiconductor Mfg. Co.	IPR2014-00802	May 22, 2014
Taiwan Semiconductor Mfg. Co.	IPR2014-00807	May 23, 2014
Taiwan Semiconductor Mfg. Co.	IPR2014-00808	May 23, 2014
Taiwan Semiconductor Mfg. Co.	IPR2014-00819	May 27, 2014
Taiwan Semiconductor Mfg. Co.	IPR2014-00821	May 27, 2014
Taiwan Semiconductor Mfg. Co.	IPR2014-00818	May 27, 2014
Taiwan Semiconductor Mfg. Co.	IPR2014-00828	May 28, 2014
Taiwan Semiconductor Mfg. Co.	IPR2014-00829	May 28, 2014
Taiwan Semiconductor Mfg. Co.	IPR2014-00827	May 28, 2014
Taiwan Semiconductor Mfg. Co.	IPR2014-00861	May 30, 2014
Taiwan Semiconductor Mfg. Co.	IPR2014-00917	June 09, 2014
The Gillette Co.	IPR2014-00479	Mar. 4, 2014
The Gillette Co.	IPR2014-00477	Mar. 4, 2014
The Gillette Co.	IPR2014-00974	June 18, 2014
The Gillette Co.	IPR2014-00975	June 18, 2014
The Gillette Co.	IPR2014-00972	June 18, 2014
The Gillette Co.	IPR2014-00973	June 18, 2014
The Gillette Co.	IPR2014-00992	June 19, 2014
The Gillette Co.	IPR2014-00986	June 19, 2014
The Gillette Co.	IPR2014-00981	June 19, 2014
The Gillette Co.	IPR2014-00991	June 19, 2014
The Gillette Co.	IPR2014-00984	June 19, 2014
The Gillette Co.	IPR2014-00990	June 19, 2014
The Gillette Co.	IPR2014-00988	June 19, 2014
The Gillette Co.	IPR2014-00985	June 19, 2014

2016]

STRATEGIC DECISION MAKING

121

Petition For	IPR Number	Filing Date
The Gillette Co.	IPR2014-01003	June 20, 2014
The Gillette Co.	IPR2014-00996	June 20, 2014
The Gillette Co.	IPR2014-01000	June 20, 2014
The Gillette Co.	IPR2014-00995	June 20, 2014
The Gillette Co.	IPR2014-01004	June 20, 2014
The Gillette Co.	IPR2014-01012	June 23, 2014
The Gillette Co.	IPR2014-01017	June 23, 2014
The Gillette Co.	IPR2014-01016	June 23, 2014
The Gillette Co.	IPR2014-01015	June 23, 2014
The Gillette Co.	IPR2014-01019	June 23, 2014
The Gillette Co.	IPR2014-01014	June 23, 2014
The Gillette Co.	IPR2014-01013	June 23, 2014
The Gillette Co.	IPR2014-01020	June 23, 2014
The Gillette Co.	IPR2014-01022	June 23, 2014
The Gillette Co.	IPR2014-01025	June 23, 2014
Toshiba Corp.	IPR2014-01072	June 30, 2014
Toshiba Corp.	IPR2014-01070	June 23, 2014
Toshiba Corp.	IPR2014-01067	June 23, 2014
Toshiba Corp.	IPR2014-01074	June 23, 2014
Toshiba Corp.	IPR2014-01065	June 23, 2014

Table 3: *Inter Partes* Review Petitions filed by Defendants in *E-Watch v. LG Electronics*

Petition For	IPR Number	Filing Date
HTC Corp.	IPR2014-00987	June 19, 2014
Sony Mobile Comm. (USA) Inc.	IPR2015-00402	Dec. 10, 2014
LG Electronics, Inc.	IPR2015-00404	Dec. 10, 2014
Kyocera Communications, Inc.	IPR2015-00406	Dec. 10, 2014
Apple Inc.	IPR2015-00411	Dec. 11, 2014
Apple Inc.	IPR2015-00412	Dec. 11, 2014
Apple Inc.	IPR2015-00413	Dec. 11, 2014
Samsung Electronics Co.	IPR2015-00541	Jan. 7, 2015
Samsung Electronics Co.	IPR2015-00610	Jan. 23, 2015
Samsung Electronics Co.	IPR2015-00612	Jan. 23, 2015
ZTE (USA) Inc.	IPR2015-01366	June 09, 2015

PREDICTABLY EXPENSIVE: A CRITICAL LOOK AT PATENT LITIGATION IN THE EASTERN DISTRICT OF TEXAS

Brian J. Love*

James Yoon†

CITE AS 20 STAN. TECH. L. REV. 1 (2017)

ABSTRACT

In this Article, we compare U.S. patent litigation across districts and consider possible explanations for the Eastern District of Texas' popularity with patent plaintiffs. Rather than any one explanation, we conclude that what makes the Eastern District so attractive to patent plaintiffs is the accumulated effect of several marginal advantages—particularly with respect to the relative timing of discovery deadlines, transfer decisions, and claim construction—that make it predictably expensive for accused infringers to defend patent suits filed in East Texas. These findings tend to support ongoing efforts to pass patent reform legislation that would presumptively stay discovery in patent suits pending claim construction and motions to transfer or dismiss. However, we also observe that courts in the Eastern District of Texas have exercised their discretion in ways that dampen the effect of prior legislative and judicial reforms that were aimed (at least in part) at deterring abusive patent suits. Given courts' broad discretion to control how cases proceed, this additional finding suggests that restricting venue in patent cases may well be the single most effective reform available to Congress or the courts to limit patentees' ability to impose unnecessary and unwarranted costs on companies accused of patent infringement.

* Assistant Professor and Co-Director of the High Tech Law Institute, Santa Clara University School of Law. My work on this Article was supported in part by the INPRECOMP Project of the Center for Law, Science & Innovation (LSI) at the Arizona State University Sandra Day O'Connor College of Law. The INPRECOMP Project was funded by a gift to LSI from Intel Corporation.

† Partner, Wilson Sonsini Goodrich & Rosati; Lecturer, Stanford Law School and Santa Clara University School of Law. We thank Jonas Anderson, Colleen Chien, and Michael Risch for providing helpful comments on an earlier draft, as well as Docket Navigator, Lex Machina, and Unified Patents for sharing data. Stephen Stanwood, Alexander Promm, and Gail Jefferson provided excellent research assistance.

TABLE OF CONTENTS

I. INTRODUCTION.....	2
II. THE EASTERN DISTRICT OF TEXAS' POPULARITY	6
III. WHY IS THE EASTERN DISTRICT OF TEXAS SO POPULAR?	13
A. <i>Is the Eastern District of Texas a "Rocket Docket"?</i>	13
B. <i>Are East Texas Judges and Juries Patentee-Friendly?</i>	15
C. <i>Discovery Deadlines and Pretrial Motions Practice</i>	21
1. <i>Discovery, Transfer, and Markman Dates</i>	22
2. <i>Predictably Expensive</i>	23
IV. WHY HAVEN'T RECENT REFORMS AND APPELLATE OPINIONS REDUCED THE EASTERN DISTRICT'S POPULARITY?	25
A. <i>The America Invents Act</i>	26
B. <i>Recent Supreme Court Opinions</i>	30
V. ANALYSIS	34
VI. CONCLUSION	36

I. INTRODUCTION

After two terms of serious congressional interest in patent reform, including the introduction of roughly twenty competing bills,¹ only one piece of prospective reform legislation still stands a reasonable chance of passage: the VENUE Act.² Introduced in March 2016 by Senators Flake, Gardner, and Lee, the bill would (with few exceptions) limit where patent suits can be filed to only those districts in which the accused infringer is incorporated or in which either party has a "regular and established physical facility" for research or production.³ Many predict that, despite the eventual failures of the many bills that came before, this rather brief piece of legislation has a legitimate shot at passing through the 115th

1. For a summary of the various bills introduced in the House and Senate since 2013, see Comput. & Comm'ns Indus. Assoc. *Patent Progress' Guide to Federal Patent Reform Legislation*, PAT. PROGRESS (Nov. 17, 2016), <http://www.patentprogress.org/patent-progress-legislation-guides/patent-progresss-guide-patent-reform-legislation> [https://perma.cc/H9UH-KYTD].

2. Venue Equity and Non-Uniformity Elimination Act of 2016, S. 2733, 114th Cong. (2016), <https://www.congress.gov/bill/114th-congress/senate-bill/2733/> [https://perma.cc/P82T-HKU5]. The VENUE Act has been referred to, for example, as a "last stand" or "last ditch effort" for patent reform supporters. See Holly Fechner et al., *Senators Introduce VENUE Act as Last Stand on Patent Legislation this Congress*, GLOBAL POL'Y WATCH BLOG (Mar. 22, 2016), <https://www.globalpolicywatch.com/2016/03/senators-introduce-venue-act-as-last-stand-on-patent-legislation-this-congress> [https://perma.cc/YMN2-NHPL]; Andrew Williams, *The VENUE Act—A Last-Ditch Attempt at Patent Reform*, PATENT DOCS BLOG (Mar. 28, 2016), <http://www.patentdocs.org/2016/03/the-venue-act-a-last-ditch-attempt-at-patent-reform.html> [https://perma.cc/VCB5-29VL].

3. S. 2733, *supra* note 2, § 2(a). This is not the first time Congress has considered venue reform for patent cases. Most recently, a patent-specific venue provision was included in the ultimately unsuccessful Patent Reform Act of 2006, S. 3818, 109th Cong. §8(a) (2006).

Congress.

The U.S. Court of Appeals for the Federal Circuit's current interpretation of 28 U.S.C. § 1400(b), which specifies where patent suits may be filed, is under attack in the courts as well. Just days before this Article's publication, the Supreme Court of the United States granted certiorari in *TC Heartland LLC v. Kraft Food Brands Group LLC*, a case that, if decided in petitioner's favor, could restrict venue in patent suits even further than the language proposed in the VENUE Act.⁴ One way or another, it seems, venue rules for patent suits will be put under the microscope in 2017.

Though it neither is mentioned in the VENUE Act nor was the court of first instance for *TC Heartland*,⁵ the target of Congress and TC Heartland's Supreme Court *amici* is crystal clear: the U.S. District Court for the Eastern District of Texas, a court made infamous as the location of choice for America's "patent trolls," companies formed solely for the purpose of monetizing patent rights through litigation, often using methods that seem to leverage the costs and burdens of litigation more so than the value of the patented technology.⁶ Since the mid-2000s the Eastern District has established a reputation as a "renegade jurisdiction"⁷ that actively cultivates, or at least tolerates,⁸ an image as the go-to

4. If the Court agrees with petitioner's interpretation of § 1400(b), patent plaintiffs would be limited to filing suit in the state of the accused infringer's incorporation or "where the defendant has committed acts of infringement and has a regular and established place of business." See Petition for a Writ of Certiorari at 1, 13-15, *TC Heartland LLC v. Kraft Foods* (U.S. Sept. 12, 2016) (No. 16-341), 2016 WL 4983136. Compared to the VENUE Act, the most important difference is that the plaintiff's location would no longer be part of the calculus. Colleen Chien and Michael Risch find that, had the rule advanced in *TC Heartland* been in place in 2015, about 58% of patent suits would have been filed in a different district. See Colleen V. Chien & Michael Risch, *Recalibrating Patent Venue* 34-35 (Santa Clara Univ. Legal Studies Research Paper No. 10-1, 2016), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2834130 [<https://perma.cc/C77T-HCWZ>]. By contrast, if the VENUE Act had been in effect in 2015 instead, about 43% of patent suits would have moved to another district. *Id.*

5. In 2014, Kraft sued TC Heartland in the U.S. District Court for the District of Delaware, not the Eastern District of Texas. *Kraft Foods Grp. Brands LLC v. TC Heartland, LLC*, No. 14-28-LPS, 2015 WL 5613160 (D. Del. Sept. 24, 2015), *aff'd*, 821 F.3d 1338 (Fed. Cir. 2016), *cert. granted*, No. 16-341, 2016 WL 4944616 (U.S. Dec. 14, 2016). However, TC Heartland's petition for certiorari references the Eastern District of Texas, and all seven amicus briefs filed at the cert stage focus almost exclusively on the Eastern District of Texas. See *TC Heartland LLC v. Kraft Foods Group Brands LLC*, SCOTUSBLOG, <http://www.scotusblog.com/case-files/cases/tc-heartland-llc-v-kraft-foods-group-brands-llc> [<https://perma.cc/BMK4-6QHA>] (providing links to all documents filed with the Supreme Court in the case).

6. For a general overview of how non-practicing patent holders can impose asymmetric costs in patent litigation and thereby induce nuisance value settlements, see *Informational Hearing on Patent Assertion Entities Before the California Assembly Select Committee on High Technology*, (Oct 30, 2013) (statement of Brian J. Love, Assistant Professor of Law, Santa Clara University), http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2347138 [<https://perma.cc/NTA6-WLZM>].

7. As Justice Scalia once famously referred to the district. Transcript of Oral Argument at 10-11, *eBay v. MercExchange*, 547 U.S. 388 (2006) (No. 05-130), https://www.supremecourt.gov/oral_arguments/argument_transcripts/05-130.pdf [<https://perma.cc/G62C-2BBU>] ("[T]hat's a problem with Marshall, Texas, not with the patent

jurisdiction for patent litigation. In recent years, word of the Eastern District of Texas spread far enough that the rural court and its judges have garnered attention from the likes of the New York Times,⁹ VICE,¹⁰ NPR,¹¹ and HBO's John Oliver.¹²

In this Article, we take a close, up-to-date empirical look at how U.S. patent litigation plays out in districts across the nation and consider the extent to which the Eastern District of Texas' reputation is justified.¹³ While the appeal of the Eastern District to patent plaintiffs is undeniable (almost forty-four percent of all patent cases in 2015 were filed in the district), a simple explanation for the district's popularity is surprisingly hard to articulate. Though we find evidence that the Eastern District of Texas is relatively plaintiff-friendly in certain respects,

law . . . I don't think we should . . . write our patent law because we have some renegade jurisdictions."). Others have been more direct in expressing their displeasure with the court. *Texas Monthly* once dubbed the Eastern District of Texas "[maybe] the worst thing that ever happened to intellectual property law." Loren Steffy, *Patently Unfair*, TEX. MONTHLY, Oct. 2014, <http://www.texasmonthly.com/politics/patently-unfair> [https://perma.cc/8P5C-WJAA]. The Eastern District of Texas was also ranked ninth on the American Tort Reform Foundation's 2015-2016 list of "Judicial Hellholes." *Judicial Hellholes: 2015/2016 Executive Summary*, AM. TORT REFORM FOUND. (Dec. 21, 2016), <http://www.judicialhellholes.org/2015-2016/executive-summary> [https://perma.cc/6SMX-Z6NW].

8. There is at least some evidence that the people of East Texas, if not also the judiciary, recognize and welcome the economic benefits that come from the local patent litigation boom. For example, Tyler4Tech, "a consortium of Tyler, Texas' local civic, education and private enterprise leaders, companies and organizations," touts on its website that the region has "plaintiff-friendly local rules, speedy dispositions, and principled jurors who understand the value of Intellectual Property." TYLER4TECH (Nov. 17, 2016), <http://tyler4tech.com/index.html> [https://perma.cc/8NZL-CMXM]. For a thorough examination of the phenomenon of "forum selling" in the Eastern District of Texas, including the indirect financial benefits of patent litigation for the local economy, see J. Jonas Anderson, *Court Competition for Patent Cases*, 163 U. PA. L. REV. 631 (2015); Daniel M. Klerman & Greg Reilly, *Forum Selling*, 89 S. CAL. L. REV. 241 (2016); Matthew Sag, *IP Litigation in United States District Courts: 1994 to 2014*, 101 IOWA L. REV. 1065, 1095-1104 (2016).

9. Julie Creswell, *So Small a Town, So Many Patent Suits*, N.Y. TIMES (Sept. 24, 2006), <http://www.nytimes.com/2006/09/24/business/24ward.html> [https://perma.cc/VM9P-XL5K]; Edgar Walters, *Tech Companies Fight Back Against Patent Lawsuits*, N.Y. TIMES (Jan. 23, 2014) <https://www.nytimes.com/2014/01/24/us/tech-companies-fight-back-against-patent-lawsuits.html> [https://perma.cc/JX8E-8NVH].

10. Kaleigh Rogers, *The Small Town Judge Who Sees a Quarter of the Nation's Patent Cases*, MOTHERBOARD (May 5, 2016), <https://motherboard.vice.com/read/the-small-town-judge-who-sees-a-quarter-of-the-nations-patent-cases> [https://perma.cc/VTS2-Y5YX].

11. *This American Life: When Patents Attack!*, NPR RADIO (Jul. 22, 2011), <http://www.thisamericanlife.org/radio-archives/episode/441/when-patents-attack> [https://perma.cc/96CC-B4UY].

12. *Last Week Tonight with John Oliver*, HBO TELEVISION (Apr. 19, 2015), https://www.youtube.com/watch?v=3bxcc3SM_KA&noredirect=1 [https://perma.cc/9KG6-R8XH].

13. For a summary of inter-district variation in patent litigation during prior years, see, e.g., John Allison et al., *Understanding the Realities of Modern Patent Litigation*, 92 TEX. L. REV. 1769 (2014); Jeanne C. Fromer, *Patentography*, 85 N.Y.U. L. REV. 1444 (2010); Kimberly A. Moore, *Forum Shopping in Patent Cases: Does Geographic Choice Affect Innovation?*, 79 N.C. L. REV. 889 (2001).

we also observe that allegedly defendant-friendly jurisdictions such as the Northern District of California¹⁴ have characteristics that in many respects are quite similar.¹⁵

Rather than any one of the traditional narratives explaining the appeal of East Texas, we conclude that what makes the Eastern District so attractive to patent plaintiffs is the accumulated effect of several marginal advantages, particularly with respect to the timing and success rate of important pretrial events. To borrow a shopworn phrase, the devil is in the details—specifically the nitty gritty details of seemingly mundane procedural choices, like the relative timing of discovery deadlines, transfer decisions, and claim construction. This observation suggests to us that, among reforms like those included in the Innovation Act and other recent omnibus patent reform bills,¹⁶ mandatory delays in discovery may be the most effective at protecting companies from abusive patent enforcement in East Texas and elsewhere.

However, we also find evidence that judges in the Eastern District of Texas have generally exercised their discretion in the past in ways that dampen the effect of prior patent reform measures and Supreme Court opinions that would otherwise have shifted leverage in patent suits away from “trolls” and toward accused infringers. This observation leads us to the conclusion that apart from venue reform, there may well be no simple fix that will end the Eastern District of Texas’ popularity with patent plaintiffs. Because judges have broad, and largely unappealable, discretion to control when and how motions are heard and the way cases proceed in their courtrooms,¹⁷ almost any other reforms may ultimately prove toothless if judges choose not to embrace them. As retired Magistrate Judge

14. Letter to Congress from 28 Law Professors & Economists Urging Caution on the VENUE Act (Aug. 1, 2016), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2816062 [<https://perma.cc/YN43-KTP7>] (stating that the District of Delaware and the Northern District of California “are recognized as more friendly to defendants” than the Eastern District of Texas).

15. In fact, the Eastern District of Texas adopted its local patent rules from those already in place in the Northern District of California. For a comparison of the districts’ respective local rules, see Jenner & Block LLP, Chart Comparing the Local Patent Rules (2016), https://jenner.com/system/assets/assets/6962/original/Local_20Patent_20Rules_20Chart.pdf [<https://perma.cc/7FYT-Y5JA>].

16. In 2013, the Innovation Act, H.R. 3309, 113th Cong. (2013), passed the House but ultimately stalled in the Senate. It was introduced again in the next session, H.R. 9, 114th Cong. (2015), but again failed to gain traction. The Innovation Act included, among other reforms: a presumption that attorney’s fees be awarded to prevailing parties in patent cases, mandatory discovery stays pending motions to transfer or dismiss, and codification of an expanded customer suit exception. H.R. 9, 114th Cong. (2015).

17. See *Amado v. Microsoft Corp.*, 517 F.3d 1353, 1358 (Fed. Cir. 2008) (“District courts . . . are afforded broad discretion to control and manage their dockets, including the authority to decide the order in which they hear and decide issues pending before them.”). Intermediate, discretionary rulings like these are not immediately appealable, 28 U.S.C. § 1291 (limiting appellate jurisdiction to “final decisions of the district courts”), and, when appealed, are reviewed under a permissive “abuse of discretion” standard. *Highmark, Inc. v. Allcare Health Mgmt. System, Inc.*, 134 S. Ct. 1744, 1748 (“[D]ecisions on ‘matters of discretion’ are ‘reviewable for abuse of discretion.’”) (quoting *Pierce v. Underwood*, 487 U.S. 552, 558 (1988)).

Judith Guthrie of Tyler, Texas once cautioned: “[a]nybody who applies to be a judge in the Eastern District knows what the deal is It’s like an unspoken job description. It will continue until the bar decides to file elsewhere or until Congress changes the law.”¹⁸ Accordingly, restricting patentees’ ability to file suit in East Texas in the first place may be the single most effective reform available to Congress and the courts to limit the use of forum selection as a weapon to impose increased legal costs on companies sued for patent infringement.

II. THE EASTERN DISTRICT OF TEXAS’ POPULARITY

Looking first at patent caseloads nationwide, we reconfirm what has long been known: that the Eastern District of Texas is wildly popular with patent plaintiffs, particularly those whose core business is enforcing “high tech” patents.¹⁹ As shown below in Table 1, more than a third of patent suits filed since 2014 were brought in the Eastern District.²⁰ In fact, one judge—Judge Rodney Gilstrap of Marshall, Texas—saw almost one quarter of all patent case filings nationwide during the same timeframe, more than all the federal judges in California, New York, and Florida combined.²¹

18. Steffy, *supra* note 7.

19. For more on the Eastern District of Texas’ rise to prominence in patent litigation, see Andrei Iancu & Jay Chung, *Real Reasons the Eastern District of Texas Draws Patent Cases: Beyond Lore and Anecdote*, 14 SMU SCI. & TECH. L. REV. 299 (2011) (presenting statistics on patent litigation in the Eastern District of Texas for the period 1991 to 2010); Yan Leychkis, *Of Fire Ants and Claim Construction: An Empirical Study of the Meteoric Rise of the Eastern District of Texas as a Preeminent Forum for Patent Litigation*, 9 YALE J. L. & TECH. 193 (2007); Xuan-Thao Nguyen, *Justice Scalia’s “Renegade Jurisdiction”: Lessons for Patent Law Review*, 83 TULANE L. REV. 111 (2008) (presenting statistics on patent litigation in the Eastern District of Texas for the period 1996 to 2006).

20. 28 U.S.C. § 1400(b) provides that “[a]ny civil action for patent infringement may be brought in the judicial district where the defendant resides, or where the defendant has committed acts of infringement and has a regular and established place of business.” 28 U.S.C. § 1391(d) states that, for venue purposes, a corporate defendant “shall be deemed to reside in any district . . . within which its contacts would be sufficient to subject it to personal jurisdiction if that district were a separate State.” As currently interpreted by the Federal Circuit, these statutory rules make jurisdiction for patent suits proper in any federal district in which the accused product is sold. *In re TC Heartland, LLC*, 821 F.3d 1338, 1344 (Fed. Cir. 2016) (stating that jurisdiction exists “where a nonresident defendant purposefully shipped accused products into the forum through an established distribution channel and the cause of action for patent infringement was alleged to arise out of those activities”), *cert. granted*, No. 16-341, 2016 WL 4944616 (U.S. Dec. 14, 2016). As a result, a patentee contemplating suit against a national retailer, or the producer of any of its products, can essentially file suit in the district of its choice. As mentioned *supra*, this rule will be revisited by the Supreme Court in *TC Heartland*.

21. We obtained this statistic, as well as many others referenced below, using Lex Machina. Lex Machina is a SaaS product that allows users to search documents filed in IP suits and generate a wide variety of analytics derived from those documents. See *About Us*, LEX MACHINA (2015), <https://lexmachina.com/about/> [<https://perma.cc/J8N9-RDW5>]; *How it Works*, LEX MACHINA (2015), <https://lexmachina.com/what-we-do/how-it-works/> [<https://perma.cc/Y3TP-94EF>]. According to Lex Machina, between 2014 and mid-2016 Judge Gilstrap saw 3,166 new patent suits, more than the combined total of all district courts in California, Florida, and New York: 2,656. Judge Gilstrap’s popularity is attributable, at least in

What makes this level of concentration even more remarkable is where it takes place. East Texas saw more patent suits since 2014 than the districts that contain California's Silicon Valley, Massachusetts' Route 128, Detroit's Automation Alley, Illinois' Golden Corridor, and North Carolina's Research Triangle.²² In contrast to the Northern District of California, which is home to a population of over 6.2 million residents, the Eastern District of Texas' population is (despite spanning three times as many counties) under 3.9 million.²³ Marshall, Texas, where almost a third of all patent suits are filed today,²⁴ has a population just shy of 25,000.²⁵ In short, rather than being a jurisdiction of convenience for America's tech industry, the Eastern District has attracted the majority of all patent suits in the U.S. despite lacking its own technology hub.²⁶

part, to the fact that he is currently assigned ninety-five percent of all civil cases filed in the Marshall Division. U.S. District Court for the Eastern District of Texas General Order No. 16-7 (July 15, 2016), http://www.txed.uscourts.gov/cgi-bin2/view_document.cgi?document=25551 [<https://perma.cc/SQ6N-L75N>]. In most other districts, new cases are assigned randomly across all judges in the district (or across all judges in the district who are participating in the Patent Pilot Program). Because the Eastern District of Texas does not follow this convention, patentees that file suit in East Texas have the unique ability to select which judge will hear their case (with a high degree of probability) by filing suit in a division that assigns a large percentage of its civil docket to a particular judge. Prior standing orders on civil case assignment in the Eastern District likely also contributed to the outsized popularity of several former East Texas judges who attracted large patent dockets during their time on the bench. See Klerman & Reilly, *supra* note 8, at 252-56 (noting, for example, that "at the outset of the Eastern District's popularity in 2006, patentees filing in the Marshall division were told they had a 70% chance of being assigned to Judge Ward, those filing in Tyler a 60% chance of Judge Davis, . . . and those filing in Texarkana a 90% chance of Judge Folsom").

22. According to Lex Machina, between 2014 and mid-2016, 4,736 patent suits were filed in the Eastern District of Texas, while the Northern District of California saw 595 patent suits, the District of Massachusetts saw 154, the Eastern District of Michigan saw 159, the Northern District of Illinois saw 448, and the Middle and Eastern Districts of North Carolina collectively saw 79.

23. A list of counties included in each judicial district can be found, for example, via the U.S. Marshals Service, <https://www.usmarshals.gov/district> [<https://perma.cc/V7XX-YFM4>]. Population estimates for Texas and California counties can be found, for example, at *Population Estimates of Texas Counties, 2010-2015*, TEX. ST. LIBR. & ARCHIVES COMMISSION (Nov. 17, 2016) <https://www.tsl.texas.gov/ref/abouttx/popcnty2010-11.html> [<https://perma.cc/84BW-MSXQ>]; *California Counties by Population*, CAL. DEMOGRAPHICS (Nov. 17, 2016) http://www.california-demographics.com/counties_by_population [<https://perma.cc/JRV6-FDVX>].

24. According to Lex Machina, Judges Gilstrap and Schroeder of the Marshall Division were assigned over 93% of all patent cases filed in the Eastern District of Texas during the period of our study.

25. *Population: Marshall, Texas*, https://www.google.com/publicdata/explore?ds=kf7tgg1uo9ude_&hl=en#!ctype=l&strail=false&bcs=d&nselm=h&met_y=population&scale_y=lin&ind_y=false&rdim=place&idim=place:4846776&ifdim=place:state:48000&hl=en_US&dl=en_US&ind=false (displaying population data over time for Marshall, Texas collected from the U.S. Census Bureau).

26. Klerman & Reilly, *supra* note 8, at 243 ("[The Eastern District of Texas] is home to no major cities or technology firms."). In fact, though the Eastern District's Sherman Division includes a portion of the Dallas-Fort Worth Metroplex—perhaps most notably several suburbs of Dallas located in Collin and Denton Counties—very few patent cases are filed in the Sherman Division. According to Lex Machina, Judges Crone, Mazzant, and Schell of the Sherman

TABLE 1: PATENT CASE FILINGS BY DISTRICT (JAN. 2014-JUNE 2016)²⁷

	Num. Dist. Judgeships ²⁸	2014	2015	2016 (to 7/1)	Total	Total per Judgeship
E.D. Tex.	8 (1.2%)	1427 (28.1%)	2541 (43.6%)	768 (34.3%)	4,736 (36.0%)	592
D. Del.	4 (0.6)	946 (18.6)	545 (9.4)	201 (9.0)	1,692 (12.9)	423
C.D. Cal.	28 (4.1)	335 (6.6)	300 (5.2)	153 (6.8)	788 (6.0)	28.1
N.D. Cal.	14 (2.0)	259 (5.1)	229 (3.9)	107 (4.8)	595 (4.5)	42.5
D.N.J.	17 (2.5)	286 (5.6)	272 (4.7)	110 (4.9)	668 (5.1)	39.3
N.D. Ill.	22 (3.2)	157 (3.1)	163 (2.8)	128 (5.7)	448 (3.4)	20.4
S.D.N.Y.	28 (4.1)	120 (2.4)	155 (2.7)	59 (2.6)	334 (2.5)	11.9
S.D. Fl.	18 (2.6)	111 (2.2)	131 (2.2)	85 (3.8)	327 (2.5)	18.2
S.D. Cal.	13 (1.9)	75 (1.5)	80 (1.4)	62 (2.8)	217 (1.6)	16.7
All Other Districts	535 (77.9)	1,371 (27.0)	1,409 (24.2)	568 (25.3)	3,348 (25.5)	6.3
J. Gilstrap	1 (0.4)	988 (19.4)	1686 (28.9)	492 (22.0)	3,166 (24.1)	3,166
All Except E.D. Tex.	679 (98.8)	3,660 (71.9)	3,284 (56.4)	1,473 (65.7)	8,417 (64.0)	12.4
Total	687 (100)	5,087 (100)	5,825 (100)	2,241 (100)	13,153 (100)	19.1

In addition to its sheer size, the population of cases in East Texas is also noteworthy for its composition. Table 2 shows that, far from a random assortment of cases, the Eastern District of Texas' caseload skews heavily toward computing and telecommunications technology, and is almost entirely made up of cases filed by "trolls," known less colloquially as patent assertion entities (PAEs)—companies that exist to monetize patents, rather than commercialize the technology they cover.²⁹ While cases involving pharmaceutical and medical patents are primarily located in close proximity to where those industries are most concentrated—in California and New Jersey³⁰—the same is not true for patents

Division presided over just 44 of the 4,736 patent cases filed in the Eastern District during the period of our study.

27. *All Court Case Filings by Year: All Patent Cases Filed by Year*, LEX MACHINA (Sept. 12, 2016), <https://law.lexmachina.com/court/table#Patent-tab>.

28. These are counts of the total number of congressionally authorized judgeships in each district. *Chronological History of Authorized Judgeships-District Courts*, U.S. COURTS (Dec. 21, 2016) <http://www.uscourts.gov/judges-judgeships/authorized-judgeships/chronological-history-authorized-judgeships-district-courts> [<https://perma.cc/E9MB-KDS8>]. The total count includes district judgeships on territorial courts. *Id.* Note that not all judgeships were filled during the entire period of this study. *Id.*

29. The term "patent assertion entity" is typically defined to encompass all non-practicing patent enforcers, except universities, early stage startups, and IP holding subsidiaries of operating technology companies. See Love, *supra* note 6, at 2-3.

30. Of the top ten pharmaceutical companies ranked by revenue earned in the U.S. in 2014, five are based in California and two in New Jersey. PMGROUP, *Top 15 Pharma*

that cover computing technology. None of the U.S. computer industry's most prolific patent applicants has so much as a single office in East Texas.³¹

TABLE 2: TECHNOLOGY, PLAINTIFF, AND CLAIM TYPES
BY DISTRICT (JAN. 2014-JUNE 2016)³²

	Technology at Issue in Case			PAE Cases ³³	Declar. Judg. Actions
	Computing & Telecomm	Pharmaceutical & Medical	Other		
E.D. Tex.	91.8%	2.9%	5.3%	93.9%	0.3%
D. Del.	57.4	33.7	9.0	59.0	3.2
C.D. Cal.	39.5	8.2	52.3	44.9	8.1
N.D. Cal.	81.4	5.1	13.4	62.4	10.7
D.N.J.	20.5	68.7	10.8	18.3	4.0
N.D. Ill.	57.6	9.6	32.8	51.9	7.2
S.D.N.Y.	48.9	14.7	36.4	41.7	6.6
S.D. Fl.	65.9	9.1	25.0	66.5	6.1
S.D. Cal.	53.7	7.9	38.3	43.3	5.5
All Other Districts	38.6	12.7	48.7	38.0	7.8
All Except E.D. Tex.	47.1	20.1	32.8	45.3	6.6
Total	63.5	13.8	22.7	62.9	4.3

To shed light on patent suits' geographic connection (or lack thereof) to the

Companies in the US, PMLIVE (2016) http://www.pmlive.com/top_pharma_list/us_revenues [<https://perma.cc/8DTZ-CVKH>]. The other three are based in Europe. *Id.*

31. For a list of companies with the top ten largest U.S. patent portfolios (all of which are computing and electronics companies), see Joff Wild, *The Biggest US Patent Portfolio Is Not Owned by IBM, but by Samsung Electronics*, INTELL. ASSET MGMT. BLOG (Apr. 11, 2016), <http://www.iam-media.com/blog/detail.aspx?g=b174a267-c73b-4f99-aa9b-dd4b21f3e217> [<https://perma.cc/4KL3-PHQ9>]. According to Lex Machina, between January 1, 2014 and June 30, 2016 only one of these ten companies filed a patent infringement case in the Eastern District of Texas, and that company filed just one suit. *Hitachi Maxwell, Ltd. v. Top Victory Elecs. (Taiwan) Co.*, No. 2:14-cv-01121 (E.D. Tex. 2014).

32. We are grateful to Unified Patents for making this data available to us. We adopted the three technology classes used by Unified Patents. See *2015 Patent Dispute Report*, UNIFIED PATENTS (Dec. 31, 2015), <https://www.unifiedpatents.com/news/2016/5/30/2015-patent-dispute-report> [<https://perma.cc/3GKW-DDCF>] ("High-tech = Technologies relating to Software, Hardware, and Networking. Medical = Technologies relating to Pharmaceuticals, Medical Devices, Health Related Technologies. Other = Technologies relating to Mechanical, Packaged Goods, Sporting Equipment and any other area outside of high-tech and medical patents.").

33. Our definition of PAE excludes universities, IP holding subsidiaries of operating companies, and start-ups working toward commercialization of the patented technology. See *supra* note 29.

districts in which they were brought, we collected data on the locations of asserted patents' inventors and original assignees, as well as the locations of parties accused of infringement, for the entire population of patent suits filed in the Northern District of California and for a sample of 600 patent suits filed in the Eastern District of Texas during the period of our study. As shown below in Table 3, we found that less than 2% of patent suits brought in the Eastern District were filed to enforce patented technology invented in East Texas, and that less than 8% were filed against defendants with a corporate office located in the district. By contrast, across all patent cases filed in the Northern District of California during the same period, we found that 42% enforced a patent invented in Northern California and that almost two-thirds were filed against defendants with a branch location in Northern California. Altogether, close to 90% of cases filed in the Northern District of California involved either a patent invented in the district or an accused infringer with an office in the district. In the Eastern District of Texas, less than 15% of cases involved a patent invented in the district or an accused infringer operating an office in the district.

TABLE 3: LOCATION OF INVENTION AND ALLEGED INFRINGERS IN PATENT SUITS FILED IN E.D. TEX. AND N.D. CAL. (JAN. 2014-JUNE 2016)

	E.D.Tex. ³⁴	N.D. Cal.
% of cases with at least one patent-in-suit that has:		
At least one inventor listed on face of patent as residing in the district.	1.7%	40.7%
At least one inventor listed on face of patent as residing in the district <i>or</i> at least one original assignee listed on face of patent as located in the district.	8.5	42.0
% of cases with a first-named defendant that has:		
Its U.S. headquarters in the district.	3.2%	47.4%
At least a branch office in the district.	7.7	65.0
% of cases with:		
At least one inventor listed on face of patent as residing in the district <i>or</i> at least one original assignee listed on face of patent as located in the district <i>or</i> a first-named defendant that has its U.S. headquarters in the district.	10.5%	75.1%
At least one inventor listed on face of patent as residing in the district <i>or</i> at least one original assignee listed on face of patent as located in the district <i>or</i> a first-named defendant that has a branch office in the district.	14.8	87.6

The gulf between the locus of original innovation and of later patent assertion is likely explained in part by the fact that so few cases filed in East Texas are filed by companies that actually produce and sell technology. Instead, cases in the Eastern District of Texas are overwhelmingly filed by PAEs, entities created

34. The statistics presented in this column are for a random sample of 600 patent suits filed in the Eastern District of Texas between January 1, 2014 and June 30, 2016. This sample size results in a confidence interval below 3.5% (at a 95% confidence level) for the statistics reported.

expressly for the purpose of litigating patent suits. No other district even comes close. Because these parties generally lack a principal place of business—or, for that matter, assets other than the patents in suit—they have the flexibility to form LLCs and file suit wherever they deem most advantageous for litigation purposes.³⁵

Finally, it is worth noting that the Eastern District of Texas' popularity is almost entirely driven by the preferences of patent enforcers, not those of accused infringers. Though it has been suggested by some that the Eastern District may be popular due to a general preference for efficiency and judicial expertise among all patent litigants,³⁶ case filing statistics do not bear this out. As shown above in Table 2, the Eastern District of Texas sees declaratory judgment filings at a rate well below the national average. In other words, when accused infringers are given the opportunity to select the venue for litigation, they disproportionately choose a different court.

Viewed together, these findings give us pause. While the Eastern District's popularity alone may not be cause for serious concern,³⁷ we find that the court's appeal is not shared by all kinds of litigants. Since 2014, more than 90% of patent suits filed in East Texas were filed by PAEs enforcing high tech patents. Accused infringers, by contrast, chose to file suit in East Texas at a rate less than one tenth that seen in other districts. Moreover, there appears to be nothing special about the East Texas economy that explains this dichotomy. Rather, cases litigated in the Eastern District of Texas overwhelmingly involve patents covering inventions made elsewhere, asserted against parties located elsewhere, and by plaintiffs with

35. Many have noted the proliferation of empty offices in East Texas leased by patent-holding LLCs for purposes of manufacturing an apparent connection to the Eastern District. See, e.g., Allan Pusey, *Marshall Law: Patent Lawyers Flock to East Texas Court for its Expertise and 'Rocket Docket'*, DALL. MORNING NEWS, Mar. 26, 2006, at 1D ("Office suites housing nothing but banker's boxes and patent paperwork are not uncommon in Marshall."); Timothy B. Lee, *These Empty Offices Are Costing the US Economy Billions*, VOX (June 8, 2016), <http://www.vox.com/2016/6/8/11886080/patent-trolls-eastern-texas> [<https://perma.cc/4K6T-B6S7>] (describing and linking to a video of software developer Austin Meyer's attempt to visit the East Texas offices of several PAEs); *When Patents Attack!*, *supra* note 11 (noting that one patentee filing lawsuits in the Eastern District "has no researchers, no employees of any kind that we can find, and its only place of business seems to be an empty office in a corridor of empty offices in a small town in Texas").

36. See Samuel F. Baxter, *Eastern District of Texas: Fair and Just Patent Outcomes for Plaintiffs and Defendants*, METROPOLITAN CORP. COUNSEL (Sept. 1, 2007), <http://www.metrocorpcounsel.com/articles/8817/eastern-district-texas-fair-and-just-patent-outcomes-plaintiffs-and-defendants> [<https://perma.cc/3SLR-V76S>]; Christopher P. Gerardi, *Inside the Busiest Patent Court in America: A Discussion with Chief Judge Leonard Davis*, FTI J. (Feb. 2014), <http://ftijournal.com/article/inside-the-busiest-patent-court-in-america> [<https://perma.cc/63R2-RVSQ>].

37. In theory, at least. In practice, we question whether it is ever possible for a single judge or small group of judges to effectively oversee many thousands of lawsuits at once, regardless of the causes of action alleged. For example, if even 10% of the 1,686 patent cases assigned to Judge Gilstrap in 2015 eventually go to trial, he would need to preside over at least three patent trials per week every week for an entire year to avoid creating a backlog.

little or no connection to the region prior to filing a complaint.³⁸

III. WHY IS THE EASTERN DISTRICT OF TEXAS SO POPULAR?

While the Eastern District's popularity with patent enforcers has been well-documented for years, there is less certainty on the reasons why this district has become the venue of choice for patent monetization. Reviewing the evidence, we find a number of plausible answers. However, we ultimately conclude that the answer is likely more complex than traditional narratives suggest.

A. *Is the Eastern District of Texas a "Rocket Docket"?*

One common explanation for the Eastern District of Texas' popularity is its reputation as a fast docket—i.e., a jurisdiction where cases proceed to trial quickly, which in turn allows plaintiffs to recover damages faster while placing greater pressure on defendants to settle.³⁹ Many current and former East Texas judges have reinforced this reputation by publicly expressing a preference for getting cases to trial, and quickly.⁴⁰ We find support for this hypothesis, but less than many might expect.

First, we do find that patent litigation generally moves quickly in the Eastern District of Texas. Eastern Texas patent cases tend to settle early (and at high rates), and when cases do not settle, they generally make it to trial faster than patent suits litigated in other courts. As shown below in Table 4, patent cases in

38. Klerman & Reilly, *supra* note 8, at 255-56 (“[P]atent cases generally have a tenuous connection to the Eastern District based on the sale of a few allegedly infringing products somewhere in the district.”).

39. See, e.g., Jeff Bounds, *New Patent Infringement Lawsuits in East Texas Shatter Records*, DALLAS MORNING NEWS (Aug. 18, 2015), <http://www.dallasnews.com/business/business/2015/08/18/new-patent-infringement-lawsuits-in-east-texas-shatter-records> [<https://perma.cc/8UBG-JTBG>] (“The Eastern District of Texas became popular with patent lawyers a decade ago when the federal judges there created a so-called rocket docket, allowing patent holders to move through the pretrial process more quickly and get to trial sooner.”); Creswell, *supra* note 9 (“What’s behind the rush to file patent lawsuit here [in the Eastern District of Texas]? A combination of quick trials and plaintiff-friendly juries, many lawyers say.”); Rogers, *supra* note 10 (attributing the Eastern District of Texas’ early popularity with patent plaintiffs to the district’s lack of a criminal docket and, thus, relative speed in civil matters).

40. See Symposium, *The History and Development of the EDTX as a Court with Patent Expertise: From TI Filing, to the First Markman Hearing, to the Present*, 14 SMU SCI. & TECH. L. REV. 253, 263 (2011) (“We believe in trial by jury, the no-nonsense expectations of lawyers to act in a professional way, getting cases to trial quickly, firm trial settings, and not deviating from them.” (quoting Judge Leonard Davis, retired)); John R. Bone & David A. Haas, *Interview with Former Chief Judge David Folsom of the U.S. District Court for the Eastern District of Texas*, STOUT RISIUS ROSS (Spring 2013), <http://www.srr.com/article/interview-former-chief-judge-david-folsom-us-district-court-eastern-district-texas> [<https://perma.cc/K9JX-3353>] (“Judge Ward and I always tried to maintain a scheduling order that would have the case ready for trial within 18 months, maybe 24 months of the filing date . . . I think we should always give thought to how to move the docket; do it quickly.”).

the Eastern District that go to trial tend to make it to a jury in less than two years, about five months faster than the nationwide median. Among districts that saw at least fifteen patent trials in the last two and a half years, the Eastern District has a median time-to-trial that is over two months faster than the next fastest court.

TABLE 4: PATENT CASE TERMINATIONS, SETTLEMENTS,
AND TRIALS BY DISTRICT (JAN. 2014-JUNE 2016)⁴¹

	Terminations		Settlements			Trials		
	Num.	Median Days to Term.	Num. (as % of all terms.)	Median Days to Settle.	% of Cases Settled w/in 1 Year	Num.	Median Days to Trial	
E.D. Tex.	4,963	188	4,341 (87.5%)	174	81.50%	43	717	
D. Del.	2,493	400	1,961 (78.7)	355	50.6	68	819	
C.D. Cal.	982	251	640 (65.2)	240	64.1	15	795	
N.D. Cal.	687	262	491 (71.5)	227	65.4	25	867	
D.N.J.	591	266	307 (51.9)	182	67.8	23	801	
N.D. Ill.	536	239	386 (72.0)	191	67.6	8	1482	
S.D.N.Y.	378	227	269 (71.2)	157	74	17	868	
S.D. Fl. ⁴²	337	120	228 (67.6)	99	93	3	454	
S.D. Cal.	303	263	238 (78.5)	243	65.5	3	581	
All Other Districts	3,779	259	2,726 (72.1)	237	66.5	101	1125	
All Except E.D. Tex.	10,086	274	7,246 (71.8)	246	63.1	263	899	
Total	15,049	237	11,587 (77.0)	210	70.0	306	861	

We also observe that cases filed in the Eastern District of Texas tend to reach a faster conclusion regardless of the manner in which they are terminated. Among all cases terminated during the period we study, those in the Eastern District conclude about six months faster than those in the District of Delaware and close to two months faster than the national median.

Looking just at those cases that settle, we again see a similar pattern. Among

41. We collected these statistics using Lex Machina. The medians reported are the median days to termination, settlement, or trial for all cases in the listed populations that were terminated, settled, or tried between January 1, 2014 and June 30, 2016.

42. Statistics for the Southern District of Florida are skewed heavily by the actions of one patentee, Shipping and Transit, LLC (FKA ArrivalStar), which filed 110 suits in the district during the period of our study. These suits also terminated exceptionally quickly, settling after a median of just sixty-five days. For background on Shipping and Transit LLC's litigation tactics, see, e.g., Jacqueline Bell, *Notorious IP Plaintiff ArrivalStar Back on the Hunt*, LAW360 (Mar. 5, 2015), <http://www.law360.com/articles/628275/notorious-ip-plaintiff-arrivalstar-back-on-the-hunt> [https://perma.cc/3QFB-G2JX].

all cases settled between 2014 and mid-2016, those in the Eastern District settled about four months faster than in the next most popular venue, the District of Delaware, and over two months faster than the national median. Looking closer still to cases that settled relatively quickly—within one year of filing—we also see a disproportionate number in the Eastern District of Texas. While about 70% of patent cases nationwide settled in their first year, the Eastern District saw more than 80% of its cases end within a year after filing. In the District of Delaware, by comparison, only half of patent cases settled within one year. In fact, with the exception of the Southern District of Florida, which saw less than one-tenth as many terminations and trials in patent suits during the same period of time, the Eastern District of Texas is the fastest venue among the top ten most popular to settlement, to trial, and to overall termination.

That said, the Eastern District is only marginally faster than many other districts, and it is not the fastest overall. Among the most popular districts for patent suits, that distinction goes to the Southern District of Florida, and nationwide to the Eastern District of Virginia, the original “rocket docket,” where patent cases make it to trial more than twice as fast as those in the Eastern District of Texas.⁴³ Moreover, the Eastern District of Texas’ popularity with patentees has continued to grow over time despite the district’s rising caseload and consequent drop in speed.⁴⁴ If speed were patentees’ primary criteria for venue selection, we would expect to see cases filed across a larger number of districts in a manner that achieves a more natural equilibrium.

B. *Are East Texas Judges and Juries Patentee-Friendly?*

Yet another common explanation for East Texas’ dominant position in patent litigation is a belief that the district is home to judges and jurors who are unusually sympathetic to plaintiffs.⁴⁵ Indeed, the district was a popular venue for

43. See, e.g., Robert M. Tata, *Virginia’s ‘Rocket Docket’ Continues to Roar*, LAW360 (Apr. 17, 2015), <http://www.law360.com/articles/644064/virginia-s-rocket-docket-continues-to-roar> [<https://perma.cc/Y7W6-F483>] (“[T]he Eastern District of Virginia—known nationally as the “Rocket Docket”—had the fastest trial docket in the country in 2014 . . . for the seventh year in a row.”).

44. Leychkis, *supra* note 19, at 210 (“[The Eastern District of Texas] patent docket has been slowing in recent years as the judges are inundated with more and more new cases.”). Indeed, many have predicted (incorrectly so far) over the years that the Eastern District’s popularity would eventually shift to other districts with faster dockets. See, e.g., Tresa Baldas, *Texas IP Rocket Docket Headed for Burnout?*, NAT’L L.J. (Dec. 28, 2004), <http://www.nationallawjournal.com/id=900005541644/Texas-IP-Rocket-Docket-Headed-for-Burnout> [<https://perma.cc/W3JZ-VLTN>]; Fromer, *supra* note 13, at 1483 (“[T]he Eastern District of Texas might be on the decline as an artificial cluster [of patent litigation], while the Western District of Wisconsin is an up-and-comer.”); Pusey, *supra* note 35, at 1D (“There is . . . trouble on the horizon [for the Eastern District of Texas]. Patent cases that used to take eight to 12 months to resolve are now taking 20 to 24 months. And districts in Pennsylvania and Wisconsin are promoting their own rocket dockets to bring intellectual property cases their way.”).

45. See Bounds, *supra* note 39 (“While the Eastern District of Texas may not be the rocket docket it once was, and even though the size of jury verdicts has generally declined in

mass tort cases before the rise of patent suits and many lawyers and judges in the area cut their teeth litigating these cases.⁴⁶ We also find statistical support for this hypothesis, but again less than conventional wisdom might suggest.

First, as shown below in Table 5, we find that judges in the Eastern District are less likely than their counterparts in other parts of the nation to grant motions to transfer. In fact, the Federal Circuit has taken the extraordinary step of issuing a writ of mandamus ordering the Eastern District to transfer a patent case four times since 2014, something it has otherwise done just once during the same period across all cases litigated in the other ninety-three districts.⁴⁷ In addition, we observe that when East Texas judges do transfer cases, they do so much later in the pre-trial process. Cases transferred out of the Eastern District of Texas are over twice as old as those transferred out of the Northern and Central Districts of California. Compared to the national average, the Eastern District of Texas takes more than 100 days longer to grant motions to transfer venue.

recent years, the Eastern District of Texas still boasts an environment that is very friendly towards plaintiffs . . .” (quoting Tyler T. VanHoutan, Partner, Winston & Strawn)); Lee Cheng, *Patent Troll Venue Abuse Must Stop in the Eastern District of Texas*, TRIBTALK (Oct. 28, 2015), <https://www.tribtalk.org/2015/10/28/patent-troll-venue-abuse-must-stop-in-the-eastern-district-of-texas> [<https://perma.cc/MB3V-MBWC>] (“What makes trolls like [the Eastern District of Texas]? . . . [T]he perception, and reality, that the district is favorable to plaintiffs. Historically, Eastern District patent cases have been propelled quickly toward high win rates and large damage awards favoring plaintiffs.”); *When Patents Attack!*, *supra* note 11 (“Many people say that it has to do with juries in Marshall, they’re famously plaintiff-friendly, friendly to patent owners trying to get a large verdict.”).

46. See Klerman & Reilly, *supra* note 8, at 272 (“Long before East Texas was a hotbed for patent litigation, it was a focal point for personal injury, products liability, and medical malpractice litigation, including major class actions against the asbestos, pharmaceutical, and tobacco industries.”). In fact, many attribute the rise of patent litigation in East Texas at least in part to the impact that tort reform had on the local tort docket. See Creswell, *supra* note 9 (“In Marshall, an oft-told joke is that the passage of tort reform was when many local lawyers . . . moved out of personal injury and into intellectual property.”); Ronen Avraham & John M. Golden, *From PI to IP: Yet Another Unexpected Effect of Tort Reform*, (U. of Tex. Law, Law & Econ. Research Paper No. 211, 2012), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=1878966 [<https://perma.cc/WMG9-926S>].

47. We obtained this statistic, as well as others referenced below, using Docket Navigator. Like Lex Machina, Docket Navigator is a SaaS provider that allows users to search documents filed in patent infringement suits and generate related analytics. See *Docket Navigator Research Database*, DOCKET NAVIGATOR (2015), <http://home.docketnavigator.com/overview/docket-navigator/> [<https://perma.cc/3L38-2492>]; *Docket Navigator Analytics*, DOCKET NAVIGATOR (2015), <http://home.docketnavigator.com/overview/analytics/> [<https://perma.cc/7SA5-5DD4>]. We calculated this statistic by searching Docket Navigator for Federal Circuit rulings that address requests for writs of mandamus. See also Paul R. Gugliuzza, *The New Federal Circuit Mandamus*, 45 IND. L. REV. 343, 346 (2012) (“Before December 2008 . . . the Federal Circuit had never granted a mandamus petition to overturn a transfer decision, denying each one of the twenty-two petitions it had decided on that issue. It is therefore surprising that the Federal Circuit has, on ten occasions since December 2008, granted mandamus to order the U.S. District Court for the Eastern District of Texas to transfer a patent case.”).

TABLE 5: PATENT CASE MOTIONS TO TRANSFER
BY DISTRICT (JAN. 2014-JUNE 2016)

	Num. ⁴⁸	Grant	Deny	Other	Median Days to Transfer ⁴⁹
E.D. Tex.	346	164 (47.4%)	154 (44.5%)	28 (8.1%)	340
D. Del.	92	48 (52.2)	33 (35.9)	11 (11.9)	286
C.D. Cal.	46	20 (43.5)	24 (52.2)	2 (4.3)	165
N.D. Cal.	26	13 (50)	11 (42.3)	2 (7.7)	137
D.N.J.	25	17 (68)	5 (20)	3 (12)	290
N.D. Ill.	34	22 (64.7)	8 (23.6)	4 (11.8)	136
S.D.N.Y.	8	5 (62.5)	3 (37.5)	0 (0)	308
S.D. Fl.	31	23 (74.2)	8 (25.8)	0 (0)	161
S.D. Cal.	9	5 (55.5)	3 (33.3)	1 (11.1)	188
All Other Districts	289	145 (50.2)	135 (46.7)	9 (3.1)	279
All Except E.D. Tex.	560	298 (53.2)	230 (41.1)	32 (5.7)	189
Total	906	462 (51.0)	384 (42.4)	60 (6.6)	232

We also see that East Texas judges are disproportionately unlikely to grant motions for summary judgment of non-infringement or invalidity. As shown below in Table 6, judges in the Eastern District of Texas grant summary judgment in defendants' favor at a rate of about half the national average. A motion for summary judgment filed by an accused infringer litigating in a court outside the Eastern District is over twenty percentage points more likely to be granted at least in part than one filed in the Eastern District of Texas. As with motions to transfer, we also see that the Eastern District of Texas takes an unusually long time to grant summary judgment. Compared to the Northern and Central Districts of California, the gap exceeds a year in duration. Even relative to the national median, the Eastern District is more than 100 days slower.

48. We calculated these statistics by searching Docket Navigator for motions to transfer filed between January 1, 2014 and June 30, 2016. Here and throughout, we adopt Docket Navigator's conventions for determining whether a motion was granted and/or denied: "Granted Includes orders (i) granting a motion, and (ii) recommending that a motion be granted. Denied Includes orders (i) denying a motion, (ii) denying a motion as moot, (iii) denying a motion without prejudice, (iv) striking a motion, (v) striking a motion without prejudice, (vi) vacating a motion, (vii) recommending that a motion be denied, and (viii) recommending that a motion be denied as moot. Partial Includes orders (i) denying or granting a motion in part, or (ii) recommending that a motion be denied and granted in part. Other Includes orders which were not included in Granted, Denied or Partial." *Case Management*, DOCKET NAVIGATOR, <https://www.docketnavigator.com/stats>.

49. We collected this statistic from Lex Machina. The medians reported are the median days to termination for cases in the listed populations that were terminated due to inter-district transfers between January 1, 2014 and June 30, 2016.

TABLE 6: DEFENDANTS' MOTIONS FOR SUMMARY JUDGMENT
IN PATENT CASES BY DISTRICT (JAN. 2014-JUNE 2016)

	Num. ⁵⁰	Grant	Deny	Partial	Other	Median Days to S ⁵¹
E.D. Tex.	227	40 (17.6%)	135 (59.5%)	19 (8.4%)	33 (14.5%)	1053
D. Del.	243	78 (32.1)	94 (38.7)	44 (18.1)	27 (11.1)	969
C.D. Cal.	149	53 (35.6)	56 (37.6)	20 (13.4)	20 (13.4)	552
N.D. Cal.	163	55 (33.7)	72 (44.2)	25 (15.3)	11 (6.7)	694
D.N.J.	45	15 (33.3)	26 (57.8)	3 (6.7)	1 (2.2)	1273
N.D. Ill.	73	26 (35.6)	32 (43.8)	10 (13.7)	5 (6.8)	1180
S.D.N.Y.	58	25 (43.1)	25 (43.1)	6 (10.3)	2 (3.4)	1153
S.D. Fl.	26	12 (46.1)	13 (50)	1 (3.8)	0 (0)	662
S.D. Cal.	46	10 (21.7)	33 (71.7)	3 (6.5)	0 (0)	925
All Other Districts	607	204 (33.6)	305 (50.2)	62 (10.2)	36 (5.9)	944
All Except E.D. Tex.	1,410	478 (33.9)	656 (46.5)	174 (12.3)	102 (7.2)	909
Total	1,637	518 (31.6)	791 (48.3)	193 (11.8)	135 (8.2)	911

Next, because East Texas patent cases are both unlikely to be transferred out of the district and unlikely to be completely resolved by summary judgement, they are (unless settled first) disproportionately likely to go to trial. As shown below in Table 7, cases tried in the Eastern District are relatively likely to be tried to a jury, and East Texas juries are in turn disproportionately likely to side with patentees. That said, Eastern District jury verdicts are far from the most plaintiff-friendly in the country, and East Texas juries find for the patentee only slightly more often than the national average. Moreover, while damages awarded by East Texas juries exceed the national average by a large margin, median jury awards in East Texas are actually quite modest—a fact suggesting that, while large awards are certainly possible in East Texas patent trials, they are relatively rare.⁵²

50. We calculated these statistics by searching Docket Navigator for motions for summary judgement filed by accused infringers in cases in the listed populations between January 1, 2014 and June 30, 2016.

51. We collected this statistic from Lex Machina. The medians reported are the median days to termination in cases resolved by summary judgment (in favor of either party) between January 1, 2014 and June 30, 2016.

52. Patentees' ability to win large damages awards in the Eastern District of Texas is also supported by the fact that East Texas juries are responsible for six of the thirteen largest jury verdicts awarded in patent cases since 1995. See PWC, 2014 Patent Litigation Study 7, <https://www.pwc.com/us/en/forensic-services/publications/assets/2014-patent-litigation-study.pdf> [<https://perma.cc/YVB6-MJFG>]; *Masimo Corp. v. Philips Elec. N. Am. Corp.*, No. 09-cv-00080 (D. Del. Oct. 1, 2014), ECF No. 913 (awarding \$466,774,783 in damages); *Smartflash LLC v. Apple Inc.*, No. 13-cv-00447 (E.D. Tex. Feb. 24, 2015), ECF No. 503

TABLE 7: TRIALS AND DAMAGES AWARDS IN PATENT
CASES BY DISTRICT (JAN. 2014-JUNE 2016)

	Trials			Damages Awards			Num. in Top 10 (2014-16)
	Num. ⁵³	% Jury Trials ⁵⁴	% Won by Patentee	Num. ⁵⁵	Median	Mean	
E.D. Tex.	43	81.8%	60.0%	19	\$6,970,381	\$76,741,070	2
D. Del.	68	54.9	74.1	12	\$15,500,000	\$83,233,792	2
C.D. Cal.	15	45.5	20.0	3	\$13,488,765	\$48,372,672	1
N.D. Cal.	25	82.9	46.2	14	\$8,320,000	\$45,475,067	3
D.N.J.	23	0.0	54.5	0	—	—	0
N.D. Ill.	8	50.0	50.0	1	\$15,884,106	\$15,884,106	0
S.D.N.Y.	17	26.7	50.0	4	\$3,494,518	\$9,634,759	0
S.D. Fl.	3	75.0	50.0	2	\$10,673,289	\$10,673,289	0
S.D. Cal.	3	100.0	100.0	3	\$2,166,654	\$95,160,551	1
All Other Districts	101	61.5	55.3	33	\$7,800,000	\$18,419,845	1
All Except E.D. Tex.	263	56.2	57.9	72	\$8,376,351	\$38,190,010	8
Total	306	60.0	58.3	91	\$8,099,943.00	\$46,239,132.36	10

Finally, the district's high reversal rate on appeal tends to support the belief that the district is too friendly to patent plaintiffs.⁵⁶ As shown below in Table 8, appeals from the Eastern District of Texas are disproportionately likely to be successful. Since 2014, the Federal Circuit has reversed the Eastern District of Texas, at least in part, in about 45% of appeals. Many other popular districts, by contrast, have affirmance rates that are twenty or more percentage points higher

(awarding \$532,900,000 in damages); *VirnetX v. Apple*, No. 12-cv-00855 (E.D. Tex. Feb. 3, 2016), ECF No. 425 (awarding \$625,633,841 in damages).

53. We collected the number of trials and win rate from Lex Machina, looking at all trials conducted between January 1, 2014 and June 30, 2016.

54. We collected the percentage of jury trials by searching Docket Navigator for verdicts and findings of fact issued in cases in the listed populations between January 1, 2014 and June 30, 2016. Thus, this statistic does not include any trials that settled or otherwise ended prematurely before a verdict was issued.

55. We collected data on damages awards by searching Docket Navigator for awards issued in cases in the listed populations between January 1, 2014 and June 30, 2016. These statistics exclude any amounts awarded in default judgments.

56. Interestingly, early on, many pointed to the Eastern District of Texas' low rate of reversal as evidence of a lack of bias in favor of patentees. See Pusey, *supra* note 35, at 1D ("Judge [T. John] Ward . . . says [complaints about plaintiff-friendly bias are] overstated, and appellate statistics support his view. Only once has he been overruled in a patent matter, and even then, only partially.").

than the Eastern District's.⁵⁷

TABLE 8: PATENT APPELLATE OUTCOMES BY DISTRICT (JAN. 2014-JUNE 2016)⁵⁸

	Num. Fed. Cir. Rulings	Affirmed	Reversed	Mixed	Other
E.D. Tex.	55	29 (52.7%)	17 (30.9%)	8 (14.5%)	1 (1.8%)
D. Del.	89	68 (76.4)	15 (16.9)	5 (5.6)	1 (1.1)
C.D. Cal.	52	41 (78.8)	5 (9.6)	5 (9.6)	1 (1.9)
N.D. Cal.	51	37 (72.5)	6 (11.8)	8 (15.7)	0 (0)
D.N.J.	30	23 (76.7)	3 (10)	4 (13.3)	0 (0)
N.D. Ill.	16	10 (62.5)	4 (25)	2 (12.5)	0 (0)
S.D.N.Y.	45	26 (57.8)	5 (11.1)	13 (28.9)	1 (2.2)
S.D. Fl.	16	9 (56.3)	5 (31.3)	1 (6.3)	1 (6.3)
S.D. Cal.	18	10 (55.5)	3 (16.7)	5 (27.8)	0 (0)
All Other Districts	207	126 (60.9)	41 (19.8)	31 (15.0)	9 (4.3)
All Except E.D. Tex.	524	350 (66.8)	87 (16.6)	74 (14.1)	13 (2.5)
Total	579	379 (65.5)	104 (18.0)	82 (14.2)	14 (2.4)

Overall, we find that while the Eastern District of Texas is generally patentee-friendly, outcomes in the Eastern District are comparable in many respects to other districts that see far fewer filings. And in some respects, cases filed in East Texas actually have worse outcomes for patentees. Perhaps most notably, both the District of Delaware and that Northern District of California saw higher median and mean jury awards during our period of study, and both districts held almost as many trials as the Eastern District, despite seeing far fewer filings. Together, these findings once again make us skeptical that a marginal tendency to favor patent enforcers in substantive decision-making is the driving force behind the Eastern District's popularity. Though relative advantages on the merits likely play some role in the district's dominance of filings, they do not strike us as sufficiently stark on net to account for such a great disparity in filings.

57. See also Teresa Lii, *Shopping for Reversals: How Accuracy Differs Across Patent Litigation Forums*, 12 CHI.-KENT J. INTELL. PROP. 31, 43-45 (2013) (finding that the Eastern District of Texas' reversal rate on appeal between 2009 and March 2012 was significantly higher than the overall mean); Ryan Davis, *EDTX Judges' Love of Patent Trials Fuels High Reversal Rate*, LAW360 (Mar. 8, 2016), <http://www.law360.com/articles/767955/edtx-judges-love-of-patent-trials-fuels-high-reversal-rate> [<https://perma.cc/USW9-DCFY>] ("The Federal Circuit affirmed decisions coming out of the patent hotbed of the Eastern District of Texas only 39 percent of the time in 2015, while the rate for other patent-heavy districts was around 70 percent . . .").

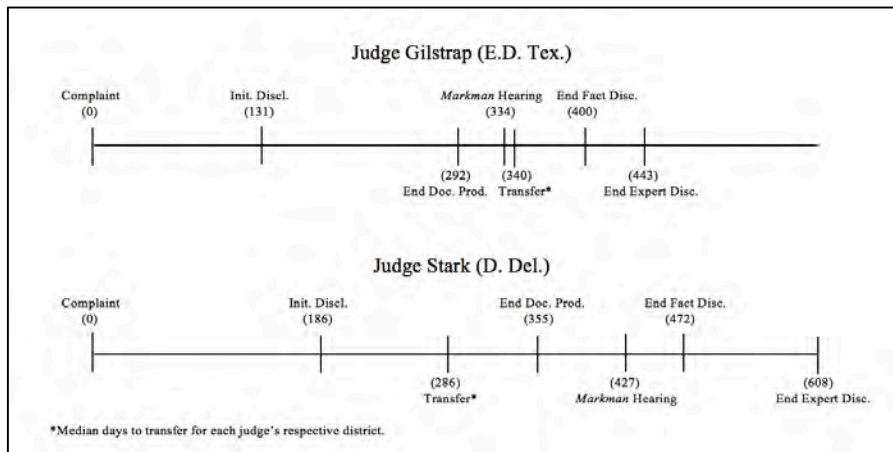
58. We collected the data in this table by searching Docket Navigator for Federal Circuit decisions issued between January 1, 2014 and June 30, 2016.

C. Discovery Deadlines and Pretrial Motions Practice

Ultimately, we find neither traditional explanation for the Eastern District's popularity particularly satisfying when viewed in isolation. Rather, we conclude that the true appeal of East Texas is more subtle and stems from the combined effect of a number of marginal procedural advantages, including the relative timing of discovery, rulings on procedural motions, and judicial scrutiny of infringement claims.

Figure 1 below shows a timeline of discovery and other pretrial deadlines taken from a sample of recent scheduling orders issued by Judge Gilstrap in patent cases litigated in the Eastern District of Texas and by Judge Leonard Stark, who has the largest patent docket in the District of Delaware.⁵⁹ The numbers shown in parentheses represent the median number of days from the complaint to each of the deadlines set in our sample of scheduling orders. In addition, we have added to each timeline the median number of days from filing to a ruling on motions to transfer for each judge's respective district.⁶⁰

Figure 1: Comparison of Median Number of Days from Filing to Various Pretrial Deadlines and Dates



As Figure 1 shows, discovery both begins and ends earlier in cases litigated before Judge Gilstrap. Every discovery deadline occurs earlier on Judge Gilstrap's

59. Using Lex Machina, we identified the last ten scheduling orders issued by each judge prior to June 30, 2016. These orders are largely uniform across cases because both judges encourage litigants to refer to model scheduling orders. Sample Docket Control Order for Patent Cases Assigned to Judge Rodney Gilstrap and Judge Roy Payne, http://www.txed.uscourts.gov/cgi-bin/view_document.cgi?document=22244 [<https://perma.cc/LD4P-4SB3>]; Revised Patent Form Scheduling Order, <http://www.ded.uscourts.gov/sites/default/files/Chambers/LPS/PatentProcs/LPS-PatentSchedOrder-Non-ANDA.pdf> [<https://perma.cc/6NZZ-KQBC>].

60. See *supra* Table 5.

scheduling order, generally by 50 to 100 days. In fact, these figures probably understate the differential in practice because, in our experience, Judge Gilstrap is less likely than most judges to allow parties to later extend these deadlines.⁶¹ As a result, parties sued for infringement in the Eastern District begin to incur discovery costs—the single largest expense in patent litigation⁶²—faster than similarly situated defendants litigating elsewhere in the country.

1. *Discovery, Transfer, and Markman Dates*

At the same time, the districts also differ with respect to the timing of two other important pretrial events: rulings on motions to transfer and the date of claim construction, or *Markman*,⁶³ hearings. Compared to their colleagues in the District of Delaware, judges in the Eastern District of Texas take a relatively long time to rule on motions to transfer venue. By the time cases erroneously filed in East Texas are transferred to a new venue, most are a year old. By contrast, judges in the District of Delaware generally transfer cases about two months faster.

Moreover, the size of this gap alone understates the true impact that this dichotomy has on accused infringers. Because Judge Gilstrap also orders that document production be complete within about ten months of filing, the relative delay in transfers means that any defendant sued in the Eastern District (even those with no real connection to the venue) must generally complete document production according to the rules of that District, which (in addition to starting early) are unusually broad in scope. Judge Gilstrap's sample discovery order, for example, requires production or inspection of "all documents . . . that are relevant to the pleaded claims or defenses," a requirement written to be so broad that it "obviate[s] the need for requests for production."⁶⁴ Local Rule 26(a) also makes clear that when it comes to discovery in the Eastern District of Texas there are "No Excuses"—responses are required regardless of any "pending motions to

61. This was also true of other former Eastern District judges who were popular with patent case filers during their time on the bench. See Gerardi, *supra* note 36 ("We have firm trial settings. I seldom grant a motion for continuance, thus one will get a fairly quick trial." (quoting Judge Leonard Davis, retired)).

62. According to a survey of IP litigators, the median cost to defend a mid-sized patent suit (i.e., a suit with between \$10 and \$25 million at stake) through the end of discovery is \$1.9 million, while the total cost through the end of trial is \$3.1 million. AM. INTELL. PROP. L. ASSOC., 2015 REPORT OF THE ECONOMIC SURVEY I-111, <http://www.aipla.org/learningcenter/library/books/econsurvey/2015EconomicSurvey/Pages/default.aspx>.

63. Named after *Markman v. Westview Instruments, Inc.*, 517 U.S. 370, 372 (1996) (holding that claim construction is a question of law to be resolved by the court).

64. Sample Discovery Order for Patent Cases Assigned to Judge Rodney Gilstrap and Judge Roy Payne, http://www.txed.uscourts.gov/cgi-bin/view_document.cgi?document=22243 [<https://perma.cc/C96U-ZEAG>]. The phrase "relevant to any party's claim or defense" is also broadly defined in the district's Local Rules. E.D. Tex. R. CV-26(d) (May 24, 2016), www.txed.uscourts.gov/cgi-bin/view_document.cgi?document=1164 [<https://perma.cc/X4VB-BARK>].

dismiss, to remand, or to change venue.”⁶⁵

In addition, the relatively early deadlines for the completion of all other forms of discovery also weigh against accused infringers. In a median patent case litigated before Judge Gilstrap in the Eastern District of Texas, fact discovery will end 66 days sooner, and expert discovery 157 days sooner, than in a typical patent case assigned to Judge Stark in the District of Delaware. As a result, otherwise similarly situated defendants litigating in East Texas will be required to incur the high costs of discovery more quickly than their counterparts litigating elsewhere. Once again, the duration of this gap alone understates the impact on accused infringers. As shown in Figure 1, both districts also differ with respect to the relative timing of discovery cutoffs and the *Markman* hearing. As a result, even though Judge Gilstrap generally schedules *Markman* hearings two to three months earlier than Judge Stark, litigants in Delaware nonetheless have three months longer to conduct discovery post-*Markman*. In our experience, accused infringers (but not plaintiffs looking for a quick settlement) strongly prefer to conduct the bulk of their own discovery only after the court has ruled on the scope of the asserted claims. Due to the inherent indeterminacy of patent claim scope, it is often unclear how a case will be litigated on the merits until after claim construction takes place.⁶⁶ As a result, Judge Gilstrap’s scheduling practices often force defendants to decide whether to cram the most crucial aspects of their own discovery into the short window following claim construction or, instead, to shoot in the dark before important terms have been defined.

2. Predictably Expensive

It is the combined effect of the procedural shifts described above that we believe actually explains the bulk of the Eastern District’s popularity and its case composition. In combination, East Texas’ tendency to impose relatively fast and firm discovery deadlines and to issue substantive rulings relatively late in cases facilitates precisely the kind of high volume, low value patent litigation that the district has become infamous for.⁶⁷ This is because the relative timing of

65. See E.D. Tex. R. CV-26(a).

66. On the difficulty inherent in determining claim scope, see, e.g., Dan L. Burk & Mark A. Lemley, *Quantum Patent Mechanics*, 9 LEWIS & CLARK L. REV. 29 (2005); Mark A. Lemley, *The Changing Meaning of Patent Claim Terms*, 104 MICH. L. REV. 101(2005).

67. As then-Chief Judge Leonard Davis once aptly put it: “If I could sum it up [i.e. why the Eastern District is so popular] in one word, I would say predictability.” Gerardi, *supra* note 36. As mentioned *supra* in note 21, this predictability includes patentees’ ability to select (with a very high degree of probability) which Eastern District judge will be assigned to their cases, something that is not possible elsewhere in the country. See Symposium, *supra* note 40, at 257-58 (explaining that one reason the Eastern District of Texas is more popular than other districts with similar local patent rules is “that there is something happening in the Eastern District that you do not have in the big commercial areas—lawyers generally know who their judge is going to be in the Eastern District of Texas” (statement of Mike McKool, Partner, McKool Smith)). Accordingly, patentees who wish to take advantage of Judge Gilstrap’s standard docket control and discovery orders can do so today with 95% certainty by filing suit in Marshall. See *supra* note 21 and accompanying text.

discovery, transfer, and *Markman* ensures that, by virtue of being sued in the Eastern District, an accused infringer will be forced to incur large discovery costs, regardless of the case's connection to East Texas or the merits of its noninfringement contentions.

The result is an opportunity for patentees to file large numbers of cases and offer to settle them for amounts few defendants will find it rational to decline. And, indeed, that is what we see in the data discussed above: the Eastern District is uniquely attractive to plaintiffs that (i) do not sell products of their own, and thus have few documents of their own to produce, (ii) enforce high tech patents that can be asserted broadly against many accused infringers, and (iii) generally settle quickly. As shown below in Table 9, five of the ten patentees that filed the most suits during the period of our study filed exclusively in the Eastern District of Texas and another two filed the majority or plurality of their suits in East Texas.⁶⁸ Law firms have also specialized to meet the needs of high-volume litigants like these. The Tadlock Law Firm, for example, has represented patentees in over one thousand cases filed in the Eastern District of Texas since 2012. Those cases have a median time-to-termination of just 172 days, and only three have gone to trial.⁶⁹

Though we lack data on settlement amounts, it is our personal experience that many cases in the Eastern District of Texas settle for between \$30,000 and \$100,000, amounts that reflect more than anything a fraction of the defendants' anticipated cost of defense.⁷⁰ A report recently published by the Federal Trade Commission supports our anecdotal experience. In a study of confidential business information subpoenaed from twenty-two PAEs, the FTC found that patentees monetizing their rights through litigation licensed their patents about 30% of the time for less than \$50,000 and almost 80% of the time for less than \$300,000,⁷¹ an amount the report "approximates [to be] the lower bound of early-stage litigation costs of defending a patent infringement suit."⁷² We think it likely

68. See also John R. Allison et al., *Patent Quality and Settlement Among Repeat Patent Litigants*, 99 GEO. L.J. 677, 677 (2011) (finding that patent plaintiffs that sued eight or more times were more likely than other patent enforcers to settle and also much more likely to lose on the merits of their cases if pushed to a trial or judgment).

69. We collected this information from Lex Machina by searching for firms that have served as counsel in the largest number of patent suits.

70. For additional anecdotal support consider, for example, the litigation practices of Lodsys and Innovatio. See David Ruddock, *Patent Trolls: What Is Lodsys Actually Asking App Developers to Pay? You Might Be Surprised*, ANDROID POLICE (Nov. 2, 2011), <http://www.androidpolice.com/2011/11/02/patent-trolls-what-is-lodsys-actually-asking-app-developers-to-pay-you-might-be-surprised> [<https://perma.cc/QS3S-984Z>]; Gregory Thomas, *Innovatio's Infringement Suit Rampage Expands to Corporate Hotels*, PAT. EXAMINER (Sept. 30, 2011), <http://patentexaminer.org/2011/09/innovatios-infringement-suit-rampage-expands-to-corporate-hotels> [<https://perma.cc/E8RZ-NKJX>].

71. FED. TRADE COMM'N, PATENT ASSERTION ENTITY ACTIVITY 88-90 (2016), https://www.ftc.gov/system/files/documents/reports/patent-assertion-entity-activity-ftc-study/p131203_patent_assertion_entity_activity_an_ftc_study_0.pdf [<https://perma.cc/LP3K-SJCE>].

72. *Id.* at 4.

that the tendency toward large numbers of small settlements also explains, at least in part, the relatively low level of damage awards that we see in most East Texas trials. Because cases are litigated in this fashion, by the time many patents are tried to a jury (if ever) in the Eastern District of Texas, those patents have been licensed numerous times for small amounts. If entered into evidence, these prior licenses make it hard for the patentee to credibly ask the jury to award a large sum of damages.

Conversely, the success of this litigation strategy also makes the Eastern District of Texas predictably inexpensive for patentees that pursue it. Because they can routinely negotiate settlements within a few months of filing a complaint, plaintiffs can very likely avoid hiring expert witnesses, as well as reviewing their own or their opponents' documents and other disclosures, before negotiating a settlement.

TABLE 9: MOST FREQUENT PATENT SUIT FILERS (JAN. 2014-JUNE 2016)⁷³

Party	Cases	% Filed in E.D. Tex.	% Terminated	Median Days to Term.	Trials
eDekka, LLC	231	100%	100%	162	0
Uniloc USA, Inc.	111	100	26	320	0
Shipping and Transit, LLC	160	0	84	65	0
Hawk Tech. Systems, LLC	149	8	88	107	0
Olivistar, LLC	103	99	98	182	0
Data Carriers, LLC	99	86	97	189	0
Eclipse IP, LLC	90	48	98	91	0
Blackbird Tech, LLC	72	0	53	336	0
Cryptopeak Solutions, LLC	66	100	73	131	0
Logitraq, LLC	59	100	100	130	0
Total	1,126	63	85	130	0

IV. WHY HAVEN'T RECENT REFORMS AND APPELLATE OPINIONS REDUCED THE EASTERN DISTRICT'S POPULARITY?

This conclusion, however, raises the question of why reforms enacted in recent years—reforms targeted at PAEs and overbroad high tech patents—have not already put an end to East Texas' dominance. In this Part, we review evidence that judges in the Eastern District of Texas have generally ruled in ways that have minimized the effect of patent reform measures passed by Congress and changes

73. The data in this table relies on a combination of information obtained from Unified Patents and Lex Machina. We obtained the names of the top 10 filers from Unified and collected case level information by searching Lex Machina for each party's name.

in the law articulated by higher courts. We find that East Texas judges are disproportionately unlikely to stay cases pending post-grant challenges, to require that patentees litigate individual cases against individual defendants, to grant early motions to dismiss on patentable subject matter grounds, and to award attorney's fees to prevailing parties.

A. *The America Invents Act*

In 2011, Congress passed the America Invents Act (AIA), the largest set of reforms to U.S. patent law since 1952.⁷⁴ Among the reforms enacted in the AIA were two specifically designed to curb the practice of filing patent suits in order to extract settlements that reflect defendants' desire to avoid the high cost of defense, rather than the strength and value of the asserted claims.

One such reform was the expansion of administrative procedures for challenging the validity of issued patents. Such procedures are designed to allow the public to eliminate patents they believe are invalid using patent office procedures that are faster, less expensive, and more broadly available than litigation in federal district court.⁷⁵ So far, the new procedures created by the AIA—particularly inter partes review and covered business method review—have proven very potent and, today, it is common for defendants to seek to invalidate patents asserted against them in court.⁷⁶ Concurrent with such challenges, defendants regularly file motions to stay patent suits for the roughly eighteen-month duration of the challenge.⁷⁷ In conjunction with litigation stays, post grant challenges allow an accused infringer to invalidate weak patent rights without first incurring the high cost of discovery.

However, as shown below in Table 10, judges in the Eastern District of Texas are less likely than their counterparts in other parts of the country to stay lawsuits pending patent office challenges of the patent-in-suit. Judges in the District of

74. Leahy-Smith America Invents Act, Pub. L. No. 112-29, 125 Stat. 284 (2011) (codified in scattered sections of 35 U.S.C.) [hereinafter AIA].

75. See 145 CONG. REC. H6944 (daily ed. Aug. 3, 1999) (statement of Rep. Rohrabacher) (“This title was an attempt . . . to further encourage potential litigants to use the PTO as a [sic] avenue to resolve patentability issues without expanding the process into one resembling courtroom proceedings.”); *Protecting Small Businesses and Promoting Innovation by Limiting Patent Troll Abuse: Hearing on S. 23 Before the U.S. Senate Judiciary Committee*, 113th Cong. 186-213, 193 (2013) (statement of Q. Todd Dickinson, Executive Director of the American Intellectual Property Law Association) (recounting the debate leading up to the AIA and referring to “the assertion of allegedly invalid or overbroad patents” as “the very abuse for which AIA post-grant procedures were created”) [hereinafter 2013 Patent Troll Abuse Hearing].

76. Roughly 10% of patents litigated between 2012 and 2014 were also challenged in a post-grant proceeding. Brian J. Love, Presentation to the State Bar of California I.P. Law Section: New Developments, New IPR Strategies Before PTAB 12 (Mar. 23, 2016), <http://digitalcommons.law.scu.edu/facpubs/925> [https://perma.cc/TV9F-ZEA5] (reporting statistics compiled by Unified Patents). Of patents challenged in post-grant proceedings between 2012 and 2014, about 80% were also asserted in court. *Id.*

77. Between January 1, 2014 and June 30, 2016, litigants filed almost 1,000 motions to stay litigation pending an inter partes or covered business method review. See *infra* Table 10.

Delaware and Northern District of California grant motions to stay, at least in part, over 70% of the time. By contrast, the grant rate in the Eastern District of Texas is less than 58%. As a result, defendants sued in East Texas are more likely to continue to rack up litigation costs early in cases, regardless of the asserted patent's validity.

TABLE 10: MOTIONS TO STAY PENDING PTAB
PROCEEDINGS BY DISTRICT (JAN. 2014-JUNE 2016)⁷⁸

	Motions to Stay Pending Inter Partes Review					Motions to Stay Pending Covered Bus. Method Review				
	Num.	Grant	Deny	Partial	Other	Num.	Grant	Deny	Partial	Other
E.D. Tex.	88	46 (52.3%)	36 (40.9%)	4 (4.5%)	2 (2.3%)	43	21 (48.8%)	18 (41.9%)	1 (2.3%)	3 (7.0%)
D. Del.	95	59 (62.1)	28 (29.5)	5 (5.3)	3 (3.1)	6	2 (33.3)	2 (33.3)	2 (33.3)	0 (0)
C.D. Cal.	53	29 (54.7)	15 (28.3)	4 (7.5)	5 (9.4)	8	4 (50)	4 (50)	0 (0)	0 (0)
N.D. Cal.	112	68 (60.7)	23 (20.5)	15 (13.4)	6 (5.3)	10	7 (70)	2 (20)	1 (10)	0 (0)
D.N.J.	10	6 (60)	4 (40)	0 (0)	0 (0)	0	0 (0)	0 (0)	0 (0)	0 (0)
N.D. Ill.	36	27 (75)	6 (16.7)	2 (5.5)	1 (2.8)	11	6 (54.5)	3 (27.3)	2 (18.2)	0 (0)
S.D.N.Y.	24	16 (66.7)	4 (16.7)	0 (0)	4 (16.7)	7	5 (71.4)	1 (14.3)	0 (0)	1 (14.3)
S.D. Fl.	11	8 (72.7)	2 (18.2)	0 (0)	1 (9.1)	3	3 (100)	0 (0)	0 (0)	0 (0)
S.D. Cal.	21	9 (42.9)	6 (28.6)	4 (19.0)	2 (9.5)	7	6 (85.7)	1 (14.3)	0 (0)	0 (0)
All Other Districts	362	215 (59.4)	97 (26.8)	26 (7.2)	24 (6.6)	48	31 (64.6)	10 (20.8)	3 (6.3)	4 (8.3)
All Except E.D. Tex.	724	437 (60.3)	185 (25.5)	56 (7.7)	46 (6.3)	100	64 (64)	23 (23)	8 (8)	5 (5)
Total	812	483 (59.5)	221 (27.2)	60 (7.4)	48 (5.9)	143	85 (59.4)	41 (28.7)	9 (6.3)	8 (5.6)

The AIA also sought to limit the ability of patentees to accuse a large number of parties of infringement in a single suit. Pre-AIA it was common for litigious patentees to sue many—sometimes dozens of—unrelated parties in a single suit.⁷⁹ This practice, while efficient for the patentee, often disadvantaged defendants sued en masse.⁸⁰ Suing large numbers of parties in a single case, for example, allowed patentees to leverage one defendant's local ties to help keep litigation against many others in East Texas. In addition, patentees also benefited from rules

78. All figures in this table were collected by searching Docket Navigator for motions to stay that were decided between January 1, 2014 and June 30, 2016.

79. See, e.g., John S. Pratt & Bonnie M. Grant, *Beware the Trolls: Explorers or Buccaneers?*, 207 PAT. WORLD 18, 18 (Nov. 2008), <http://www.kilpatricktownsend.com/~media/Files/articles/BewaretheTrolls.ashx> [<https://perma.cc/4TE9-GXFZ>] (reporting that patentee Clear with Computers, LLC once sued forty-seven defendants in a single suit).

80. See Klerman & Reilly, *supra* note 8, at 257-60 (summarizing the Eastern District of Texas' liberal stance on joinder and the negative effects it can have on accused infringers sued in multi-defendant cases).

restricting all co-defendants to a single brief or allotment of time for argument or trial. In the AIA, Congress sought to limit plaintiffs' ability to file these suits by changing the rules for joinder in patent cases.⁸¹ As the law reads today, joinder of multiple accused infringers is no longer permissible "based solely on allegations that they each have infringed the patent or patents in suit."⁸²

However, as shown below in Table 11, it has become common in the Eastern District of Texas for individual patent cases filed by the same plaintiff to be consolidated post-filing back into what is effectively a single suit for pre-trial purposes. Though grant rates are relatively high for these motions nationwide, judges in the Eastern District of Texas grant them virtually every time. In addition, while these motions are relatively rare in most other districts, they are common in East Texas. On a per case basis, the Eastern District of Texas issues three times more consolidation orders than the District of Delaware and Northern District of California, and compared to most other popular districts, the Eastern District of Texas is about twice as likely to consolidate cases that share a common patent-in-suit.⁸³ In absolute terms, the Eastern District of Texas issues more consolidation orders than all other districts combined. In fact, these statistics arguably understate the gap between districts' willingness to consolidate patent cases because it is common for judges in the Eastern District to consolidate cases *sua sponte*, without a motion ever being filed.⁸⁴

81. See Tracie L. Bryant, Note, *The America Invents Act: Slaying Trolls, Limiting Joinder*, 25 HARV. J.L. & TECH. 687, 687-88 (2012) (noting that on the day before the AIA's new joinder rules went into effect, NPEs filed "over fifty patent infringement cases . . . against more than 800 defendants.").

82. AIA, *supra* note 74, sec. 19(d), § 299, 125 Stat. 284, 332-33 (2011).

83. Consider, for example, the forty-four cases filed by Eclipse IP LLC to enforce U.S. Pat. No. 7,876,239 during the period of our study. Of those cases, twenty-nine were filed in the Eastern District of Texas, thirteen in the District of New Jersey, and two in the Northern District of Illinois. In addition, another seven declaratory judgment actions targeting the same patent were filed against Eclipse IP in the Central District of California. The Eastern District of Texas, which issued three orders consolidating fifteen of its twenty-nine cases, was the only district of these four to combine Eclipse cases for pretrial purposes.

84. We collected data on consolidation orders by searching Docket Navigator for motions to consolidate decided between January 1, 2014 and June 30, 2016. During the first six months of 2016, judges in the Eastern District of Texas issued 121 *sua sponte* consolidation orders. During the same period of time, all other districts issued just twenty-four.

TABLE 11: CONSOLIDATION OF PATENT CASES
BY DISTRICT (JAN. 2014-JUNE 2016)

	Num. Cases with Patent-in-Suit in Common with Another Case Filed in Same District . . . ⁸⁵		Consolidation Orders ⁸⁶				
	Anytime Jan. 2014- June 2016.	Within Same 6 Month Period.	Num.	Grant	Deny	Partial	Other
E.D. Tex.	4486	4407	552	542 (98.2%)	7 (1.3%)	3 (0.5%)	0 (0%)
D. Del.	1388	1297	68	62 (91.2)	5 (7.3)	1 (1.5)	0 (0)
C.D. Cal.	479	442	38	25 (65.8)	4 (10.5)	6 (15.8)	3 (7.9)
N.D. Cal.	369	343	24	21 (87.5)	3 (12.5)	0 (0)	0 (0)
D.N.J.	503	466	116	108 (93.1)	7 (6.0)	0 (0)	1 (0.9)
N.D. Ill.	280	266	13	11 (84.6)	1 (7.7)	1 (7.7)	0 (0)
S.D.N.Y.	189	161	13	8 (61.5)	4 (30.8)	0 (0)	1 (7.7)
S.D. Fl.	235	231	20	10 (50)	6 (30)	0 (0)	4 (20)
S.D. Cal.	137	123	16	14 (87.5)	2 (12.5)	0 (0)	0 (0)
All Other Districts	1416	1262	156	119 (76.3)	27 (17.3)	8 (5.1)	2 (1.3)
All Except E.D. Tex.	4996	4591	464	378 (81.5)	59 (12.7)	16 (3.4)	11 (2.4)
Total	9482	8998	1016	920 (90.5)	66 (6.5)	19 (1.9)	11 (1.1)

In short, though one might have expected ex ante that the AIA would shrink the Eastern District of Texas' caseload, it appears to have done precisely the opposite. Since 2012, the Eastern District of Texas' share of patent litigation has only grown.⁸⁷ While other districts generally embraced the new reforms, judges in East Texas were more reluctant to break with tradition and, as a result, the Eastern District retained and attracted cases filed by patentees who also preferred the old way.

85. We are grateful to Unified Patents for sharing data on asserted patents. Using that data, we were able to construct a list of unique patent-case pairs and identify cases sharing a patent-in-suit.

86. We collected data on consolidation orders by searching Docket Navigator for motions to consolidate decided between January 1, 2014 and June 30, 2016.

87. Patent suits in the Eastern District of Texas have increased since 2012, both in absolute terms and as a share of all patent litigation nationwide. According to Lex Machina, 1,251 new patent cases were filed in the Eastern District of Texas in 2012 compared to a national total of 5,461 patent cases. In 2015, the Eastern District saw 2,541 new patent cases, compared to 5,821 nationally. *Patent Cases Filed by Year*, LEX MACHINA (Sept. 12, 2016), <https://law.lexmachina.com/court/table#Patent-tab>.

B. Recent Supreme Court Opinions

In addition to congressional action, the Supreme Court has also recently modified several patent law doctrines in ways that tend to favor accused infringers. In these areas as well, we observe that the Eastern District of Texas has been reluctant embrace change.

First, in *Alice v. CLS Bank* the Supreme Court tackled the patentability of software, a topic that had deeply divided the Federal Circuit for years.⁸⁸ As interpreted by lower courts, *Alice* all but precludes the patentability of business methods, including those implemented in software.⁸⁹ Another result of the case was that, soon thereafter, many courts began disposing of cases asserting business method patents on the pleadings, without need for discovery or other pretrial proceedings. In our experience, this type of quick adjudication generally allows for business method cases to be defended for five figures in costs, far more efficiently even than filing an inter partes or covered business method review.⁹⁰ However, as shown below in Table 12, judges in the Eastern District of Texas have been reluctant to embrace this new practice. On a per case basis, defendants in the Eastern District of Texas filed three to four times fewer motions to dismiss than those sued in other popular districts. We do not believe this lack of motions to reflect a lack of merit in potential arguments, but rather an understanding that such motions would not be viewed favorably by the court. For one, for a period of time Judge Gilstrap took the exceptional step of requiring parties to request permission in writing to file an early motion to dismiss based on *Alice*.⁹¹ More importantly, as Table 12 shows, hundreds of cases enforcing business method patents were filed in East Texas during the period covered by our study. Between January 2014 and June 2016, the Eastern District of Texas saw 30% of all cases enforcing patents examined by PTO Technology Center 3600,⁹² the tech center

88. *Alice Corp. Pty. Ltd. v. CLS Bank Int'l*, 134 S. Ct. 2347 (2014).

89. See, e.g., Robert R. Sachs, *Two Years After Alice: A Survey of the Impact of a "Minor Case" (Part 1)*, BILSKI BLOG (June 16, 2016) <http://www.bilskiblog.com/blog/2016/06/two-years-after-alice-a-survey-of-the-impact-of-a-minor-case.html> [https://perma.cc/KZ6P-TPJC] (showing the impact of *Alice* on patent litigation, particularly with respect to asserted "software" and "business method" patents); Robert R. Sachs, *Two Years After Alice: A Survey of the Impact of a "Minor Case" (Part 2)*, BILSKI BLOG (June 20, 2016) <http://www.bilskiblog.com/blog/2016/06/two-years-after-alice-a-survey-of-the-impact-of-a-minor-case-part-2.html> [https://perma.cc/D4YF-MS3C] (showing the impact of *Alice* on patent prosecution, particularly with respect to the rate of patentable subject matter rejections in Tech Center 3600, "Business Methods, Construction, Transportation").

90. Inter partes review, for example, generally costs well over a quarter million dollars. AM. INTELL. PROP. L. ASSOC., 2015 REPORT OF THE ECONOMIC SURVEY I-141 (reporting a median cost of \$275,000 to pursue an inter partes review through a hearing before the Patent Trial and Appeal Board).

91. See, e.g., Kevin Penton, *Judge Gilstrap Rewrites Rules For Alice Motions In Texas*, LAW360 (Nov. 12, 2015) <http://www.law360.com/articles/726270/judge-gilstrap-rewrites-rules-for-alice-motions-in-texas> [https://perma.cc/BF32-52WJ].

92. U.S. patent examiners are divided into nine "technology centers," each subdivided into a number of "work units" that, in turn, are further subdivided into "art units." See *Patent Technology Centers*, U.S. PAT. & TRADEMARK OFF.,

with the highest rate of patentable subject matter rejections post-*Alice*,⁹³ and about 45% of all cases enforcing patents examined by TC3600 art units responsible for examining e-commerce patent applications,⁹⁴ the art units with the highest rate of patentable subject matter rejections post-*Alice*.⁹⁵ Nonetheless, during the same period of time, the Eastern District of Texas issued just 12% of all dismissals on patentable subject matter grounds.

In addition to seeing a relatively small number of early *Alice* motions, judges in the Eastern District also granted these motions at a relatively low rate—ten percentage points below the national average. Moreover, if we are right about litigants’ reluctance to file these motions in the first place, those motions filed in East Texas likely represent among the strongest motions that might otherwise have been filed and, thus, the figures reported here likely understate the true gap among districts’ grant rates.

https://www.uspto.gov/about/contacts/phone_directory/pat_tech [<https://perma.cc/TE8R-UYVW>]. Though titled “Transportation, Construction, Electronic Commerce, Agriculture, National Security and License & Review,” Technology Center 3600 is the primary tech center for applications covering business methods. See *Patent Business Methods*, U.S. PAT. & TRADEMARK OFF., <https://www.uspto.gov/patents-getting-started/patent-basics/types-patent-applications/utility-patent/patent-business> [<https://perma.cc/U6CP-FAPQ>].

93. Robert R. Sachs, *Two Years after Alice: A Survey of the Impact of a “Minor Case” (Part 2)*, BILKSI BLOG (June 20, 2016), <http://www.bilskiblog.com/blog/2016/06/two-years-after-alice-a-survey-of-the-impact-of-a-minor-case-part-2.html> [<https://perma.cc/D4YF-MS3C>] (reporting that applications examined by TC 3600 have been rejected on patentable subject matter grounds more often than those examined by any other technology center).

94. Within TC 3600, work units 3620, 3680, and 3690 specialize in business method patents related to “electronic commerce” and include art units devoted to “coupons,” “e-shopping,” “accounting,” “insurance,” and “finance and banking.” *Patent Technology Centers*, *supra* note 92.

95. *Id.* (reporting that, within TC 3600, patent applications examined by art units in the “E-commerce related work groups” have seen exceptionally high patentable subject matter rejection rates and exceptionally low overall allowance rates). See also James Cosgrove, *Are Business Method Patents Dead? It Depends on Who’s Applying for Them*, IPWATCHDOG (Aug. 4, 2015), <http://www.ipwatchdog.com/2015/08/04/are-business-method-patents-dead-it-depends-on-whos-applying-for-them/id=60077> (“The 3600s are also home to art units that concern ‘e-commerce’ . . . found in the 3620s, 3680s, and 3690s[, which] . . . [p]atent professionals have been watching . . . closely in the wake of last year’s Supreme Court decision in *Alice* . . .”); Kate Gaudry, *Post-Alice, Allowances Are a Rare Sighting in Business-Method Art Units*, IPWATCHDOG (Dec. 16, 2014), <http://www.ipwatchdog.com/2014/12/16/post-alice-allowances-rare-in-business-method/id=52675/>; Austin Underhill, *These Are the 20 Hardest and Easiest Art Units*, IPWATCHDOG (May 21, 2015), <http://www.ipwatchdog.com/2015/05/21/hardest-easiest-art-units/id=57864/> (reporting that business method art units make up eight of the fourteen art units with the lowest allowance rates).

TABLE 12: IMPACT OF *ALICE V. CLS BANK* BY DISTRICT (JAN. 2014-JUNE 2016)

	Num. Cases with Patents-in-suit Assigned to Art Units in the Following Ranges: ⁹⁶		Motions to Dismiss Citing <i>Alice v. CLS Bank</i> ⁹⁷				
	3600-95	3621-29, 3681-89, or 3691-95	Num.	Grant	Deny	Partial	Other
E.D. Tex.	685	292	20	8 (40%)	10 (50%)	1 (5%)	1 (5%)
D. Del.	260	92	27	11 (40.7)	8 (29.6)	8 (29.6)	0 (0)
C.D. Cal.	186	26	9	5 (55.5)	3 (33.3)	1 (11.1)	0 (0)
N.D. Cal.	140	40	7	4 (57.1)	2 (28.6)	1 (14.3)	0 (0)
D.N.J.	104	19	5	1 (20)	4 (80)	0 (0)	0 (0)
N.D. Ill.	75	21	9	6 (66.7)	3 (33.3)	0 (0)	0 (0)
S.D.N.Y.	63	24	2	0 (0)	1 (50)	1 (50)	0 (0)
S.D. Fl.	161	26	0	0 (0)	0 (0)	0 (0)	0 (0)
S.D. Cal.	34	9	2	1 (50)	1 (50)	0 (0)	0 (0)
All Other Districts	598	95	42	26 (61.9)	10 (23.8)	5 (11.9)	1 (2.4)
All Except E.D. Tex.	1621	352	103	54 (52.4)	32 (31.1)	16 (15.5)	1 (1.0)
Total	2306	644	123	62 (50.4)	42 (34.1)	17 (13.8)	2 (1.6)

The Supreme Court again made waves in the patent world in *Octane Fitness v. ICON Health & Fitness* when it lowered the bar for awarding attorney fees to prevailing parties in patent suits.⁹⁸ The decision came at a time when Congress was considering the Innovation Act, which would have made fee awards all but mandatory in patent suits, and the Court may well have been influenced by congressional interest in deterring abusive patent assertion.⁹⁹ Since that time, fee awards in patent suits have become both more common and more substantial in size.¹⁰⁰

96. We used the USPTO's PatEx database to determine the art unit that examined each litigated utility patent. Due to limitations of the PatEx database, we were unable to determine the tech class of 367 of the 8,527 unique utility patents that we identified as asserted at least once between 2014 and mid-2016. These 367 patents account for just 683 of the 26,459 unique utility patent-case pairs in the data we analyzed.

97. Figures in these columns were collected by searching Docket Navigator for motions to dismiss decided between January 1, 2014 and June 30, 2016 that cite to *Alice v. CLS Bank* (i.e., included the text "Alice" within six words of the text "CLS").

98. *Octane Fitness, LLC v. ICON Health & Fitness, Inc.*, 134 S. Ct. 1749 (2014) (rejecting the Federal Circuit's rigid, two-part test for determining whether a patent suit was "exceptional" for purposes of awarding attorney's fees under 35 U.S.C. § 285).

99. At the time of the opinion, the Innovation Act, H.R. 3309, 113th Cong. (2013), was pending in Congress.

100. See Hannah Jiam, Note, *Fee-Shifting and Octane Fitness: An Empirical Approach*

However, as shown below in Table 13, this shift has not been uniform across districts. Compared to the national average, the Eastern District of Texas has seen fewer motions (per case filed and per case terminated on the merits), granted motions at a lower rate, and awarded smaller amounts for those that were granted. Perhaps most remarkable is the dichotomy with respect to the size of awards given. Among the most popular districts for patent litigation, the Eastern District is the only to have both median and mean awards fall below \$100,000.

TABLE 13: ATTORNEY FEE MOTIONS AND AWARDS IN
PATENT CASES BY DISTRICT (JAN. 2014-JUNE 2016)

	Num. Cases Term. on Merits ¹⁰¹	Motions for Fees ¹⁰²					Fee Awards		
		Num.	Grant	Deny	Partial	Other	Num.	Median	Mean
E.D. Tex.	81	36	5 (13.9%)	26 (72.2%)	0 (0%)	5 (13.9%)	26	\$14,849	\$76,053
D. Del.	140	46	9 (19.6)	30 (65.2)	4 (8.7)	3 (6.5)	8	\$1,197,757	\$2,275,452
C.D. Cal.	68	48	15 (31.3)	29 (60.4)	3 (6.3)	1 (2.1)	8	\$494,481	\$995,934
N.D. Cal.	89	38	5 (13.1)	22 (57.9)	6 (15.8)	5 (13.1)	8	\$1,004,708	\$1,940,818
D.N.J.	35	12	4 (33.3)	7 (58.3)	0 (0)	1 (8.3)	2	\$2,995,842	\$2,995,842
N.D. Ill.	44	16	2 (12.5)	7 (43.7)	6 (37.5)	1 (6.3)	23	\$7,500	\$437,177
S.D.N.Y.	35	19	5 (26.3)	10 (52.6)	3 (15.8)	1 (5.3)	5	\$739,743	\$1,023,830
S.D. Fl.	22	18	4 (22.2)	13 (72.2)	0 (0)	1 (5.5)	5	\$337,553	\$1,345,895
S.D. Cal.	25	13	7 (53.8)	5 (38.5)	0 (0)	1 (7.7)	2	\$208,357	\$208,357
All Other Districts	349	227	39 (17.2)	136 (59.9)	15 (6.6)	37 (16.3)	36	\$315,734	\$1,119,034
All Except E.D. Tex.	807	437	90 (20.6)	259 (59.3)	37 (8.5)	51 (11.7)	97	\$288,857	\$1,137,061
Total	888	473	95 (20.1)	285 (60.3)	37 (7.8)	56 (11.8)	123	\$88,902	\$912,783

In short, while both Congress and the Supreme Court have modified patent law and procedure in ways that tend to benefit accused infringers, the manner in which cases are conducted in the Eastern District of Texas has dulled

Toward Understanding "Exceptional", 30 BERKELEY TECH. L.J. 611 (2015); Federal Circuit Bar Association, A Comparison of Pre Octane and Post Octane District Court Decisions on Motions for Attorneys' Fees Under Section 285 (Apr. 13, 2015), <http://www.thenalfa.org/files/FCBA-Fee-Shifting-Paper.pdf> [<https://perma.cc/83YS-PHRC>] (attached to a letter from Edgar Huang, President Elect of the FCBA, to the Senate Judiciary Committee dated Apr. 13, 2015).

101. These figures were collected by searching Lex Machina for patent cases terminated between January 1, 2014 and June 30, 2016 due to judgment on the pleadings, summary judgment, trial, judgment as a matter of law, or a contested order of dismissal.

102. All fee-related figures in this table were collected by searching Docket Navigator for motions for attorney's fees filed between January 1, 2014 and June 30, 2016.

the effects of these modifications. While some have asserted that the Eastern District of Texas has developed practices designed to protect the local market for patent litigation,¹⁰³ our data is insufficient to support such an assertion. Nevertheless, it is a fact that the Eastern District of Texas' popularity has only grown in the years since the AIA's passage.

V. ANALYSIS

Viewed as a whole, our findings suggest to us that Congress and the courts should consider placing new limits on discovery and venue in patent suits. Though patent litigation in the Eastern District of Texas tends to favor patentees in several respects, our observations lead us to conclude that the driving force behind the jurisdiction's popularity is the combination of plaintiffs' ability to impose early, broad discovery obligations on accused infringers and defendants' inability to obtain an early procedural or substantive victory through motion practice. Together, these facts make the jurisdiction attractive to PAEs with a high-volume, low-rate patent monetization strategy. Simply by filing a complaint in the Eastern District, these plaintiffs can predictably and consistently impose large costs on their opponents and leverage those costs to extract settlements that primarily reflect a percentage of a defendant's expected litigation costs from virtually any infringer, no matter where they are located in the U.S.

One way to counteract this leverage—and in turn to shift the focus of patent suits from an accounting of discovery costs to an assessment of the merits of the claim—would be to place strict limits on discovery early in patent suits. Reforms like those found in various iterations of the Innovation Act strike us as particularly promising examples. As passed by the House in 2013, section 3(d) of the bill would have strictly limited discovery in patent suits prior to claim construction.¹⁰⁴ As reintroduced in 2015, a modified version of this section would have stayed discovery altogether pending resolution of pretrial motions, including motions to transfer and motions to dismiss on the pleadings.¹⁰⁵ Both reforms would have a significant impact on pretrial practice in the Eastern District of Texas. Today in the Eastern District of Texas defendants are generally required to complete document production—a task that alone can cost six or even seven figures¹⁰⁶—well before the court has held a claim construction hearing, let alone

103. For a discussion of whether the judges of the Eastern District of Texas engage in intentional “forum selling” in order to attract patent litigation for the benefit of the local economy, themselves, and their families, see Klerman & Reilly, *supra* note 8.

104. Innovation Act, H.R. 3309, 113th Cong. § 3(d) (2013) (stating that “if the court determines that a ruling relating to the construction of terms used in a patent claim asserted in the complaint is required, discovery shall be limited, until such ruling is issued, to information necessary for the court to determine the meaning of the terms used in the patent claim . . .”).

105. Innovation Act, H.R. 9, 114th Cong. § 3(d) (2015) (stating that “discovery shall be stayed if . . . the defendant moves to . . . transfer the action . . . or . . . dismiss the action pursuant to Federal Rule of Civil Procedure 12(b) . . .”).

106. For example, a study conducted by the RAND Institute for Civil Justice of forty-five federal civil cases found a median document production cost (i.e., the total cost of collection,

made a ruling, and about fifty days before the court might grant a motion to transfer. Recent experience with rule changes in the District of Delaware also tends to suggest that reforms shifting the relative timing of substantive decisions and discovery can be quite effective. In 2014, Judges Stark and Robinson of the District of Delaware both modified their scheduling practices for patent cases to allow early claim construction decisions.¹⁰⁷ In response, case filings in Delaware fell precipitously, with most plaintiffs shifting new case filings to East Texas.¹⁰⁸

While demonstrating just how effective pretrial modifications can be, patentees' reaction to Delaware's rule change also reveals how permissive venue rules can easily scuttle otherwise effective reforms. If judges have discretion to implement the rules in ways that tend to dull their effectiveness, plaintiffs can and likely will flock to jurisdictions that fail to fully embrace reforms. The end result may well be a "race to the bottom" that exacerbates, rather than eases, the flow of cases to plaintiff-friendly jurisdictions. In the wake of the AIA and scheduling changes in the District of Delaware, this appears to be precisely what we see today in Marshall, Texas.

This fact, in turn, suggests to us that restricting venue rules applicable in patent suits may be the single most effective reform available to policymakers and courts. Procedural reforms, by their very nature, are hard to implement and even harder to police. Indeed, the discovery reforms found in both versions of the Innovation Act, though nominally mandatory, are each followed by a list of discretionary exceptions.¹⁰⁹ Though reasonable on their face, exceptions like these nonetheless leave the door open for individual districts to exercise their discretion in a manner that reduces the impact of reforms and reinforces plaintiffs' desire to litigate there. One way to prevent a race to the bottom is to cancel the

processing and privilege review) of \$1.8 million. NICHOLAS M. PACE & LAURA ZAKARAS, RAND, WHERE THE MONEY GOES: UNDERSTANDING LITIGANT EXPENDITURES FOR PRODUCING ELECTRONIC DISCOVERY 17-18 (2012), http://www.rand.org/content/dam/rand/pubs/monographs/2012/RAND_MG1208.pdf [<https://perma.cc/765V-N3CE>].

107. See, e.g., Barnes & Thornburg, LLP, "The Times They Are A-Changin'"—Delaware's Judge Stark Outlines New Patent Case Management Practices, NAT'L L. REV. (May 16, 2014), <http://www.natlawreview.com/article/times-they-are-changin-delaware-s-judge-stark-outlines-new-patent-case-management-pr> [<https://perma.cc/GLA3-JD4E>].

108. See Jennifer J. Jedra, *New Patent Suits in Eastern District of Texas Shatter Records*, MYERS WOLIN, <http://www.myerswolins.com/general/new-patent-suits-in-eastern-district-of-texas-shatter-records> [<https://perma.cc/ZD9H-MFBB>] (reporting that "only 101 new patent cases were filed in the District of Delaware in the second quarter [of 2014]" including "[j]ust six . . . from high-volume plaintiffs . . . because plaintiffs . . . see the court's early Markman hearings as a negative in getting defendants to settle cases there . . . in contrast to the Eastern District of Texas, which generally holds claim construction hearings after a great deal of pretrial discovery has been done"); Brian J. Love, Presentation at the Corporate Intellectual Property Strategy Conference: 2015 Patent Litigation Update 10 (Nov. 17, 2015), <http://digitalcommons.law.scu.edu/facpubs/911> [<https://perma.cc/C6QB-3RCB>] (showing that the growth of patent cases filed in the Eastern District of Texas between 2014 and 2015 came at the expense of case filings in the District of Delaware).

109. H.R. 3309, 113th Cong. § 3(d), *supra* note 104; H.R. 9, 114th Cong. § 3(d), *supra* note 105.

race altogether. Passing legislation like the VENUE Act or adopting the interpretation of existing patent venue rules advanced in *TC Heartland* would be a significant step in the right direction.¹¹⁰

VI. CONCLUSION

Using recent data on patent litigation across the U.S., we examined the Eastern District of Texas' status as an outlier. While the district stands out clearly for its large patent caseload, a simple explanation for its popularity is harder to identify. Though the Eastern District is relatively fast and relatively friendly to patentees on the merits of their claims, other popular districts often have comparable statistics and occasionally even surpass the Eastern District, for example with respect to speed, number of trials, and size of jury verdicts.

Rejecting these traditional explanations as overly simplistic, we then examined the relative timing of pretrial litigation events. Here, we found that the patentees suing in East Texas benefit from the district's combination of early, broad discovery deadlines with late action on motions to transfer, motions for summary judgment, and claim construction. Though our analysis is purely descriptive, we believe that the evidence points to this combination as the primary driving force behind the Eastern District's popularity. A virtual guarantee that accused infringers will be forced to incur large discovery costs well before they are given a shot to move or win cases opens the door for patentees to profitably pursue high volume, low value litigation, and this is precisely the phenomenon that appears to drive the popularity of East Texas.

Consistent with our theory, case filings in East Texas are dominated by a relatively small number of frequent filers that virtually always settle quickly and, anecdotally, for relatively small sums. It should come as no surprise then that docket speed and merits decisions do not stand out in our study. These patentees care little about the timing of trial because they have little intention of ever making it that far. Likewise, they care little about the rate of success on summary judgment and size of jury verdicts because they price their settlements at levels that primarily reflect expected litigation costs, not damages.

On the one hand, our conclusions are discouraging. Today, patentees can and often do seek out districts that offer procedural and substantive advantages, and are able to leverage these advantages to extract larger settlements from accused infringers. As a result, reforms that apply only in individual courts or that leave individual courts broad discretion to decide how general reforms will be implemented may (despite reformers' best of intentions) ultimately serve to further exacerbate the accumulation of cases in plaintiff-friendly courts, as scheduling changes in Delaware and some portions of the AIA appear to have

110. See Chien & Risch, *supra* note 4, at *34-35 (estimating that if the VENUE Act were to pass or if the Supreme Court were to side with the petitioner in *TC Heartland*, more than half of cases filed by non-practicing entities would shift to other districts, including more than two-thirds of NPE cases currently filed in the Eastern District of Texas).

done for the Eastern District of Texas. In light of these considerations, venue reform stands out as an appealing solution that bypasses both plaintiffs' ability to "shop" for friendly venues and courts' ability to "market" their jurisdiction to a particular type of litigant. Alternatively, our findings suggest that, in order to be effective, reforms should be mandatory and crafted to limit courts' ability to modify or otherwise undermine them. Mandatory discovery delays like those included in the Innovation Act may be particularly effective.

At the same time, our findings are also encouraging. If problematic patent litigation largely stems from a small number of repeat litigants, then it may be possible to craft a simple, targeted solution. Relatively small shifts in the economics of patent litigation, provided they are unavoidable, could have outsized impact on the prevalence of cost-fueled patent suits. We believe that venue reform and mandatory discovery delays are two that Congress and the courts should give very serious consideration.

Symposium “The Life of A Claim”

ARTICLES

Changing the Claim-Construction Standard of Review <i>William M. Jay</i>	553
Claim Construction Evidence During Patent Prosecution in the USPTO and Appeals to the Federal Circuit <i>Peter Hrubiec & David Marsh</i>	585
Substitute Claims in <i>Inter Partes</i> Review – Real or Illusory? <i>Andrea G. Reister, Christopher K. Eppich, Christopher G. Higby, & Nicole D. Sharer</i>	603
Beyond <i>Cuozzo</i> <i>Scott McKeown & Yasawi Raparla</i>	619
A Race to the Federal Circuit: How the Differing Claim Construction Standards and Standards of Review Influence Patent Invalidation <i>Leora Ben-Ami & Corinne Stone</i>	639
Impact of <i>Teva</i> on ITC Investigations: The Role of Experts at <i>Markman</i> Hearings <i>Jim Adduci, James Ton-that, & Jack DaSilva</i>	659
INDEX	
Volume 44 Index	677

American Intellectual Property Law Association

OFFICERS 2016-2017

MARK L. WHITAKER
President

MYRA H. MCCORMACK
President-Elect

SHELDON H. KLEIN
First Vice President

BARBARA A. FIACCO
Second Vice President

DENISE W. DEFranCO
Immediate Past President

KIM VAN VOORHIS
Secretary

BRIAN H. BATZLI
Treasurer

BOARD OF DIRECTORS

GREGORY D. ALLEN

NICHOLAS P. GODICI

SALVATORE ANASTASI

JAMES D. HALLENBECK

MONICA M. BARONE

JENNIFER L. KOVALCIK

VALERIE L. CALLOWAY

NANCY J. MERTZEL

PATRICK J. COYNE

THOMAS T. MOGA

JACQUES (JACK) L. ETKOWICZ

BRAD PEDERSEN

LISA K. JORGENSON
Executive Director

The AIPLA QUARTERLY JOURNAL is published quarterly and dedicated to presenting materials relating to intellectual property matters. The views and opinions expressed in the AIPLA QUARTERLY JOURNAL are those of the authors and unless expressly stated to be such, material contained herein shall not be construed as actions or positions of the American Intellectual Property Law Association.

AIPLA QUARTERLY JOURNAL

VOLUME 44, NUMBER 4

FALL 2016

EDITORIAL BOARD

JOAN E. SCHAFFNER, CHAIR

The George Washington University Law School
Washington, DC

DAWN-MARIE BEY
Richmond, VA

JEREMY OCZEK
Buffalo, NY

JOSEPH G. CONTRERA
Baltimore, MD

LUCILLE M. PONTE
Jacksonville, FL

ELIZABETH COWAN WRIGHT
Minneapolis, MN

WILLIAM RALSTON
Carsbad, CA

JAMES D. CROWNE (*EX OFFICIO*)
Arlington, VA

LORELEI D. RITCHIE
Los Angeles, CA

BRIAN GRAY
Toronto, Ontario, Canada

BRADLEY W. SCHEER
San Jose, CA

SANDRA S. LEE
New York, NY

KIM VAN VOORHIS (*EX OFFICIO*)
Beaverton, OR

GREGORY LYONS
KENSINGTON, MD

BRIAN D. WASSOM
Southfield, MI

COLETTE R. MAYER
Palo Alto, CA

VERNON M. WINTERS
San Francisco, CA

GARY MYERS
Columbia, MO

JULIE ZINK
Dayton, OH

AIPLA members interested in participating on the Editorial Board should submit their qualifications, including completed questionnaire, in writing, to AIPLA Quarterly Journal Editorial Board, 1400 Crystal Drive, Suite 600, Arlington, VA 22202. Materials should be received by August 31st. Members are selected annually for 3-year terms beginning in November. For more information, visit www.aipla.org.

AIPLA QUARTERLY JOURNAL

VOLUME 44, NUMBER 4

FALL 2016

PUBLICATION STAFF

Editor-in-Chief

Joan E. Schaffner

Student Editor-in-Chief

Taylor Caldwell

Executive Articles Editor

Nathan Ranns

Executive Production Editor

Paulina Starostka

Executive Managing Editor

David Brown

Executive Notes Editor

Nicole Sharer

Articles Editors

Kelsi Moore

Jessica Nam

Mary Spargo

Isabel Corngold

Managing Editor

Yasaswi Raparla

Notes Editors

Adam Weiss

Brendon O'Shea

Lauren Salter

Nathan Sisodia

Associate Members

Hiwa Alaghebandian

Haleigh Amant

William Barclay

Phillip Beck

William Choi

Evan D'Aversa

Gisella de la Rocha

Kendall Gurule

Kristin Hoerberlein

Daniel Lee

Kelly Marco

John McGeehan

Christina Mitropoulos

Cindy Navarro

Aileen Ng

Shana Olson

Devang Patel

Andrew Pepper-Anderson

Tatiana Pino

Siri Rao

Renee Reasoner

Ashley Reese

Corinne Rockoff

Sandra Rubinchik

Bobby Sahachartsiri

Olivia Seraphim

Zachary Schroeder

Allison Shapland

Xi Zhang

Staff Members

Derek Biehn

Calvin Brien

Ashley Brydone-Jack

Ashley Cade

Stuart Call

Zachary Coots

Benjamin Dahl

Stuart Dong

Peter Firey

Hani Gazal

Yao Yang (Nathan) Goh

Jessica Gopiao

Connor Hansen

Carmen Hargis-Villanueva

Siobhan Hawkins

Vyson Hsu

Reilly Keane

Emily Keil

Jason Kim

Joseph Kirkwood

Stephen Kudla

Hankyul Lee

Olivia Lee

Yun (Ramona) Lin

J.R. LoMonaco

Kathrynn Lyddane

Lindsay Marks

Brandon McTigue

Gabrial Mitchell

Ashley Newsome

Obiobodo Onyeozili

Maleena Paal

Nicholas Sabet

Jesse Schulman

Breanna Smith

Sarah Teitelman

Anderson To

Jamie Unger

Daniel Valente

Zachary Zamore

AIPLA QUARTERLY JOURNAL

VOLUME 44, NUMBER 4

FALL 2016

© 2016 American Intellectual Property Law Association

CONTENTS

ARTICLES

SYMPOSIUM: "THE LIFE OF A CLAIM"

CHANGING THE CLAIM-CONSTRUCTION STANDARD OF REVIEW

William M. Jay 553

CLAIM CONSTRUCTION EVIDENCE DURING PATENT PROSECUTION IN THE USPTO AND APPEALS TO THE FEDERAL CIRCUIT

Peter Hrubiec & David Marsh 585

SUBSTITUTE CLAIMS IN *INTER PARTES* REVIEW—REAL OR ILLUSORY?

Andrea G. Reister, Christopher K. Eppich, Christopher G. Higby, & Nicole D. Sharer 603

BEYOND *CUOZZO*

Scott McKeown & Yasawi Raparla 619

A RACE TO THE FEDERAL CIRCUIT: HOW THE DIFFERING CLAIM CONSTRUCTION STANDARDS AND STANDARDS OF REVIEW INFLUENCE PATENT INVALIDATION

Leora Ben-Ami & Corinne Stone 639

IMPACT OF *TEVA* ON ITC INVESTIGATIONS: THE ROLE OF EXPERTS AT MARKMAN HEARINGS

Jim Adduci, James Ton-that, & Jack DaSilva 659

INDEX

VOLUME 44 INDEX 677

Subscription Information

Published by the American Intellectual Property Law Association and distributed digitally to all members *gratis*.

Non-Member and Law Library Subscription (per year)	\$95.00
Foreign Rate (per year)	\$109.00
Single Issue Price	\$25.00
Double Issue Price	\$40.00

Requests for subscription by non-members and law libraries for back issues and single issues are to be addressed to AIPLA Headquarters, 1400 Crystal Drive, Suite 600, Arlington, VA 22202. Telephone: (703) 415-0780. Facsimile: (703) 415-0786.

Copyright clearance and request for re-publication rights are to be directed to AIPLA Headquarters at aipla@aipla.org.

ISSN: 0883-6078

Guidelines for Authors

1. Manuscripts relating to intellectual property matters may be submitted for consideration for publication.
2. Authors should submit an electronic copy of the manuscript to the journal offices at The George Washington University Law School, via e-mail, at submissions@aipla.org, or online, at <http://law.bepress.com/expresso>. Submission of a manuscript implies that it is an original, unpublished work. The AIPLA Quarterly Journal does not publish student articles, but will consider AIPLA student member note submissions. AIPLA student members must indicate their status as a member on their submission if they wish to be considered for the student note section. All student note submissions should be submitted on May 1st.
3. Manuscripts (text and footnotes) should be typewritten and double-spaced with one-inch margins. All pages should be consecutively numbered. Footnotes should be numbered consecutively with Arabic numbers. The total number of words, including the text and footnotes, should be between 5,000 and 15,000.
4. In preparing text and footnotes, authors should consult the style presented in *The Bluebook: A Uniform System of Citation* (Columbia Law Review Ass'n et al. eds., 20th ed. 2015). Parallel citation to U.S.P.Q. should be included where applicable. For questions of literary style not included in *The Bluebook*, authors should consult *The Chicago Manual of Style* (University of Chicago Press, 16th ed. 2010).
5. All citations should be placed in the footnotes, even if the authority is mentioned in the text.
6. The editors reserve the right to make alterations and corrections for grammar and syntax.
7. To preserve professional objectivity, an article may not be based upon a pending or recently concluded litigation in which the author(s) or the authors' firm is or was involved as counsel of record, absent an appropriate disclosure.
8. All submission inquiries may be forwarded to submissions@aipla.org.

CHANGING THE CLAIM-CONSTRUCTION STANDARD OF REVIEW

*William M. Jay**

I. INTRODUCTION554

II. THE PATH TO *CYBOR*556

 A. *Early Claim Construction*557

 B. *The First En Banc — Markman*560

 C. *The Second En Banc — Cybor*561

III. WHAT WAS GOING ON IN THE SUPREME COURT MEANWHILE?562

IV. THE *TEVA* LITIGATION.....566

V. WHY DID THE COURT TAKE UP THE ISSUE AT LONG LAST?570

VI. IN THE SUPREME COURT575

VII. QUESTIONS LEFT OPEN.....580

VIII. CONCLUSION584

* © 2016 William Jay. William Jay is a partner at Goodwin Procter, LLP and served as counsel of record for Teva Pharmaceuticals USA, Inc., and the other petitioners in the Supreme Court decision discussed in this article. A version of this article was delivered at the *Quarterly Journal* symposium in March 2016; it has been edited to appear in print. All views expressed in this article are entirely my own, not those of my law firm or any client, and nothing in this article is intended to divulge any client confidences. I would like to thank the *Quarterly Journal* for inviting me to take part in its Symposium, and especially to thank Maureen Long Urbina, former Student Editor-in-Chief of the *Quarterly Journal*, for her invaluable assistance in preparing this article.

I. INTRODUCTION

Depending on who you ask, the Supreme Court's decision in *Teva Pharmaceuticals USA, Inc. v. Sandoz, Inc.*,¹ was either a major patent law decision or a blip.² Although it is too soon to tell for sure, it is clear that the Federal Circuit has read the Supreme Court as requiring, at most, a modest course correction.³ This article explains why the origins of that modest holding lie in a small-town sex-discrimination dispute and a murder case from New Jersey. Those cases have nothing to do with patent law—yet they turned out to be hugely important for patent litigation.

In *Teva*, the Supreme Court held that the standard of review that the Federal Circuit had used in claim-construction appeals for nearly twenty years was erroneous.⁴ Under the previous rule, a claim term's life story could not be definitively written until the Federal Circuit had ruled upon it.⁵ But under the Supreme Court's ruling, part of the story is written in district court—maybe not indelibly, but at least more durably than under the previous rule.⁶ On its face, that certainly seems like a decision worthy of inclusion in the *Quarterly Journal's* symposium on the life of a claim term.

¹ *Teva Pharms. USA, Inc. v. Sandoz, Inc. (Teva IV)*, 135 S. Ct. 831 (2015).

² *Compare Lighting Ballast Control LLC v. Universal Lighting Techs., Inc.*, 135 S. Ct. 1173, 1173 (2015) (mem.) (remanding in light of *Teva IV*), with Katherine E. White, *Post-Teva: When Will the Federal Circuit Embrace the Deferential Standard of Review for Patent Claim Construction?*, 25 FED. CIR. B.J. 191, 210 (2016) (explaining why the Federal Circuit continues to treat claim construction as a question of law post *Teva IV*).

³ See White, *supra* note 2, at 211, 213–14.

⁴ *Teva IV*, 135 S. Ct. at 836–37, 843; see *infra* Part II (explaining the history of the Federal Circuit's no-deference standard of review).

⁵ As discussed in Part II, below, the Federal Circuit had a longstanding practice of reviewing all claim constructions afresh under the *de novo* standard of appellate review. See *Lighting Ballast Control LLC v. Philips Elecs. N. Am. Corp.*, 744 F.3d 1272, 1276–77 (Fed. Cir. 2014) (en banc), *vacated sub nom. Lighting Ballast Control LLC v. Universal Lighting Techs.*, 135 S. Ct. 1173 (remanding in light of *Teva IV* decision); *Cybor Corp. v. FAS Techs., Inc.*, 138 F.3d 1448, 1451 (Fed. Cir. 1998) (en banc); *Markman v. Westview Instruments, Inc. (Markman II)*, 517 U.S. 370, 376 (1996), *aff'g* 52 F.3d 967, 979 (Fed. Cir. 1995) (en banc).

⁶ See *Teva IV*, 135 S. Ct. at 836–37.

But in the time since the decision, a number of commentators and, indeed, Federal Circuit decisions, have suggested that the decision would have a modest impact at most.⁷ After all, the Supreme Court reaffirmed that claim construction is a legal question.⁸ Only facts are reviewed deferentially.⁹ And the Federal Circuit has proceeded to hold, in a number of contexts, that deference is not warranted even when the district court's claim construction involves factual evidence.¹⁰ Commentators have accordingly asked: How much did the Supreme Court's decision really change the law?

The purpose of this article is not to offer a definitive answer, but a partial explanation for why the Supreme Court decided the case narrowly enough that its impact is in question. I am not a scholar, but a litigator, and I handled the Supreme Court case for the petitioners—the parties seeking greater deference. And the arguments we framed are part of the reason why the Supreme Court eventually decided the case in a way that could be read narrowly. Litigants pressed the Federal Circuit for years, off and on, to defer to the district court's claim construction *in all cases*. Yet, by the time the issue went to the Supreme Court, *no one*—no party and no amicus curiae—argued for deference to the district court's construction in all cases. As a result, the Supreme Court's decision focused on the narrow role that facts play in claim construction—an important role, to be sure, but only a narrow part of the life of a claim term.

On a more basic level, what the Supreme Court was asking was: What *is* a claim term? What *is* claim construction? Which of the categories that we are used to (legal, factual, mixed) does claim construction term fit into? Once those questions were answered, the Supreme Court seemed to think that the answer to the standard-of-review question would follow quite naturally—without needing to rely just on patent law.

⁷ See, e.g., White, *supra* note 2, at 210–12, n.201 (observing that even post-*Teva IV*, trial court records often do not have factual findings and, thus, the Federal Circuit accords no deference).

⁸ *Teva IV*, 135 S. Ct. at 837–38 (discussing the precedent from *Markman* that is not changed by the decision).

⁹ See *id.* at 836, 838.

¹⁰ See, e.g., White, *supra* note 2, at 211–13 (discussing the Federal Circuit's failure to defer to the trial courts' claim construction in several recent cases including *Enzo Biochem Inc. v. Applera Corp.*, 780 F.3d 1149 (Fed. Cir. 2015), and *Shire Dev., LLC v. Watson Pharms., Inc.*, 787 F.3d 1359 (Fed. Cir. 2015)).

The role of facts in shaping a judge's legal ruling is a generally applicable question, and the Supreme Court decided—in keeping with its general reluctance to make up different rules for patent litigation—that the answer is no different for claim construction.¹¹ Wherever possible, the current Supreme Court uses non-patent law to interpret patent law, rather than keeping patent law as a pure and distinct body of law unto itself.¹² Hence, the significance of the sex discrimination and murder cases, as this article will explain.

II. THE PATH TO *CYBOR*

The literal question presented in *Teva* was “[w]hether a district court’s factual finding in support of its construction of a patent claim term may be reviewed *de novo*, as the Federal Circuit requires[,] . . . or only for clear error”¹³ Review “*de novo*” means that the court of appeals decides the question for itself and pays no deference to the district court.¹⁴ Review for clear error, by contrast, means that the district court does receive deference. Indeed, under that standard, mere disagreement with the district court is not enough; the district court cannot be reversed unless it commits error that is “clearly erroneous.”¹⁵ Unpacking which of those two standards applies, the question presented to the Supreme Court in *Teva* requires us to set the stage with some of the relevant patent law history.

¹¹ See *Teva IV*, 135 S. Ct. at 837–38.

¹² See *id.*

¹³ Petition for Writ of Certiorari at i, *Teva IV*, 135 S. Ct. 831 (No. 13-854). The question presented read, in full: Rule 52(a) of the Federal Rules of Civil Procedure provides that in matters tried to a district court, the court’s “[f]indings of fact . . . ‘must not be set aside unless clearly erroneous.’” The question presented is as follows: Whether a district court’s factual finding in support of its construction of a patent claim term may be reviewed *de novo*, as the Federal Circuit requires (and as the panel explicitly did in this case), or only for clear error, as Rule 52(a) requires. *Id.*

¹⁴ *Salve Regina Coll. v. Russell*, 499 U.S. 225, 238 (1991) (“When *de novo* review is compelled, no form of appellate deference is acceptable.”).

¹⁵ *Anderson v. City of Bessemer City*, 470 U.S. 564, 573–74 (1985) (citing *United States v. Yellow Cab Co.*, 338 U.S. 338, 342 (1949)) (“Where there are two permissible views of the evidence, the factfinder’s choice between them cannot be clearly erroneous.”).

A. *Early Claim Construction*

How to interpret a patent grant is obviously not a new question. Exactly how much a patent covers has been a hotly debated issue since well before Congress decided to require written claims that “point[] out and distinctly claim[]” the subject matter that the inventor thinks he or she deserves a patent on.¹⁶ But the prehistory of patent claim construction is beyond the scope of this discussion, which picks up the story in the early days of the Federal Circuit.

The earliest Federal Circuit cases on the subject expressly stated that claim construction is a question of law, and left it at that.¹⁷ But before very long, the Federal Circuit began to splinter. In 1984, when the court was less than two years old, it began opening the door to expert evidence in claim construction. In *McGill Inc. v. John Zink Co.*,¹⁸ a panel commented approvingly on the use of expert testimony “to construe claims[,]” but ultimately did not resolve the role of that expert evidence, because it concluded that there was “no set of facts” that could support one party’s interpretation.¹⁹

Shortly thereafter, the court materially relied on expert evidence in a case called *Palumbo v. Don-Joy Co.*²⁰ That case involved a means-plus-function claim in which determining the meaning of the claim required understanding what embodiments were equivalent to the one discussed in the patent.²¹ The Federal Circuit reached back to cases saying that equivalence under the doctrine of

¹⁶ 35 U.S.C. § 112(b) (2012). Congress did not require a patentee to “distinctly claim” the invention until 1870, in part to reduce the disputes over what we would today call claim construction. Patent Act of 1870, ch. 230, § 26, 16 Stat. 198-217 (amended 1939). See, e.g., *Vance v. Campbell*, 66 U.S. (1 Black) 427, 429-30 (1861); *McClain v. Ortmayer*, 141 U.S. 419, 424 (1891) (“The object of the patent law in requiring the patentee to ‘particularly point out and distinctly claim the part, improvement, or combination which he claims as his invention or discovery’ is not only to secure to him all to which he is entitled, but to apprise the public of what is still open to them.”).

¹⁷ See *Fromson v. Advance Offset Plate, Inc.*, 720 F.2d 1565, 1569 (Fed. Cir. 1983); *SSIH Equip. S.A. v. ITC*, 718 F.2d 365, 376 (Fed. Cir. 1983); *Kalman v. Kimberly-Clark Corp.*, 713 F.2d 760, 771 (Fed. Cir. 1983).

¹⁸ *McGill Inc. v. John Zink Co.*, 736 F.2d 666 (Fed. Cir. 1984).

¹⁹ *Id.* at 675.

²⁰ See *Palumbo v. Don-Joy Co.*, 762 F.2d 969, 975-76 (Fed. Cir. 1985).

²¹ See *id.* at 974-76.

equivalents is a question of fact, and that opened the door for the inventor to testify about his view of what scope of equivalents the patent covered.²² Arguably, that was testimony about infringement rather than claim construction.²³ But the decision included some seemingly unqualified language about the nature of claim construction: While it first acknowledged that “[c]onstruction of a claim [is] a question of law,” it went on to state that “when the meaning of a term in the claim is disputed and extrinsic evidence is necessary to explain that term, then an underlying factual questions [sic] arises, and construction of the claim should be left to the trier or jury under appropriate instruction.”²⁴

The Federal Circuit did not read the holding of *Palumbo* as one about infringement. Before long, the Federal Circuit was citing both *Palumbo* and *McGill* for a broader proposition—that “[i]n a patent case involving complex scientific principles, it is particularly helpful to see how those skilled in the art would interpret the claim.”²⁵ That “makes sense,” the court added, because “the test of claim interpretation is directed to one skilled in the art,” and “testimony from such individuals” is therefore probative.²⁶

In the context of that case, that was arguably dicta—the evidence was not actually evidence of how the expert “would interpret the claim.”²⁷ Instead, it was on a much narrower proposition—a proposition that is now significant again after *Teva IV*—about the meaning of a term of art. The experts would have testified that to people skilled in the art, a particular term in the patent (“electrode”) had multiple, different meanings.²⁸ The district court did not care; it

²² See *id.* at 975; see also *Graver Tank & Mfg. Co. v. Linde Air Prods. Co.*, 339 U.S. 605, 609–10 (1950); *Thomas & Betts Corp. v. Litton Syss., Inc.*, 720 F.2d 1572, 1579 (Fed. Cir. 1983).

²³ See *Palumbo*, 762 F.2d at 974 (discussing two-step infringement analysis).

²⁴ *Id.*

²⁵ *Moeller v. Ionetics, Inc.*, 794 F.2d 653, 657 (Fed. Cir. 1986) (citing *Palumbo*, 762 F.2d at 975; *McGill Inc. v. John Zink Co.*, 736 F.2d 666, 675–76 (Fed. Cir. 1984); *Fromson v. Advance Offset Plate, Inc.*, 720 F.2d 1565, 1571 (Fed. Cir. 1983)).

²⁶ *Id.* (citing *Loctite Corp. v. Ultraseal Ltd.*, 781 F.2d 861, 867 (Fed. Cir. 1985)).

²⁷ See *id.* (citing *Palumbo*, 762 F.2d at 975; *McGill*, 736 F.2d at 675–76; *Fromson*, 720 F.2d at 1571).

²⁸ See *id.*

thought that “electrode” looked unambiguous on the printed page, and that should be the end of it.²⁹ The Federal Circuit held that the district court had abused its discretion in not taking the extrinsic expert evidence.³⁰ It used that broader language about evidence of “how those skilled in the art would interpret the claim.”³¹ Once that evidence was admitted, the Federal Circuit told the district court, “although claim construction is a legal question, underlying fact disputes may arise pertaining to extrinsic evidence that might preclude summary judgment treatment of claim construction.”³²

From there, it was off to the races. Within a few years, there were multiple decisions upholding district court claim constructions under the clear-error standard of review.³³ And that language about “how those skilled in the art would interpret the claim” suggested that the door was open to considering testimony from experts in document construction, not just scientific experts who were skilled in the relevant art. Indeed, by 1988, in *Snellman v. Ricoh Co.*,³⁴ the Federal Circuit upheld a district court’s claim construction as reasonable where an expert in document construction opined that the claims should be construed one way rather than the other.³⁵ The dispute was submitted to the jury, and the jury rendered a verdict that was reasonably supportable based on the expert evidence, so the Federal Circuit deferred to the jury’s decision to credit the expert.³⁶

In other words, if the approach those panels were following was right, the experts were in, and the judges were largely out. The “law” part of this supposed “question of law” seemed to have been lost. Experts were not being confined to explaining scientific matters like the accepted meaning of a term of

²⁹ *Id.* (“The district court determined that ‘the devices are sufficiently simple that they can be understood without the aid of experts.’ . . . [It] “look[ed] just at the literal language used . . .”).

³⁰ *Moeller*, 794 F.2d at 657.

³¹ *Id.* (citing *Palumbo*, 762 F.2d at 975; *McGill*, 736 F.2d at 675–76; *Fromson*, 720 F.2d at 1571).

³² *Id.* (citing *Palumbo*, 762 F.2d at 973–77).

³³ *See, e.g.*, *HH Robertson, Co. v. United Steel Deck, Inc.*, 820 F.2d 384, 389–90 (Fed. Cir. 1987).

³⁴ *Snellman v. Ricoh Co., Ltd.*, 862 F.2d 283 (Fed. Cir. 1988).

³⁵ *See id.* at 287–88.

³⁶ *Id.* at 288.

art. Indeed, the experts were not working scientists, they were practicing patent lawyers; for example, the expert in *Snellman* was the distinguished patent litigator Donald Dunner.³⁷

Not every panel followed such broad reasoning, and the result was a series of intra-circuit conflicts.³⁸ The pendulum swung back when the Federal Circuit decided to clean up those conflicts in a series of *en banc* rulings.

B. *The First En Banc* — Markman

In the Federal Circuit's *en banc* decision in *Markman v. Westview Instruments, Inc.*,³⁹ a case that would later go to the Supreme Court, the court confronted a litigant who presented his claim construction through a document-construction expert, a practicing patent attorney, and wanted the Federal Circuit to defer to the jury's apparent decision to credit that construction.⁴⁰ The Federal Circuit said no—the claim construction task was entirely one for the judge, not the jury, because it was entirely a question of law.⁴¹

Markman took the case to the Supreme Court, but he presented only a narrow question about the identity of the decision-maker, judge vs. jury—not the nature of claim construction, fact vs. law.⁴² Answering Markman's question, the Supreme Court agreed that claim construction should be decided by the judge.⁴³ So Mr. Markman did not get to claim deference to the jury's apparent decision to credit his document construction expert; document construction is, on the whole, something that judges do better than juries, the Supreme Court unanimously

³⁷ *Id.*

³⁸ *See, e.g., Markman v. Westview Instruments, Inc. (Markman I)*, 52 F.3d 967, 976 (Fed. Cir. 1995) (*en banc*).

³⁹ *Id.*

⁴⁰ *Id.* at 973–74. The trial judge had thrown out the jury verdict based on his disagreement with the claim construction that Markman and his expert advanced. *See id.*

⁴¹ *Id.* at 977–78.

⁴² Petition for Writ of Certiorari at i, *Markman II*, 517 U.S. 370 (1996) (No. 95-26).

⁴³ *Markman II*, 517 U.S. at 391.

held.⁴⁴ Significantly, however, the Supreme Court acknowledged that the claim construction issue might in some cases have “evidentiary underpinnings.”⁴⁵

The Federal Circuit disregarded that cautionary note. Even though the Supreme Court never spoke to the standard of review, the Federal Circuit read the two decisions in *Markman*—the Federal Circuit’s and the Supreme Court’s—as settling the standard of review for claim construction.

C. *The Second En Banc* — *Cybor*

In the decision that is usually cited as the Federal Circuit’s seminal decision on the standard of review, *Cybor Corp. v. FAS Technologies, Inc.*,⁴⁶ the Federal Circuit held that those two *Markman* decisions established that claim construction is completely and totally a question of law, and that the standard of review would always be *de novo*.⁴⁷ “Nothing in the Supreme Court’s opinion[,]” said the Federal Circuit, “supports the view that the Court endorsed . . . [the view] that claim construction may involve subsidiary or underlying questions of fact.”⁴⁸

Thus, the standard of review in the Federal Circuit was settled, unsettled, and then settled again, all without any direct involvement by the Supreme Court—except, of course, for *Markman*, which did not specifically answer the standard-of-review question, but which the Federal Circuit thought had pointed the way by identifying claim construction as an issue for the court and not the jury.

⁴⁴ *Id.* at 388–90.

⁴⁵ *Id.* at 390; *see id.* at 378 (calling claim construction a “mongrel practice”); *see also id.* at 389 (alluding to the “credibility judgments” that sometimes may be involved).

⁴⁶ *Cybor Corp. v. FAS Techs., Inc.*, 138 F.3d 1448 (Fed. Cir. 1998) (en banc).

⁴⁷ *Id.* at 1455–56. *Cybor Corp.* is usually cited as the seminal decision, *see, e.g.*, *Lighting Ballast Control LLC v. Philips Elecs. N. Am. Corp.*, 744 F.3d 1272, 1276–77 (Fed. Cir. 2014) (en banc), because some panels returned to the clear-error standard after the Supreme Court’s decision. *Cybor Corp.*, 138 F.3d at 1454.

⁴⁸ *Cybor Corp.*, 138 F.3d at 1455.

III. WHAT WAS GOING ON IN THE SUPREME COURT MEANWHILE?

Meanwhile, the Supreme Court was deciding another line of cases that, in important ways, were narrowing the scope of appellate review of factual issues. As alluded to above, a sex discrimination case and a murder case became important guideposts in the development of this aspect of patent litigation. Here is why: During the 1980s, while the Federal Circuit was tying itself in knots about the appropriate role of expert evidence, the Supreme Court was firming up two key principles. First, law and fact can be disaggregated from one another; just because the ultimate question is a question of law does not mean that there are not facts involved. And second, facts are facts, for the purposes of appellate deference. Appeals court judges are not supposed to be finding the facts, and the Supreme Court had no tolerance for the idea that some facts ought to be more easily second-guessable on appeal than others.

To begin with the law-fact distinction: In 1985, while the Federal Circuit was taking up the role of expert evidence in claim construction cases, the Supreme Court reviewed the case of a convicted murderer from New Jersey in *Miller v. Fenton*.⁴⁹ *Miller* became an important case on how to handle mixtures of legal and factual questions.

Miller was a state prisoner who had litigated his conviction all the way through the New Jersey courts and then turned to federal court to petition for a writ of habeas corpus.⁵⁰ After Miller was arrested, he was Mirandized and interrogated for almost an hour.⁵¹ The detectives lied to Miller repeatedly—they told him that the young woman he had allegedly attacked was alive and could identify him; then they told him that she had just died, so he was facing murder charges; they also said they had eyewitnesses who could put him at the victim's home and told him that blood stains had been found on his front stoop.⁵² All of that was completely untrue, but it worked—Miller confessed.⁵³ Later, after he had spoken to a lawyer, Miller realized he had been tricked and decided to challenge his confession as involuntary.⁵⁴ The Supreme Court of New Jersey held

⁴⁹ *Miller v. Fenton*, 474 U.S. 104 (1985).

⁵⁰ *Id.* at 108.

⁵¹ *Id.* at 106.

⁵² *Id.*

⁵³ *Id.* at 106–07, n.2.

⁵⁴ *See Miller*, 474 U.S. at 108.

that his confession was admissible because it was voluntary.⁵⁵ The question before the Supreme Court was to what degree the federal courts could second-guess the state court.⁵⁶

At the time, the relationship between the federal courts and the state courts basically mirrored the relationship between federal appellate courts and district courts: questions of law were reviewed *de novo* in habeas corpus; questions of fact were reviewed deferentially.⁵⁷ In light of the differing standards of review, the State argued that voluntariness was a factual finding, so that the New Jersey courts would receive deference, and Miller argued that it was a legal conclusion, so that he would get a do-over in federal court.⁵⁸

The Supreme Court held that the ultimate question, voluntariness, was really one of law, for reasons that are not really relevant here.⁵⁹ Suffice it to say that the Court did not think that the trier of fact was uniquely well-positioned to answer the ultimate question whether a confession is voluntary—at least not “once [the] underlying factual issues ha[d] been resolved”⁶⁰

Importantly for present purposes, the Court recognized that even when the ultimate question is a question of law, it can rest on what it called “subsidiary questions.”⁶¹ So, for example, “the length and circumstances of the interrogation” might be one factor in deciding whether the confession was voluntary.⁶² Before the court can decide how much impact the length of the interrogation really had in a particular case, it has to figure out how long the interrogation actually was. That is a factual question that “often require[s] the resolution of conflicting testimony of police and defendant.”⁶³ The trier of fact gets to resolve those factual

⁵⁵ *Id.*

⁵⁶ *See id.* at 104, 109–10.

⁵⁷ *See id.* at 104, 110.

⁵⁸ *See id.* at 108–09.

⁵⁹ *Miller*, 474 U.S. at 112–18.

⁶⁰ *Id.* at 117 (emphasis added); *see id.* at 116–18.

⁶¹ *Id.* at 117; *see also id.* at 112 (providing examples of “subsidiary factual questions” in cases involving voluntariness).

⁶² *Id.* at 117.

⁶³ *Id.*

issues and is entitled to deference on them, no matter how big an impact the relevant finding might have on the ultimate legal conclusion.⁶⁴

The Court returned to that same theme in a number of other cases involving mixed questions of law and fact. Whether a lawyer provided constitutionally ineffective assistance may be a question of law, but the answer can rest on factual findings about how carefully the lawyer investigated the case before making a strategic decision.⁶⁵ Whether a search violated the Fourth Amendment may be a question of law, but the answer can rest on factual findings about how the police officer's experience taught him to make particular judgments based on certain evidentiary tip-offs about drug smuggling, gang membership, or the like.⁶⁶

The recurring theme in each of these cases is that the trial court is the primary sifter of the factual record. And that brings us to the other line of relevant non-patent cases, which goes more directly to the standard of review once the case is broken down between law and fact.

Deference to trial-court factfinding was once controversial, at least in a subset of cases. A number of appellate judges began essentially to rebel against the deferential standard for reviewing factual findings. Federal Rule of Civil Procedure 52(a)(6) says that a finding of fact in a bench trial "must not be set aside unless [it is] clearly erroneous . . ."⁶⁷ But some very distinguished appellate judges began to say—and, indeed, to hold in case after case—that the Rule could not possibly mean *every* finding of fact.⁶⁸

Take, for example, a finding of fact that a judge makes after reading some documentary evidence. The well-respected Judge Jerome Frank, of the Second Circuit, wrote that "[i]f [the trial judge] decides a fact issue on written evidence alone, we are as able as he to determine credibility, and so we may

⁶⁴ See *Miller*, 474 U.S. at 112.

⁶⁵ See *Knowles v. Mirzayance*, 556 U.S. 111, 123, 125–26 (2009).

⁶⁶ See *Ornelas v. United States*, 517 U.S. 690, 699–700 (1996).

⁶⁷ FED. R. CIV. P. 52(a)(6).

⁶⁸ FED. R. CIV. P. 52(a) advisory committee's note to 1985 amendment (stating that the advisors differ in opinion as to how strictly the Rule should be applied, and noting that the Supreme Court has not clearly resolved the issue).

disregard his finding.”⁶⁹ In other words, deference only applies when the trial judge relies on oral testimony, delivered by a witness whose demeanor the trial judge can observe.⁷⁰ No demeanor, no reason for deference, Judge Frank and others reasoned.⁷¹

In 1985, the Supreme Court squarely rejected that view. In *Anderson v. City of Bessemer City*,⁷² a case brought by a woman who had been rejected for a position as the city’s Recreation Director, the trial judge conducted a very short bench trial and then entertained written submissions proposing findings of fact and conclusions of law.⁷³ The trial court then found that the plaintiff was better qualified than the man who was hired.⁷⁴ The court of appeals tried setting that finding aside, based on its disagreement with the trial court over the qualifications for a good city Recreation Director—a subject on which there was only written evidence.⁷⁵ The Supreme Court, in short, did not care that the evidence was only in written form.⁷⁶

The trial judge and the appellate judges both had a permissible view of the evidence. But, because resolving factual disputes is the district judge’s job, the district judge’s finding prevailed.⁷⁷ To be sure, the Supreme Court noted, a district judge gets *extra* deference when his or her finding is based on something that cannot really be reviewed on appeal, such as the demeanor of a witness

⁶⁹ *Orvis v. Higgins*, 180 F.2d 537, 539 (2d Cir. 1950) (citing *Luckenbach S.S. Co. v. United States*, 157 F.2d 250, 251 (2d Cir. 1946); *Kind v. Clark*, 161 F.2d 36, 46 (2d Cir. 1947)).

⁷⁰ *See id.* at 538–40 (citing *Petterson Lighterage & Towing Corp. v. N.Y. Cent. R.R. Co.*, 126 F.2d 992, 994–96 (2d Cir. 1942); *Morris Plan Indus. Bank v. Henderson*, 131 F.2d 975, 977 (2d Cir. 1942); *Broadcast Music Co. v. Havana Madrid Rest. Corp.*, 175 F.2d 77, 80 (2d Cir. 1949)).

⁷¹ *See id.*

⁷² *Anderson v. City of Bessemer City*, 470 U.S. 564 (1985).

⁷³ *Id.* at 568.

⁷⁴ *Id.* at 570–71.

⁷⁵ *See id.* at 576–77.

⁷⁶ *See id.* at 580 (holding that the district court’s finding based on petitioner’s written qualifications and other factors was not clearly erroneous, so the Fourth Circuit erred in reversing it).

⁷⁷ *Anderson*, 470 U.S. at 573–75.

giving oral testimony.⁷⁸ But even when that super-strong deference does not apply, there is still a strong reason to defer to the district court on *all* factual matters:

The rationale for deference to the original finder of fact is not limited to the superiority of the trial judge's position to make determinations of credibility. The trial judge's major role is the determination of fact, and with experience in fulfilling that role comes expertise. Duplication of the trial judge's efforts in the court of appeals would very likely contribute only negligibly to the accuracy of fact determination at a huge cost in diversion of judicial resources. In addition, the parties to a case on appeal have already been forced to concentrate their energies and resources on persuading the trial judge that their account of the facts is the correct one; requiring them to persuade three more judges at the appellate level is requiring too much.⁷⁹

The Supreme Court's decision in *Anderson* was simultaneously enshrined in the Federal Rules of Civil Procedure.⁸⁰ Rule 52(a)(6) now says that findings of fact are entitled to deference "whether based on oral or other evidence[.]"⁸¹

Both of these Supreme Court decisions were on the books while the Federal Circuit was taking more and more control over claim construction. While the Federal Circuit was saying that the facts basically melted into the law and would get reviewed *de novo* on appeal, the Supreme Court was saying that law and facts can be disaggregated, and that appellate courts can review the facts deferentially even while reviewing the ultimate legal conclusion *de novo*.

IV. THE *TEVA* LITIGATION

Against that backdrop, the *Teva* case arose. The litigation involved a pair of patent-infringement cases that were decided by the Southern District of New

⁷⁸ See *id.* at 574–75.

⁷⁹ *Id.*

⁸⁰ Compare FED. R. CIV. P. 52(a) advisory committee's note to 1985 amendment (citing the cases that the Rule amendment was designed to overturn), with *Anderson*, 470 U.S. at 574 (citing some of the same cases as part of the "impressive genealogy" of the incorrect no-deference view that the Supreme Court was disapproving).

⁸¹ FED. R. CIV. P. 52(a)(6).

York, sitting without a jury.⁸² The key claim term was “molecular weight.”⁸³ And Teva was exceedingly fortunate to have a district judge who, in construing that claim term, did what the Federal Circuit had long discouraged judges from doing: She entertained expert evidence and made factual findings after the Markman hearing.⁸⁴ Three of her findings supported Teva’s construction of the key term “molecular weight,” and that is the construction she adopted.⁸⁵

First, the district court considered what a skilled artisan would think “molecular weight” meant in the context of the patent, based on the technology the patent describes being used to find it.⁸⁶ The court credited Teva’s expert testimony that the use of a particular technology—size exclusion chromatography—would tell a person of ordinary skill in the art that the “presumed meaning” of the claim term was the one Teva was advancing.⁸⁷

Second, the district court considered the meaning of a graph in the patent, known as Figure 1. The defendants argued that Figure 1 ruled out Teva’s interpretation because Teva was arguing for a measurement called “peak average molecular weight,” yet the peaks of the curves in Figure 1 did not precisely match up with the point on the x-axis that corresponded to the average molecular weight.⁸⁸ Teva’s expert explained that the peak of the curve in Figure 1 was expected to shift slightly while the data was transformed and plotted on the curve.⁸⁹ The district court credited Teva’s expert.⁹⁰

Third, the district court credited Teva’s expert in resolving an inconsistency between two pieces of prosecution history.⁹¹ The expert explained

⁸² *Teva Pharms. USA, Inc. v. Sandoz Inc. (Teva I)*, 810 F. Supp. 2d 578, 581 (S.D.N.Y. 2011).

⁸³ *Teva IV*, 135 S. Ct. 831, 835 (2015).

⁸⁴ *See generally Teva I*, 810 F. Supp. 2d 578 (crediting extrinsic evidence, *inter alia*), *rev’d in relevant part*, 723 F.3d 1363 (Fed. Cir. 2013), *vacated*, 135 S. Ct. 831 (2015), *rev’d in relevant part again*, 789 F.3d 1335 (Fed. Cir. 2015).

⁸⁵ *See Teva I*, 810 F. Supp. 2d at 600.

⁸⁶ *See id.* at 588.

⁸⁷ *Id.* at 588.

⁸⁸ *See id.* at 589–91.

⁸⁹ *See id.* at 590–91.

⁹⁰ *Teva I*, 810 F. Supp. 2d at 588–91.

⁹¹ *See id.* at 591–92.

that a person of ordinary skill in the art would resolve the inconsistency by recognizing that one of the two prosecution history statements was scientifically erroneous.⁹²

The Federal Circuit reversed that aspect of the district court's decision.⁹³ It expressly reviewed all aspects of claim construction *de novo*.⁹⁴ And on that *de novo* review, it read Figure 1 of the patent exactly as the defendants advocated, without mentioning the district court's finding about the shift in the curve.⁹⁵ It also did not mention the district court's finding about reconciling the conflict in the prosecution history.⁹⁶ And as for the expert's discussion of size exclusion chromatography, the Federal Circuit thought it inadequate because that technology *could* provide different measures of average molecular weight; the court did not mention the finding about "presumed meaning."⁹⁷

A few months before it decided *Teva*, the Federal Circuit granted rehearing *en banc* in a case called *Lighting Ballast Control LLC v. Philips Electronics North America Corp.*,⁹⁸ which was reheard for one reason and one reason only: to decide whether to overrule *Cybor* and abandon the regime of *de novo* review.⁹⁹ The appellee in that case argued for a very strong form of deference: It took the position that everything in claim construction is factual, so the district court is always entitled to deference.¹⁰⁰ The United States filed an amicus brief, through the PTO Solicitor, arguing that claim construction can include at least some

⁹² See *id.* at 591–92.

⁹³ *Teva Pharms. USA, Inc. v. Sandoz, Inc. (Teva II)*, 723 F.3d 1363, 1366 (Fed. Cir. 2013).

⁹⁴ *Id.* at 1369.

⁹⁵ *Id.* (“[T]he peaks of the curves in Figure 1 do not correspond to the values denoted as ‘average molecular weight’ in the figure’s legend . . .”).

⁹⁶ See *id.*

⁹⁷ See *id.*

⁹⁸ *Lighting Ballast Control LLC v. Philips Elecs. N. Am. Corp.*, 500 F. App'x 951 (Fed. Cir. 2013) (per curiam).

⁹⁹ See *id.* at 951–52.

¹⁰⁰ See Rehearing *En Banc* Response Brief of Plaintiff-Appellee at 1, *Lighting Ballast Control LLC v. Philips Elecs. N. Am. Corp.*, 744 F.3d 1272 (Fed. Cir. 2014) (No. 2012-1014) (“All aspects of claim construction should receive deference . . . Only a district court’s statement of the legal canons should receive plenary review.”).

factual findings, such as the meaning of terms of art, and that those are entitled to deference under Rule 52(a)(6).¹⁰¹

The prospect that the law might change also meant that the panel's decision in *Teva* might well fall. Because the Federal Circuit panel had not deferred to the district court, but had reviewed *de novo*, and because the panel's reasoning could not stand if deference applied to all three of the district court's findings, the outcome of *Lighting Ballast* could well have reversed the outcome of *Teva*. So, three days after the oral argument in *Lighting Ballast*,¹⁰² *Teva* filed a petition for rehearing, suggested that the court hold on to that petition until after it decided *Lighting Ballast*,¹⁰³ and waited.

But the Federal Circuit had met behind closed doors after the argument in *Lighting Ballast* and voted, and the vote was evidently to keep the law as it was.¹⁰⁴ *Teva* did not know that, but of course the active judges on the panel must have. Several months after the decision in *Teva*, the *en banc* Federal Circuit released the decision in *Lighting Ballast* and held that, based on *stare decisis*, it would not change the standard of review for claim construction.¹⁰⁵ So when the panel received *Teva*'s petition for rehearing, suggesting that *Lighting Ballast*

¹⁰¹ See generally Corrected Brief for the United States as Amicus Curiae on Rehearing En Banc in Support of Neither Party at 4–22, *Lighting Ballast Control LLC v. Philips Elecs. N. Am. Corp.*, 744 F.3d 1272 (Fed. Cir. 2014) (No. 2012-1014) (arguing that the Federal Circuit should defer to factual findings by district courts in reviewing claim construction) (filed June 5, 2013).

¹⁰² Oral Argument, *Lighting Ballast Control LLC v. Philips Elecs. N. Am. Corp.*, 744 F.3d 1272 (Fed. Cir. 2014) (No. 2012-1014), http://www.cafc.uscourts.gov/oral-argument-recordings?title=lighting+ballast&field_case_number_value=&field_date_value2%5Bvalue%5D%5Bdate%5D=&=Search (argued Sept. 13, 2013).

¹⁰³ See Corrected Plaintiff-Appellees' Combined Petition for Rehearing En Banc and Panel Rehearing, *Teva Pharms. USA, Inc. v. Sandoz Inc.*, No. 12-1567 (Fed. Cir. Oct. 18, 2013) (per curiam) (filed Sept. 16, 2013).

¹⁰⁴ See Fed. Cir. Internal Operating Procedure #8. This assumes that the votes at conference matched the positions reflected in the *en banc* opinions.

¹⁰⁵ See *Lighting Ballast Control LLC v. Philips Elecs. N. Am. Corp.*, 744 F.3d 1272, 1276–77, 1292 (Fed. Cir. 2014) (en banc).

might change the world, it denied the petition.¹⁰⁶ Worse still, it also denied Teva a stay of mandate, so the injunction it had won in the district court was cut short.¹⁰⁷ Teva had nowhere to go but the Supreme Court.

V. WHY DID THE COURT TAKE UP THE ISSUE AT LONG LAST?

The Supreme Court controls the vast majority of its own docket. For the most part, if the Court does not want to hear a particular case or a particular issue, it can simply deny a petition for certiorari. And it previously denied certiorari in a number of cases raising the standard-of-review question.¹⁰⁸ The Supreme Court never explained those denials, or the grant in *Teva*, so the most one can do is speculate about its reasons.

When the appeal originally went to the Federal Circuit, there was no indication that the case was headed for the Supreme Court, or even that the Supreme Court might be interested in taking up the standard of review question. So *Teva* was not consciously setting up a test case. Why, then, did it become one?

First, *Teva* had gotten a modicum of attention at the Court already. Because the Federal Circuit refused to stay its mandate, the injunction protecting Teva against the launch of an infringing generic was going to be lifted.¹⁰⁹ So Teva went to the Supreme Court even before its certiorari petition was filed.¹¹⁰

¹⁰⁶ Order on Petition for Panel Rehearing and Rehearing En Banc, *Teva Pharms. USA, Inc. v. Sandoz Inc.*, No. 12-1567 (Fed. Cir. Oct. 18, 2013) (per curiam).

¹⁰⁷ Order on Motion, *Teva Pharms. USA, Inc. v. Sandoz Inc.*, No. 12-1567 (Fed. Cir. Nov. 1, 2013) (per curiam); *Teva II*, 723 F.3d 1363, n.5 (Fed. Cir. 2013). Some of Teva's claims (those without the term "molecular weight") survived, so the injunction was modified to end when those claims expired. See Modified Final J., *Teva Pharms. USA, Inc. v. Sandoz Inc.*, No. 1:08-cv-7611, ECF No. 355 (S.D.N.Y. Dec. 20, 2013).

¹⁰⁸ See e.g., *Saffran v. Johnson & Johnson*, 134 S. Ct. 1023 (2014) (mem.); *Retractable Techs., Inc. v. Becton, Dickinson & Co.*, 133 S. Ct. 833 (2013) (mem.).

¹⁰⁹ Order on Motion, *supra* note 107; see *Teva II*, 723 F.3d at n.5.

¹¹⁰ See Application to Recall and Stay Mandate Pending the Filing and Disposition of a Petition for a Writ of Certiorari, *Teva Pharms. USA, Inc. v. Sandoz, Inc.* (2014) (No. 13A458). Teva filed its first emergency application on November 4, 2013. *Id.* The petition for a writ of certiorari was not filed until January 16, 2014. See Petition for Writ of Certiorari, *Teva IV, supra* note 13.

Applications (which include requests for emergency action) are handled by the individual Justices of the Supreme Court, each of whom is assigned to at least one circuit.¹¹¹

The Circuit Justice for the Federal Circuit is Chief Justice Roberts.¹¹² Teva asked him to order the Federal Circuit's mandate recalled and stayed, pending the filing and disposition of a cert petition.¹¹³ Briefing an issue like that at the Supreme Court requires a litigant to convince the Circuit Justice that cert is likely to be granted *and* that the Court is reasonably likely to reverse the lower court.¹¹⁴ The Chief Justice did not write an opinion in the case at that time; he simply denied the stay.¹¹⁵ But it is likely that his experience handling the stay application, and the critiques of *Cybor* that we put into that application, helped prepare the ground for the cert petition.

Second, and more fundamentally, during the certiorari briefing in *Teva*, the Federal Circuit decided the *Lighting Ballast* case *en banc*.¹¹⁶ And it did so in a way that the Supreme Court probably took as a bit provocative. It was conspicuous that the *en banc* majority did not engage with the dissenters on the merits. Instead, the majority relied almost entirely on *stare decisis*: *Cybor* had been the law long enough, and was working well enough, that they were not willing to make a change.¹¹⁷

Indeed, *stare decisis* appeared to be the primary reason there was a 6-4 majority to keep *Cybor*: Two of the judges in the six-judge majority had previously criticized *Cybor* in dissenting opinions. Judge Newman, for example, wrote in 2006:

The Federal Circuit's position that patent interpretation requires more rigorous appellate review than other fact/law issues has not well withstood the test of experience. It is time to reopen the

¹¹¹ See SUP. CT. R. 22.

¹¹² Allotment of Justices, 561 U.S. V, VII (Sept. 28, 2010).

¹¹³ Application (13A458) to Recall and Stay Mandate, *supra* note 110.

¹¹⁴ See, e.g., *Rostker v. Goldberg*, 448 U.S. 1306, 1308 (1980).

¹¹⁵ Order, *Teva Pharms. USA, Inc. v. Sandoz, Inc.*, No. 13A458 (U.S. Nov. 13, 2013).

¹¹⁶ *Lighting Ballast Control LLC v. Philips Elecs. N. Am. Corp.*, 744 F.3d 1272 (Fed. Cir. 2014) (*en banc*).

¹¹⁷ See *id.* at 1281–86.

question and to rethink, *en banc*, the optimum approach to accuracy, consistency, and predictability in the resolution of patent disputes[.]¹¹⁸

In 2014, by contrast, Judge Newman authored the *en banc* opinion in *Lighting Ballast* and wrote that the question “is not whether to adopt a *de novo* standard of review of claim construction, but [instead] whether to change that standard”¹¹⁹ So by 2014, a majority of the court was of the view that—whatever the right answer might be as an original matter—*Cybor* was good enough to keep.¹²⁰

For the Federal Circuit to treat its own decision in *Cybor* as settling the law might well have waved a red cape at the Supreme Court, intentionally or not. For an intermediate appellate court to make such a clear appeal to finality might have seemed inappropriate to the Justices—as though the lower court was saying that *it*, and not the Supreme Court, was entitled to the last word.

It depends on how you count, of course, but if you begin with the *en banc Markman* decision in 1995, *de novo* review had been the settled law in the Federal Circuit for a bit less than 20 years.¹²¹ And even a 20-year-old precedent from a court of appeals does not carry a ton of weight in the Supreme Court.¹²² Probably

¹¹⁸ *Amgen Inc. v. Hoechst Marion Roussel, Inc.*, 469 F.3d 1039, 1043 (Fed. Cir. 2006) (Newman, J., dissenting from denial of the petition for rehearing en banc); see also *Retractable Techs., Inc. v. Becton, Dickinson & Co.*, 659 F.3d 1369, 1373 (Fed. Cir. 2011) (Moore, J., dissenting from the denial of the petition for rehearing en banc) (“[Claim construction] is clearly a mixed question of law and fact and deference should be given to the factual parts.”).

¹¹⁹ *Lighting Ballast Control*, 744 F.3d at 1281.

¹²⁰ See *id.* at 1286.

¹²¹ See *Markman I*, 52 F.3d 967, 979 (Fed. Cir. 1995) (en banc).

¹²² See Transcript of Oral Argument at 7–8, *Teva Pharms. USA, Inc. v. Sandoz, Inc.*, 135 S. Ct. 831 (2015) (No. 13-854). To be sure, Justice Sotomayor asked about the possibility of deferring to the Federal Circuit’s approach during the oral argument. *Id.* But Justice Sotomayor later joined the Court’s opinion without comment. *Teva IV*, 135 S. Ct. at 834.

at least once a Term, the Justices decide a case in a way that reverses precedent from one or more of the regional courts of appeals that is roughly as old.¹²³

Third, the *stare decisis* rationale suggested (rightly or wrongly) that the Federal Circuit had nothing more of substance to contribute to the discussion. In cert petitions coming from patent cases in the Federal Circuit, the Supreme Court does not have the ability to do what it does in cases from the regional circuits: look at whether the regional circuits are in conflict.¹²⁴ If a conflict has developed among the regional circuits or state supreme courts, the issue probably has percolated long enough and is ready for Supreme Court review.¹²⁵ That generally does not happen at the Federal Circuit. While one panel can bind future panels, Decision #1 sometimes leaves enough wiggle room that the Supreme Court can wait and see whether, on slightly different facts, Decision #2 might distinguish Decision #1.

That was never going to happen here. The Federal Circuit had considered the issue *en banc* four times—in the first *Markman* decision,¹²⁶ in *Cybor*,¹²⁷ in *Phillips v. AWH Corp.*¹²⁸ and most recently in *Lighting Ballast*.¹²⁹ The court never retreated an inch from *Cybor*, not even taking up the suggestion of

¹²³ See, e.g., *Kirtsaeng v. John Wiley & Sons, Inc.*, 136 S. Ct. 1979, 1984 n.1 (2016) (disapproving, among others, an 18-year-old decision by the Fifth Circuit); *Betterman v. Montana*, 136 S. Ct. 1609, 1613, n.1 (2016) (disapproving, among others, a 39-year old decision by a state supreme court).

¹²⁴ See, e.g., Ryan Stephenson, Note, *Federal Circuit Case Selection at the Supreme Court: An Empirical Analysis*, 102 GEO. L.J. 271, 275 (2013). No other circuit has patent jurisdiction to create a conflict. 28 U.S.C. § 1295(a) (2012).

¹²⁵ See Stephenson, *supra* note 124, at 274 (emphasizing that a majority of cases in which the Court grants certiorari present "clear conflicts between either the federal courts of appeals or state courts of last resort").

¹²⁶ *Markman I*, 52 F.3d 967.

¹²⁷ *Cybor Corp. v. FAS Techs., Inc.*, 138 F.3d 1448 (Fed. Cir. 1998) (en banc).

¹²⁸ *Phillips v. AWH Corp.*, 415 F.3d 1303 (Fed. Cir. 2005) (en banc). *Phillips* today is remembered as a case setting out claim-construction methodology, because the *en banc* court chose to duck the question of the standard of review on which it had granted rehearing. *Id.* at 1328.

¹²⁹ *Lighting Ballast Control LLC v. Philips Elecs. N. Am. Corp.*, 744 F.3d 1272 (Fed. Cir. 2014) (en banc).

some kind of informal deference that one concurring judge offered.¹³⁰ And because the Federal Circuit relied so heavily on *stare decisis*, the clear message was: *de novo* review today, *de novo* review tomorrow, *de novo* review forever. Even sitting *en banc*, with the power to change its mind, the Federal Circuit would not do so.¹³¹

Fourth, the United States—a very influential *amicus curiae* in patent cases—had filed briefs in *Lighting Ballast* and in an earlier Supreme Court case expressing the view that the Federal Circuit had it wrong.¹³² The Federal Circuit's disagreement with the views expressed through the Solicitor General and the PTO Solicitor was likely an additional factor suggesting that the Federal Circuit might not have had it right. And the respondents did not defend the Federal Circuit's rule on the merits in their brief in opposition.¹³³

Finally, Teva's case was a very good vehicle. On the advice of the Solicitor General, the Court had turned away another petition raising the same issue not long before, because the trial court had not actually made any findings.¹³⁴ In Teva's case, by contrast, the district court's findings were clear, and the defendants did not argue that they were clearly erroneous.¹³⁵ So applying

¹³⁰ *Id.* at 1294 (Lourie, J., concurring) (“This appellate court, when asked to interpret the claims of a patent carefully, notes and considers how the district court construed the claims. If we disagree, it is not without a degree of informal deference.”).

¹³¹ *See id.* at 1281–86 (holding that the Court's previous holding in *Cybor* would not change and the standard of review for cases such as this one would remain *de novo* review).

¹³² *See* Corrected Brief for the United States, *supra* note 101, at 4–22; Brief for the United States as Amicus Curiae at 20–21, *Retractable Techs., Inc. v. Becton, Dickinson & Co.*, 133 S. Ct. 833 (2013) (No. 11-1154) (mem.).

¹³³ *See generally* Brief for Respondents in Opposition, *Teva Pharms. USA, Inc. v. Sandoz Inc.*, 134 S. Ct. 1761 (2014) (mem.) (No. 13-854); Reply Brief for Petitioners at 1, *Teva Pharms. USA, Inc. v. Sandoz, Inc.*, 134 S. Ct. 1761 (2014) (mem.) (No. 13-854). Indeed, in a subsequent in-chambers opinion, written after certiorari was granted but before merits briefing, Chief Justice Roberts acknowledged that Teva had already shown a “fair prospect of success on the merits.” *Teva Pharms. USA, Inc. v. Sandoz, Inc. (Teva III)*, 134 S. Ct. 1621, 1621 (2014) (mem.).

¹³⁴ *See* Brief for the United States as Amicus Curiae, *supra* note 132, at 21–22.

¹³⁵ *See generally* Brief for Respondents in Opposition, *supra* note 133; Reply Brief for Petitioners, *supra* note 133, at 3.

the right standard of review could make all the difference to the claim construction issue—and the claim construction issue determined whether the patent would survive.¹³⁶

VI. IN THE SUPREME COURT

From the moment Teva first went to the Supreme Court, it had to choose: Would it argue for deference to the district court's claim construction itself or *only* to the factual findings—which would mean accepting the proposition that claim construction is, in the final analysis, a question of law reviewed *de novo*? Lighting Ballast, the appellee in the recent *en banc* decision, had adopted the former strategy.¹³⁷ The government had argued for something much closer to the latter.¹³⁸ Teva chose the latter, too.¹³⁹

This Part, without revealing any client confidences or attorney thought processes, sets out some reasons why that judgment made sense in context, even though the result was a less robust holding than those dissatisfied with *Cybor* might have liked. For years, the primary complaint about the *de novo* standard of review has been the Federal Circuit's reversal rate, which scholars described as “unusually high” compared to appellate courts' treatment of other issues, even other issues reviewed without deference.¹⁴⁰ District judges, especially, have bemoaned the fact that the Federal Circuit reverses such a large number of claim

¹³⁶ See *Teva IV*, 135 S. Ct. 831, 842–43 (2015). The Supreme Court ultimately used one of the three factual findings Teva emphasized—the one concerning Figure 1—to illustrate the Federal Circuit's error in failing to defer. *Id.*

¹³⁷ *Lighting Ballast Control LLC v. Philips Elecs. N. Am. Corp.*, 744 F.3d 1272, 1277 (Fed. Cir. 2014) (*en banc*).

¹³⁸ See Corrected Brief for the United States, *supra* note 101, at 3.

¹³⁹ Petition for a Writ of Certiorari, *Teva IV*, *supra* note 13, at i.

¹⁴⁰ See, e.g., Brief of Professor Peter S. Menell as Amicus Curiae Supporting Lighting Ballast Control LLC at 13, *Lighting Ballast Control LLC v. Philips Elecs. N. Am. Corp.*, 744 F.3d 1272 (Fed. Cir. 2014) (No. 2012-1014) (“The unusually high reversal rate . . . has remained a source of consternation among trial judges.”) (citation omitted); *id.* at 15 (“Although we document a significant drop in the claim construction reversal rate since the *Phillips* decision, there still remains a high reversal rate compared to other areas of federal practice.”); Kimberly A. Moore, *Markman Eight Years Later: Is Claim Construction More Predictable?*, 9 LEWIS & CLARK L. REV. 231, 239 (2005) (between 1996 and 2003, “[a]fter a *de novo* appeal, the Federal Circuit held that 34.5% of the terms were wrongly construed by the district court”).

constructions.¹⁴¹ And as some members of the Federal Circuit became disillusioned with the reversal rate, they tended to suggest a solution that would protect a reasonably broad number of district court claim constructions.¹⁴²

Yet, Teva did not argue for across-the-board deference.¹⁴³ That would have been a rule specific to patent law.¹⁴⁴ And the Supreme Court has for years been suspicious of the Federal Circuit's attempts to announce rules—whether of jurisdiction, statutory interpretation, or appellate review—that seem to treat patent litigation differently from other litigation, or the patent appeals court differently from other appeals courts. For instance, the Supreme Court unanimously clarified that the PTO is an agency, and that judicial review of that agency's decisions should therefore follow the same “uniform approach” that applies to all other agencies.¹⁴⁵

¹⁴¹ See, e.g., Hon. Kathleen M. O'Malley et al., *A Panel Discussion: Claim Construction from the Perspective of the District Judge*, 54 CASE W. RES. L. REV. 671, 682 (2004) (remarks of Judge Patti Saris: “[T]he high reversal rate demoralizes many federal district court judges.”); Moore, *supra* note 140, at 231–32 n.2 (citing comments by a district judge and by a patent litigator who believed his view was “shared by the district court judges”).

¹⁴² See *Amgen Inc. v. Hoechst Marion Roussel, Inc.*, 469 F.3d 1039, 1040–41 (Fed. Cir. 2006) (Michel, C.J., dissenting from the denial of the petition for rehearing en banc) (emphasis added) (opining that when a trial judge assesses the perspective of the skilled artisan on a claim term, she “necessarily relies upon prior art documents and other evidence[,]” and “[i]n such instances, perhaps we should routinely give at least some deference to the trial court, given its greater knowledge of the facts”).

¹⁴³ See *Petition for a Writ of Certiorari, Teva IV*, *supra* note 13, at 2–3.

¹⁴⁴ See *id.*

¹⁴⁵ *Dickinson v. Zurko*, 527 U.S. 150, 154–155 (1999) (citing *Universal Camera Corp. v. NLRB*, 340 U.S. 474 (1951)); see also, e.g., *eBay Inc. v. MercExchange, L.L.C.*, 547 U.S. 388, 391–92 (2006) (holding that motions for injunctions in patent cases are governed by the same traditional equitable principles as in other cases); *Holmes Grp., Inc. v. Vornado Air Circulation Sys., Inc.*, 535 U.S. 826, 832–34 (2002) (refusing to allow the Federal Circuit to assert jurisdiction over patent counterclaims, even if that “would further . . . patent-law uniformity,” because the wording of the jurisdictional statute has an accepted, generally applicable meaning that does not allow for such counterclaim jurisdiction).

Teva, therefore, relied on the murder case as much as on *Markman*¹⁴⁶—in other words, it maximized its appeal to rules of general applicability. Three principles stand out in particular, all of them foreshadowed to some degree in the foregoing discussion.

First, every federal appellate court is bound by Rule 52(a)(6) of the Federal Rules of Civil Procedure, which states that in an action tried to the court without a jury, the district court’s findings of fact “must not be set aside unless clearly erroneous[.]”¹⁴⁷

Second, that factual finding can still receive deference even if the ultimate question is one of law.¹⁴⁸ That is the teaching of the criminal and other cases cited above: Sometimes a fact can drive the legal conclusion, such as when what the police officer saw or knew (matters of historical fact that can be disputed) can determine whether the officer had probable cause.¹⁴⁹

Third, that is the principle that governs the interpretation of other written instruments, such as contracts and deeds. Indeed, it is literally hornbook law in those areas.¹⁵⁰ And the Supreme Court itself had treated Interstate Commerce Commission tariffs that way—in resolving ambiguities, such as “technical words or phrases not commonly understood[.]” extrinsic evidence may help to “establish a usage of trade or locality[.]” and the resolution of that evidentiary question is a “matter of fact.”¹⁵¹

As a result of these three rules, the regional circuits routinely decide cases—including cases involving the interpretation of written instruments—by disaggregating law and fact, deciding the former *de novo* but deferring to the latter. The regional circuits even followed that approach in patent cases before

¹⁴⁶ See Petition for a Writ of Certiorari, *Teva IV*, *supra* note 13, at 4–5 (discussing the history of “reviewing factual issues *de novo*” starting with the Federal Circuit’s 1995 decision in *Markman*).

¹⁴⁷ FED. R. CIV. P. 52(a)(6).

¹⁴⁸ See *Ornelas v. United States*, 517 U.S. 690, 699 (1996).

¹⁴⁹ *Id.* at 699–700.

¹⁵⁰ See 12 RICHARD A. LORD, WILLISTON ON CONTRACTS § 34:19 (4th ed. 1990).

¹⁵¹ *Great N. Ry. Co. v. Merchs.’ Elevator Co.*, 259 U.S. 285, 291–92 (1922).

the creation of the Federal Circuit.¹⁵² To a judge who regards disaggregating law from fact as a routine part of the job, Teva's rule likely did not seem unsustainably difficult to apply. That appeal to familiar principles helped to rebut the arguments made by the defendants,¹⁵³ which introduced the following key points.

Uniformity: The Federal Circuit is the single appeals court for all patent cases, a fact that the Supreme Court noted in *Markman*.¹⁵⁴ The defendants and their *amici* contended that the need for uniformity justified treating factual findings in claim construction as part of the legal question of claim construction.¹⁵⁵ That way, the Federal Circuit could always interpret them *de novo* and render an interpretation of a patent that would be nationally uniform and not dependent on what a single judge in a particular district found as a matter of fact.¹⁵⁶ That is, of course, *not* a generally applicable principle; it is an appeal to principles specific to patent law.¹⁵⁷

Burden and Stability: The respondents (and one of the Justices who later dissented) seized on the very narrowness of the proposed rule as a reason to reject it—too much more work for too little added benefit, they suggested.¹⁵⁸ Indeed, at argument, respondents' counsel repeatedly characterized the proposed change to the Federal Circuit's rule as "not worth the candle,"¹⁵⁹ and

¹⁵² See, e.g., *Harries v. Air King Prods. Co.*, 183 F.2d 158, 164 (2d Cir. 1950) (L. Hand, J.); *Johnson & Johnson v. Carolina Lee Knitting Co.*, 258 F.2d 593, 596 (4th Cir. 1958).

¹⁵³ See, e.g., *Teva IV*, 135 S. Ct. 831, 839 (2015) (citing *First Options of Chi., Inc. v. Kaplan*, 514 U.S. 938, 947–48 (1995)) ("Courts of appeals have long found it possible to separate factual from legal matters.").

¹⁵⁴ *Markman II*, 517 U.S. 370, 391 (1996) (referring to "the single appeals court").

¹⁵⁵ Transcript of Oral Argument, *supra* note 122, at 42–43, 47; Brief for Intel Corp. et al. as *Amici Curiae* in Support of Affirmance at 21–22, *Teva Pharms. USA, Inc. v. Sandoz, Inc.*, 135 S. Ct. 831 (2015) (No. 13-854).

¹⁵⁶ See Brief for Intel Corp., *supra* note 155, at 22.

¹⁵⁷ See Transcript of Oral Argument, *supra* note 122, at 36–40. Justice Breyer asked at argument, "[I]s that the only answer[,] that patents are somehow different?" *Id.* at 36. Respondents' counsel forthrightly answered, "Yes. Patent claim construction is different." *Id.*

¹⁵⁸ See *id.* at 33–34, 38, 41.

¹⁵⁹ *Id.*

Justice Alito asked a similar question pegged to a study suggesting that changing the standard of review for factual findings would not have made a difference in any of the cases studied.¹⁶⁰

Supported by Precedent: The respondents relied heavily on *Markman* for the proposition that claim construction is a question of law in its entirety, and they also sought more generalized support from cases involving the interpretation of statutes.¹⁶¹ When a court interprets a statute based on its view of how the world works, it does not make factual findings; it treats such facts as legislative facts.¹⁶² They are reviewed *de novo*, respondents argued, and so should claim construction be.¹⁶³ This argument dovetailed with their uniformity argument: A statute has a single meaning and so should a patent, they said.¹⁶⁴

Ultimately, as everyone now knows, the Supreme Court came down on the side of deference.¹⁶⁵ And its leading reason was the cross-cutting one: Rule 52(a)(6) makes no exceptions, not even for the sake of “uniformity,” a consideration that the Supreme Court thought was largely overblown.¹⁶⁶ And since federal courts disentangle fact from law all the time, including in the interpretation of written instruments, mere difficulty does not justify ignoring the Rule (that is, even if ignoring the Rule would *ever* be permissible).¹⁶⁷

Furthermore, the Court reaffirmed that sometimes facts can be extremely important in claim construction. “[I]n some instances,” the Court agreed, “a factual finding may be close to dispositive of the ultimate legal question of the proper meaning of the term in the context of the patent[,]” though that ultimate question still remains a legal one.¹⁶⁸ Here again, the Court analogized to non-patent law: An appellate court reviews factual findings *de novo* in deciding “whether a defendant gave a confession voluntarily[,]” even though “the answer to a subsidiary factual question, say[,] ‘whether in fact the police engaged in the

¹⁶⁰ See *id.* at 21.

¹⁶¹ *Id.* at 33–34, 36–37, 40, 42–43, 52–53.

¹⁶² See *Teva IV*, 135 S. Ct. 831, 840 (2015).

¹⁶³ See Transcript of Oral Argument, *supra* note 122, at 46–47.

¹⁶⁴ See *id.*

¹⁶⁵ See *Teva IV*, 135 S. Ct. at 835.

¹⁶⁶ *Id.* at 836–37, 839–40.

¹⁶⁷ See *id.* at 837, 839–40.

¹⁶⁸ *Id.* at 841–42.

intimidation tactics alleged by the defendant[,]" may determine the legal answer as well.¹⁶⁹ The point is that our system treats district courts as better at fact finding than appellate courts, even when that fact finding is very, very important.

In its discussion, however, the Court made a fateful statement: "[S]ubsidiary factfinding is unlikely to loom large in the universe of litigated claim construction."¹⁷⁰ By signaling that its decision was intended to be a narrow one, the Court may well have invited lower courts to treat it as *extremely* narrow. In other words, if the Supreme Court expects deference to be rare overall, it will probably not be surprised at the Federal Circuit's refusals to defer in individual cases.

VII. QUESTIONS LEFT OPEN

The Federal Circuit turned to the implementation of *Teva* with alacrity. Indeed, even before *Teva* itself returned to the Court of Appeals, it had already started issuing decisions interpreting the Supreme Court's holding. And not surprisingly, most of those decisions determined that no deference was warranted.¹⁷¹ It would be premature to survey the entire landscape of Federal Circuit decision making in this area, as the law is still percolating. District courts that, over a generation, grew accustomed to *not* allowing extrinsic evidence, now have a new license to take expert testimony and make findings. Some of them will use it. Those new findings will take time to bubble up to the Federal Circuit. For now, this Part offers only a few preliminary observations about where the narrowness of the Supreme Court decision may lead.

First, relatively uncontroversially, the Federal Circuit held that no deference is warranted when there are no findings.¹⁷² That was not what Lighting Ballast argued for in the *en banc* proceeding just 18 months earlier—in which it

¹⁶⁹ *Id.* at 842 (quoting *Miller v. Fenton*, 474 U.S. 104, 112-18 (1985)).

¹⁷⁰ *Teva IV*, 135 S. Ct. at 840.

¹⁷¹ *See, e.g., Enzo Biochem Inc. v. Applera Corp.*, 780 F.3d 1149, 1157 (Fed. Cir. 2015).

¹⁷² *E.g., In re Cuozzo Speed Techs., LLC*, 778 F.3d 1271, 1282-83 (Fed. Cir. 2015), *aff'd on other grounds*, 136 S. Ct. 2131 (2016). *Cuozzo* came from the Patent Trial and Appeal Board, not a district court, so a different deferential standard applies ("substantial evidence" and not clear error), but the same basic rule of deference to fact and *de novo* review of law still holds. *See id.* at 1274, 1282-83.

argued that claim construction is always factual—but it was common ground in the Supreme Court among the litigants and the United States.¹⁷³ The Federal Circuit promptly embraced it as well.

The Federal Circuit has not yet had to confront the question of what happens when a district court has not made findings, *but patently should have*. In other contexts, a failure to find facts results in a remand, so that the appellate court does not usurp the district court's role. But the Federal Circuit for many years has been the final arbiter of claim construction;¹⁷⁴ to remand for a new claim construction doubtless will cut against its usual instincts. And there may be strong reasons to resist a remand: Sending a case back to the district court for a new trial under a corrected claim construction may be bad, but litigants might be even *more* frustrated if a case were sent back for a *possible* new trial under a *possibly different* claim construction—with appellate review unavailable until after a new final or near-final judgment.¹⁷⁵

Second, when findings *are* made, the findings must be on matters of fact. The defendants had argued intensely in the Supreme Court that the findings in Teva's case were not actually factual in nature, and on remand the Federal Circuit largely accepted that contention—this time, by a divided vote.¹⁷⁶ As explained above, two of the matters on which Teva's expert had opined—and the district court had made findings—were whether the specification gave a “presumed meaning” to the key claim term “molecular weight,” and whether a skilled artisan would read the prosecution history as conflicting.¹⁷⁷ The Federal Circuit did not afford deference to either of these findings.¹⁷⁸

¹⁷³ See *Lighting Ballast Control LLC v. Philips Elecs. N. Am. Corp.*, 744 F.3d 1272, 1278 (Fed. Cir. 2014) (en banc); *Teva IV*, 135 S. Ct. at 841.

¹⁷⁴ See *Lighting Ballast Control*, 744 F.3d at 1277, *judgment vacated and remanded*, 135 S. Ct. 1173 (2015) (mem.); *Cybor Corp. v. FAS Techs., Inc.*, 138 F.3d 1448, 1454 (Fed. Cir. 1998) (en banc); see also *Markman II*, 517 U.S. 370, 370, *aff'g*, 52 F.3d 967.

¹⁷⁵ See 28 U.S.C. § 1292(c)(2) (2012) (Federal Circuit has appellate jurisdiction once the judgment is “final except for an accounting.”).

¹⁷⁶ See *Teva Pharms. USA, Inc. v. Sandoz, Inc. (Teva V)*, 789 F.3d 1335, 1342 (Fed. Cir. 2015).

¹⁷⁷ *Teva I*, 810 F. Supp. 2d 578, 587–92 (S.D.N.Y. 2011) (crediting extrinsic evidence, *inter alia*), *rev'd in relevant part*, *Teva II*, 723 F.3d 1363 (Fed. Cir.

On prosecution history, the holding was perfectly clear: While the court accepted the finding that the prosecution history contained a scientific error, what the court should make of that error is a pure question of law.¹⁷⁹ “The determination of the significance of statements made during prosecution to the claim construction is a question of law[,]” wrote the panel majority, and it proceeded to decide *as a matter of law* how “a person of ordinary skill in the art would have understood the . . . applicants [to have] defined ‘molecular weight’” in the prosecution history.¹⁸⁰

On the impact of the specification, the holding was more ambiguous. Portions of the opinion appear to hold that an expert can never explain a scientific inference if that scientific inference comes from materials within the patent or the intrinsic record.¹⁸¹ “Determining the meaning or significance to ascribe to the legal writings which constitute the intrinsic record is legal analysis[,]” wrote the Federal Circuit, and a litigant “cannot transform legal analysis about the meaning or significance of the intrinsic evidence into a factual question simply by having an expert testify on it”¹⁸² (which is what Markman tried to do, years ago).

But that holding cannot be as broad as it seems. After all, the Supreme Court itself accepted factual evidence about a part of the intrinsic record—Figure 1.¹⁸³ The expert testimony helped furnish the scientific knowledge necessary for a lay judge to understand the figure and its interpretive significance, or lack thereof. Therefore, the Federal Circuit cannot have meant that experts can never provide evidence with which to construe the intrinsic record. That sort of “background science” remains perfectly proper for expert evidence—and factual findings.¹⁸⁴ Rather, the Federal Circuit may simply have concluded that on the

2013), *vacated and remanded*, *Teva IV*, 135 S. Ct. 831 (2015), *rev'd in relevant part*, *Teva V*, 789 F.3d 1335 (Fed. Cir. 2015).

¹⁷⁸ *Teva V*, 789 F.3d at 1342, 1344.

¹⁷⁹ *Id.* at 1344.

¹⁸⁰ *Id.*

¹⁸¹ *Id.* at 1342.

¹⁸² *Id.*

¹⁸³ *Teva IV*, 135 S. Ct. 831, 843 (2015).

¹⁸⁴ *Id.* at 841.

facts of the case, the expert did not opine directly enough about the science or the use of scientific terminology.¹⁸⁵

One more matter left open by *Teva*, which the Federal Circuit has been attempting to answer, is what happens when the Federal Circuit thinks the expert evidence is unnecessary. For example, suppose a term—or a graph—appears unambiguous to the appellate eye, but the district court entertains extrinsic evidence and makes findings that justify a different meaning. The Federal Circuit has begun to hold that under those circumstances, it may simply ignore the expert evidence and the resulting findings.¹⁸⁶

That is a troubling development. As Judge Easterbrook of the Seventh Circuit observed after sitting in the district court to try a patent case: “What seems clear to a judge may read otherwise to a skilled designer. That is why we had a trial.”¹⁸⁷ As the Supreme Court said in the venerable tariff case that it later cited in *Teva*: Whether words in a written instrument are “used in their ordinary meaning, or in a peculiar meaning” specific to a particular trade, is a question of fact and not of construction.¹⁸⁸ Yet the Federal Circuit appears to be reserving the right to decide for itself that a patent has one unambiguous meaning, without reference to the specialized evidence that a district court uses to give it a different meaning.

If the *Teva* decision was intended to be narrow, it likely was not intended to be *that* narrow. *Teva*’s arguments consistently embraced the notion that “terms

¹⁸⁵ See *Teva V*, 789 F.3d at 1341 (disputing whether the district court made a finding about “presumed meaning” based on the recitation of particular technology).

¹⁸⁶ See, e.g., *Microsoft Corp. v. Proxyconn, Inc.*, 789 F.3d 1292, 1297 (Fed. Cir. 2015) (reviewing claim construction *de novo* without considering “findings on [extrinsic] evidence[,] because the intrinsic record [was] clear”); *Eidos Display, LLC v. AU Optronics Corp.*, 779 F.3d 1360, 1365 (Fed. Cir. 2015) (citing *Phillips v. AWH Corp.*, 415 F.3d 1303, 1318 (Fed. Cir. 2005) (en banc)) (“To the extent the district court considered extrinsic evidence in its claim construction order or summary judgment order, that evidence is ultimately immaterial to the outcome because the intrinsic record is clear.”).

¹⁸⁷ *In re Mahurkar Double Lumen Hemodialysis Catheter Patent Litig.*, 831 F. Supp. 1354, 1359 (N.D. Ill. 1993), *aff’d on other grounds*, 71 F.3d 1573, 1578 (Fed. Cir. 1995).

¹⁸⁸ *Great N. Ry. Co. v. Merchs.’ Elevator Co.*, 259 U.S. 285, 293 (1922).

of art,” like “the state of the art,” were proper subjects for factual inquiry.¹⁸⁹ Yet courts could easily think that the “intrinsic record is clear” simply because they do not understand that the word has a different sense in the relevant art. The purpose of factual findings is to share with the court the skilled artisan’s perspective necessary to understand those terms of art. And because those findings are factual in nature, they are entitled to deference on appeal. Once it is established that a term used in a claim has a definite meaning in the art, an appellate panel would need persuasive reasons to decide that the claim uses that same term differently (if, for example, the patentee has acted as his or her own lexicographer and defined the term to mean something else). Simply deeming the district court’s factual finding immaterial will not do.

VIII. CONCLUSION

The *Teva* decision represents a long journey, but perhaps not much movement. Precisely because the Supreme Court is disinclined to let the Federal Circuit get out of step with its sibling circuits and its governing rules, the *Teva* decision focused narrowly on how to treat the factual elements of claim construction. But the Supreme Court—emphasizing *non*-patent law—did not delve into the question of what elements of claim construction *are*, in fact, factual. “Terms of art” and “background science” are about as specific as the Court was willing to get. And even in those categories, it seems, the Federal Circuit may still apply *de novo* review—if the necessary findings were never made, or perhaps if the findings seem unnecessary to the reviewing court.

But the point of explaining all this litigation history is this: if *Teva* had not focused its arguments the way it did, but instead had argued for across-the-board deference, it might well have been rebuffed completely. So while the Supreme Court’s ultimate decision in *Teva* may seem not to have changed very much, it is quite easy to imagine a decision that would have changed literally nothing at all.

¹⁸⁹ Transcript of Oral Argument, *supra* note 122, at 5; see *Teva IV*, 135 S. Ct. 831, 841 (2015) (quoting *Winans v. N.Y. & Erie R.R. Co.*, 62 U.S. (21 How.) 88, 100–01 (1858)) (“[E]xperts may be examined to explain terms of art, and the state of the art, at any given time,’ but they cannot be used to prove ‘the proper or legal construction of any instrument of writing.’”).

**CLAIM CONSTRUCTION EVIDENCE DURING PATENT PROSECUTION
IN THE USPTO AND APPEALS TO THE FEDERAL CIRCUIT**

*Peter Hrubiec & David Marsh**

I.	INTRODUCTION	586
II.	CLAIM CONSTRUCTION BACKGROUND	586
	A. <i>Brief Introduction to Claim Construction in the USPTO</i>	586
	B. <i>Claim Construction Evidence After Phillips</i>	587
	1. Intrinsic Evidence.....	590
	2. Extrinsic Evidence.....	592
III.	CLAIM CONSTRUCTION IN <i>EX PARTE</i> MATTERS	593
	A. <i>The Federal Circuit’s Broadest Reasonable Interpretation Analysis</i> ..	593
	1. Forms of Evidence Relied Upon in Affirming the Board’s Decision.....	593
	2. Forms of Evidence Relied Upon in Reversing the Board’s Decision.....	596
	B. <i>The Patent Trial & Appeal Board’s Broadest Reasonable Interpretation Analysis</i>	598
	1. Forms of Evidence Relied Upon in Affirming the Examiner’s Construction.....	598
	2. Forms of Evidence Relied Upon in Reversing the Examiner’s Construction.....	600
IV.	CONCLUSION	601

* © 2016 Peter Hrubiec and David Marsh. Peter Hrubiec is a graduate of the George Washington University Law School, Class of 2016. David Marsh is a partner and co-chair of the Intellectual Property practice of Arnold & Porter, LLP.

I. INTRODUCTION

Claim construction is a central issue in the prosecution and evaluation of a patent application before the United States Patent and Trademark Office (“USPTO”). Determining the meaning of a claim is the first step in determining whether a claim is patentable over the prior art. The United States Court of Appeals for the Federal Circuit (“Federal Circuit”) instructed the USPTO to give claims their “broadest reasonable interpretation” during patent examination.¹ Until the *Phillips v. AWH Corp.*² decision there had been a question of the extent to which intrinsic and extrinsic evidence could be relied upon in the interpretation of a specific claim term. In *Phillips*, the Federal Circuit stated that in construing claim terms a court can look at “the words of the claims themselves, the remainder of the specification, the prosecution history, and extrinsic evidence concerning relevant scientific principles, the meaning of technical terms, and the state of the art.”³

Prosecution history is part of the intrinsic evidence relied upon to determine the meaning of disputed terms. This article looks at how both the Patent Trial and Appeal Board (“PTAB”) and the Federal Circuit have evaluated how claims have been interpreted during *ex parte* prosecution, focusing on the evidence relied upon during the patent application process.⁴

II. CLAIM CONSTRUCTION BACKGROUND

A. *Brief Introduction to Claim Construction in the USPTO*

Claim construction is arguably one of the most important issues in patent prosecution.⁵ Claim construction in the USPTO requires the patent examiner and the PTAB to determine the scope of a claim according to its

¹ *In re Morris*, 127 F.3d 1048, 1054 (Fed. Cir. 1997).

² *Phillips v. AWH Corp.*, 415 F.3d 1303 (Fed. Cir. 2005).

³ *Id.* at 1314 (quoting *Innova/Pure Water, Inc. v. Safari Water Filtration Sys., Inc.*, 381 F.3d 1111, 1116 (Fed. Cir. 2004)).

⁴ To obtain a representative set of cases, a search between 2012 and 2015 of the Federal Circuit database of published opinions and orders was undertaken. Authors also searched for PTAB *ex parte* decisions. In doing so, authors used Westlaw’s *Patent Trial & Appeal Board* database and limited the date range from October 2012 to December 2015.

⁵ Jason R. Mudd, *To Construe or Not to Construe: At the Interface Between Claim Construction and Infringement in Patent Cases*, 76 MO. L. REV. 709, 710 (2011).

“broadest reasonable construction in light of the specification of the patent in which it appears.”⁶ Moreover, “this interpretation must be consistent with the [interpretation] that those skilled in the art would reach.”⁷ The policy behind giving claims their “broadest reasonable interpretation” during patent prosecution is that at this stage claims can be readily amended.⁸ Furthermore, the Federal Circuit reviews the USPTO’s claim construction under a “reasonable” standard.⁹

B. Claim Construction Evidence After Phillips

With its decision in *Phillips v. AWH Corp.*, the Federal Circuit laid out the foundation for the extent that certain types of evidentiary sources can be relied upon during claim construction in patent litigation.¹⁰ In *Phillips*, the patent at issue was directed to modular steel-shell panels that could be welded together to form vandalism-resistant walls.¹¹ The panels were useful in prison walls because they were impact-resistant and insulated against fire and noise.¹² Defendant AWH Corporation (“AWH”) entered into an agreement with the patent owner, Edward Phillips, to market and sell the panels.¹³ AWH, however, continued to sell similar panels after the arrangement ended.¹⁴ Subsequently, Phillips brought

⁶ 37 C.F.R. § 42.100(b) (2016).

⁷ *In re Cortright*, 165 F.3d 1353, 1358 (Fed. Cir. 1999).

⁸ *In re Carr*, 297 F. 542 (D.C. Cir. 1924). “After a patent has issued, and it no longer is possible for the patentee to control the phraseology of his claims, the courts will so interpret them, if possible, as to protect him; but there is no reason, as we many times have observed, why an applicant in the Patent Office should not draw his claims to cover his actual invention only. For this reason[,] we have uniformly ruled that claims will be given the broadest interpretation of which they reasonably are susceptible. This rule is a reasonable one, and tends not only to protect the real invention, but to prevent needless litigation after the patent has issued.” *Id.* at 544.

⁹ *In re Morris*, 127 F.3d 1048, 1055 (Fed. Cir. 1997).

¹⁰ *Phillips v. AWH Corp.*, 415 F.3d 1303, 1317–18 (Fed. Cir. 2005).

¹¹ *Id.* at 1309.

¹² *Id.*

¹³ *Id.*

¹⁴ *Id.*

suit for patent infringement, *inter alia*, in the United States District Court for the District of Colorado.¹⁵

The District Court focused its analysis on the claim interpretation of claim 1 and relied on the specification and its diagrams explicitly.¹⁶ Claim 1 recited “further means disposed inside the shell for increasing its load bearing capacity comprising internal steel *baffles* extending inwardly from the steel shell walls.”¹⁷ The Court interpreted this language under 35 U.S.C. § 112, paragraph 6¹⁸ as a “means-plus-function” claim covering the “corresponding structure, material, or acts described in the specification or equivalents thereof.”¹⁹ From the specification and its diagrams, the Court interpreted the claim term “baffles” to mean barriers placed at angles other than 90 degrees and that placement at such angles had the function of creating an “intermediate interlocking, but not solid, internal barrier.”²⁰ Because AWH’s panels had baffles at an angle of 90 degrees, Phillips could not prove infringement under the Court’s claim construction and the Court granted summary judgment in favor of AWH.²¹ Phillips appealed the District Court’s decision to the Federal Circuit.

A divided panel of the Federal Circuit sustained the District Court’s decision on different grounds.²² The panel concluded that “because [Claim 1] . . . contained a sufficient recitation of structure, the district court erred by construing the term ‘baffles’ to invoke the ‘means-plus-function’ claim format

¹⁵ *Phillips*, 415 F.3d at 1309. Phillips also brought a trade secret misappropriation claim and the district court dismissed it as barred by Colorado’s three-year statute of limitations.

¹⁶ *Id.*

¹⁷ *Id.* (emphasis added).

¹⁸ 35 U.S.C. § 112(f) (2012) (“An element in a claim for a combination may be expressed as a means or step for performing a specified function without the recital of structure, material, or acts in support thereof, and such claim shall be construed to cover the corresponding structure, material, or acts described in the specification and equivalents thereof.”).

¹⁹ *Id.*; *Phillips*, 415 F.3d at 1309.

²⁰ *Phillips*, 415 F.3d at 1309.

²¹ *Id.*

²² *Id.* Phillips also appealed the trade secret misappropriation holding and the Federal Circuit panel unanimously upheld the district court’s ruling that the claim was barred due to the statute of limitations. *Id.*

authorized by section 112, paragraph 6.”²³ Also relying on the specification, the panel held that the term “baffles,” as used in the patent, excludes structures that extend at an angle of 90 degrees from the wall.²⁴ In addition, the panel noted that the specification was silent with regards to a baffle projecting from the wall at a 90 degree angle and that prior art covered such a configuration.²⁵ The majority stated that a patent specification is intended to support and inform the claims and concluded that, based on the specification’s explicit descriptions, Phillips regarded his invention as panels having baffles oriented at angles other than 90 degrees from the wall.²⁶ Consequently, a majority of the panel upheld the District Court’s holding for summary judgment, with one dissenting opinion.²⁷ The Federal Circuit agreed to rehear the appeal *en banc* and vacated the panel’s decision.²⁸

The Federal Circuit’s *en banc* panel reversed the District Court’s decision with respect to the patent infringement claim.²⁹ Before addressing claim construction, the Federal Circuit held that the term “baffles” is not a “means-plus-function” limitation that invokes Section 112, paragraph 6, and thus looked to the language of Section 112, paragraphs 1 and 2.³⁰ The Federal Circuit noted that there was a known issue in claim construction regarding the role of the

²³ *Id.* at 1310.

²⁴ Specifically, the specification describes the baffles as being “disposed at such angles that bullets which might penetrate the outer steel panels are deflected.” *Id.*

²⁵ See *Phillips*, 415 F.3d at 1310.

²⁶ *Id.* (citing *Phillips v. AWH Corp.*, 363 F.3d 1207, 1213 (Fed. Cir. 2004)).

²⁷ *Id.* The dissenting judge argued that the panel should have looked to the “plain meaning” of the term “baffles.” *Id.* (citing *Phillips*, 363 F.3d at 1216–17). Noting that the plain meaning of “baffles” is “something for deflecting, checking, or otherwise regulating flow,” the dissenting judge concluded that there was “no reason to supplement the plain meaning of the claim language with a limitation from the preferred embodiment.” *Id.* (citing *Phillips*, 363 F.3d at 1218).

²⁸ *Id.* (citing *Phillips v. AWH Corp.*, 376 F.3d 1382 (Fed. Cir. 2004)).

²⁹ The Court affirmed the district court’s holding with respect to the trade secret misappropriation claim as being barred by the statute of limitations. *Id.*

³⁰ See *Phillips*, 415 F.3d at 1311–12.

specification.³¹ Specifically, the Court sought to clarify the extent to which courts should resort to, and rely on, a patent's specification in seeking to ascertain the proper scope of its claims.³²

The Federal Circuit first pointed out that the words of a claim are "generally given their ordinary and customary meaning" and this is the meaning a person of ordinary skill in the art would give the term.³³ A person of ordinary skill in the art is deemed to read the claim term "not only in the context of the particular claim in which the disputed term appears, but *in the context of the entire patent, including the specification.*"³⁴ While the ordinary meaning of claim language may be readily apparent, it is often the case that a court will need to look to sources available to the public, which include "the words of the claims themselves, the remainder of the specification, the prosecution history, and extrinsic evidence concerning relevant scientific principles, the meaning of technical terms, and the state of the art."³⁵ In defining the different types of evidence that can be relied upon to interpret a claim term, the Federal Circuit separated each into two categories: intrinsic evidence and extrinsic evidence.³⁶

1. Intrinsic Evidence

First, the claim itself can provide substantial guidance as to the meaning of a particular claim term, as well as the context in which a term is used within the asserted claim.³⁷ For example, in the instant case the Federal Circuit stated that the claim refers to "steel baffles," strongly implying that the term "baffles"

³¹ See *id.* at 1312.

³² See *id.*; Section 112, paragraph 1 requires that the specification "contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains . . . to make and use the same . . ." Section 112, paragraph 2 states that the specification "shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the inventor or a joint inventor regards as the invention." 35 U.S.C. § 112(a)-(b) (2012).

³³ *Phillips*, 415 F.3d at 1312-13.

³⁴ *Id.* at 1313 (emphasis added).

³⁵ *Id.* at 1314 (quoting *Innova/Pure Water, Inc. v. Safari Water Filtration Sys., Inc.*, 381 F.3d 1111, 1116 (Fed. Cir. 2004)).

³⁶ See *id.* at 1314-19.

³⁷ See *id.* at 1314.

does not inherently mean objects made of steel.³⁸ Further, because claim terms are normally used consistently throughout the patent, the usage of a term in one claim can illustrate the meaning of the same term in another claim.³⁹

Second, “[c]laims must be read in view of the specification, of which they are a part.”⁴⁰ Citing numerous Federal Circuit and Supreme Court cases, the Federal Circuit emphasized the importance of the specification in claim construction, stating that it is usually dispositive and the best guide to the meaning of a claim term.⁴¹ For this reason, the specification should be the primary basis for construing claims.⁴²

Third, a court can also consider the patent’s prosecution history if it is in evidence.⁴³ The prosecution history is the complete record before the Patent Office, including the prior art cited during examination.⁴⁴ The Federal Circuit warned that, while the prosecution history provides evidence of how the Patent Office and the inventor understood the patent, it can lack the clarity of the specification because it shows an ongoing negotiation between the examiner and the patentee rather than the final product of that negotiation.⁴⁵ Nonetheless, the prosecution history can demonstrate how the inventor understood the invention and whether the inventor limited the invention during the course of prosecution and narrowed the claim scope.⁴⁶

³⁸ *Phillips*, 415 F.3d at 1314.

³⁹ *Id.*

⁴⁰ *Markman v. Westview Instruments, Inc.*, 52 F.3d 967, 979 (Fed. Cir. 1995).

⁴¹ *Phillips*, 415 F.3d at 1315 (citing *Standard Oil Co. v. Am. Cyanamid Co.*, 774 F.2d 448, 452 (Fed. Cir. 1985)). *See, e.g.*, *Schriber-Schroth Co. v. Cleveland Trust Co.*, 311 U.S. 211, 217 (1940); *Hogg v. Emerson*, 47 U.S. (6 How.) 437, 448, 466, 479, 483 (1848); *Multiform Desiccants, Inc. v. Medzam, Ltd.*, 133 F.3d 1473, 1477-78 (Fed. Cir. 1998).

⁴² *Phillips*, 415 F.3d at 1315.

⁴³ *See id.* at 1317 (citing *Markman*, 52 F.3d at 980).

⁴⁴ *See id.*

⁴⁵ *See id.*

⁴⁶ *See id.*

2. Extrinsic Evidence

While extrinsic evidence is less significant than intrinsic evidence, the Federal Circuit has expressly authorized courts to rely on such evidence.⁴⁷ The Federal Circuit has observed that dictionaries and treatises can provide the true and accepted meaning of a claim term.⁴⁸ This is especially true when using technical dictionaries to “better understand the underlying technology.”⁴⁹ Furthermore, a court can also rely on expert testimony to establish that a claim term in the patent or in the prior art has a particular meaning in the relevant field.⁵⁰ But, expert testimony should be discounted if it is clearly at odds with the claim construction defined by the intrinsic evidence.⁵¹

Extrinsic evidence is less reliable than intrinsic evidence for several reasons. First, extrinsic evidence is not part of the patent and was not created during prosecution for the purpose of explaining the patent’s meaning and scope.⁵² Second, extrinsic evidence such as publications may not be written by skilled artisans and may not reflect the understanding of a person skilled in the relevant art.⁵³ Third, extrinsic evidence such as expert testimony is generated for litigation and can suffer from bias.⁵⁴ Fourth, because extrinsic evidence comes from an open universe, litigants can pick and choose the evidence that is most favorable to its position, leaving it to the court to filter the useful evidence from the fluff.⁵⁵ Finally, extrinsic evidence poses the risk of being used to change the meaning of a claim term against a claim construction built from the intrinsic evidence and undermining the public notice function of the patent.⁵⁶ For these

⁴⁷ *Phillips*, 415 F.3d at 1317 (citing *Markman*, 52 F.3d at 980).

⁴⁸ *See id.* at 1318.

⁴⁹ *Id.* (quoting *Vitronics Corp. v. Conceptor, Inc.*, 90 F.3d 1576, 1584 n.6 (Fed. Cir. 1996)).

⁵⁰ *See id.*

⁵¹ *See id.* Such intrinsic evidence includes the claims themselves, the written description, and the prosecution history. *Id.*

⁵² *See Phillips*, 415 F.3d at 1318.

⁵³ *See id.*

⁵⁴ *See id.*

⁵⁵ *See id.*

⁵⁶ *See id.* at 1319.

reasons, a court should use its discretion when relying on extrinsic evidence during claim construction.⁵⁷

III. CLAIM CONSTRUCTION IN *EX PARTE* MATTERS

We analyzed twelve cases from the Federal Circuit that addressed the issue of claim construction in an *ex parte* appeal. The Court affirmed the PTAB's decision in nine cases (75 percent) and reversed the PTAB's decision in three cases (25 percent).

We further analyzed twenty *ex parte* decisions from the PTAB that have addressed the issue of claim construction. The Board affirmed the examiner's claim construction in eighteen cases (90 percent) and reversed the examiner's claim construction in two cases (10 percent).

A. *The Federal Circuit's Broadest Reasonable Interpretation Analysis*

1. **Forms of Evidence Relied Upon in Affirming the Board's Decision**

In its claim construction analysis in *ex parte* appeals since 2012, the Federal Circuit has relied upon the specification, the prior art, the claim language itself, and the ordinary meaning of the claim term when it affirms a decision from the PTAB.⁵⁸ The Court has relied upon the specification explicitly in five cases.⁵⁹ For example, in *In re Tay*, the Applicant attempted to rely on extrinsic evidence to overcome the Examiner's claim interpretation.⁶⁰ Instead, the Court relied upon the claim language and the specification in affirming the examiner's claim construction.⁶¹

⁵⁷ See *Phillips*, 415 F.3d at 1319.

⁵⁸ See, e.g., *In re Khayrallah*, 594 F. App'x 666 (Fed. Cir. 2015); *In re Holness*, 612 F. App'x 999 (Fed. Cir. 2015); *In re Shaneour*, 600 F. App'x 734 (Fed. Cir. 2015); *In re Schreer*, 526 F. App'x 999 (Fed. Cir. 2013).

⁵⁹ See *In re Khayrallah*, 594 F. App'x at 668; *In re Tay*, 579 Fed. App'x. 999, 1000-01 (Fed. Cir. 2014); *In re Teles AG Informationstechnologien*, 747 F.3d 1357, 1367-68 (Fed. Cir. 2014); *In re Haase*, 542 Fed. Appx. 962, 969 (Fed. Cir. 2013); *In re Chaganti*, 468 Fed. App'x. 974, 976-77 (Fed. Cir. 2012).

⁶⁰ See *In re Tay*, 579 Fed. App'x. at 1000-01.

⁶¹ See *id.*

The application at issue related to improving the performance of electronic image sensors in photographic equipment.⁶² Such sensors “have millions of light-capturing photodiodes arranged in a tightly spaced pixel array” which includes “many routing wires stacked on the surface of the array” that “connect each photodiode to a light reader.”⁶³ The wires are spaced apart to “allow light to travel into the photo-absorption regions” of the array.⁶⁴

An issue existed with these types of electronic image sensors, where a lower picture quality would result because each photo-absorption region inadvertently sensed light that should only be sensed by nearby photo-absorption regions due to the tight spacing and gaps created by the wires.⁶⁵ To resolve this, the application included a metal “reflective ‘contact’ adjacent to the routing wires that surrounds and reflects light back down to the photo-absorption region.”⁶⁶ Challenging the Board’s adoption of the construction of the claim term “contact” to include the “reflective layer” disclosed in the prior art, the applicant cited extrinsic evidence arguing that the construction of “contact” requires that it be “embedded” in a dielectric layer on the substrate and below a conductive wire.⁶⁷ The Court rejected this argument and affirmed the examiner’s claim construction, stating that the specification disclosed that a “contact” can be *adjacent* to a dielectric layer and can be *adjacent* to a conductive wire.⁶⁸

While other cases have also relied on the specification to explicitly define a claim term,⁶⁹ there have been those in which the court looks to the specification

⁶² *Id.* at 999.

⁶³ *Id.*

⁶⁴ *Id.*

⁶⁵ *In re Tay*, 579 F. App’x at 999.

⁶⁶ *Id.* at 999-1000.

⁶⁷ *Id.* at 1000-01.

⁶⁸ *Id.* at 1001.

⁶⁹ See *In re Khayrallah*, 594 F. App’x 666, 669 (Fed. Cir. 2014) (upholding the Board’s opinion stating that the specification expressly disclosed a broad construction of the claim term and that the Board’s conclusions in light of that construction contained no errors); *In re Haase*, 542 F. App’x 962, 966 (Fed. Cir. 2013) (upholding the Board’s opinion in which it quoted the specification to interpret the claim term at issue).

to show that it *does not* clearly limit or define a claim term.⁷⁰ For example, the court in *In re Chaganti* found that the specification did not clearly define “intangible property” in an application related to a computer-implemented method of marketing an “intangible property” interest.⁷¹ In light of this, the court affirmed the Board’s inclusion of stocks and bonds in the construction of “intangible property,” stating that the term is “not clearly defined, nor do the embodiments of the invention disclosed in the specification reveal a clear intent to exclude stocks and bonds from the scope of the claims”⁷²

Furthermore, the Federal Circuit has also upheld an examiner’s construction that implies the meaning of a claim term from reading the prior art.⁷³ Specifically, this means that the examiner looked to the prior art and determined that it anticipates the claim, and thus the examiner implicitly construed the meaning of the claim term.⁷⁴ In *In re Chuang*, the examiner found that the prior art had an associated rental fee for renting media online and anticipated an application for a computer implemented method for managing rented downloaded content at a “rental price.”⁷⁵ Upholding this construction, the Court stated that the examiner implicitly construed the “rental price” limitation to mean “an associated rental fee for renting media online.”⁷⁶

Along that same reasoning, the Court has also upheld the Board’s construction that is implied from the claim language itself.⁷⁷ For example, in *In re Shaneour* the application was related to a system of high intensity light fixtures,

⁷⁰ See generally *In re Teles AG Informationstechnologien*, 747 F.3d 1357, 1369 (Fed. Cir. 2014) (finding that accepting an argument objecting to a claim that “discloses a method of calculating transmission delay based on monitoring the entire network rather than an individual communication” would overly limit the language of the claim); See also *In re Chaganti*, 468 F. App’x 974, 977 (Fed. Cir. 2012) (holding that the vague contested term encompasses stocks and bonds although the specification did not include those words explicitly).

⁷¹ See *In re Chaganti*, 468 F. App’x at 977.

⁷² *Id.*

⁷³ See *In re Holness*, 612 F. App’x 999, 1005 (Fed. Cir. 2015); *In re Chuang*, 603 F. App’x 941, 945 (Fed. Cir. 2015).

⁷⁴ See *In re Chuang*, 603 F. App’x at 945.

⁷⁵ *Id.* at 942, 945.

⁷⁶ *Id.* at 945.

⁷⁷ See *In re Shaneour*, 600 F. App’x 734 (Fed. Cir. 2015).

such as those used in sports stadiums, with each fixture associated with its own sensor that detects light level, allowing intensity adjustments for a uniform light output.⁷⁸ The issue during claim construction was whether the claims require each light sensor to be placed at the point of the light's origin so as to measure only the output of each individual lamp.⁷⁹ The Court noted that the claim language described each sensor as being "*associated with an individual fixture*" and "*capable of producing a signal related to the light level being produced.*"⁸⁰ Holding that the Board did not clearly err in concluding that the prior art anticipated the claims, the Court stated that the claim language highlighted is "quite reasonably read as covering sensors that are somewhat removed from the particular lamp or fixture and that measure the level of light that is a blend of outputs from more than one lamp or fixture."⁸¹

Lastly, the Federal Circuit has simply relied upon the ordinary meaning of the claim term.⁸² In *In re Schreer*, the Court held that the Board's construction of "'public broadcast' to mean '[t]o transmit (a radio or television) program for public or general use'" was within the term's ordinary meaning and was not inconsistent with the specification.⁸³ Further, the applicant did not offer any evidence to refute this and admitted during prosecution that this was the common use of "broadcast."⁸⁴

2. Forms of Evidence Relied Upon in Reversing the Board's Decision

In its claim construction analysis in *ex parte* appeals since 2012, the Federal Circuit has reversed the Board's decision while relying upon the specification in two cases and relied upon the dictionary definition in one case.⁸⁵

⁷⁸ *Id.* at 735.

⁷⁹ *Id.* at 738.

⁸⁰ *Id.*

⁸¹ *Id.*

⁸² *In re Schreer*, 526 F. App'x 999, 1001 (Fed. Cir. 2013).

⁸³ *Id.*

⁸⁴ *See id.*

⁸⁵ *See In re Imes*, 778 F.3d 1250, 1255 (Fed. Cir. 2015) (relying upon the specification); *In re Stoller*, 598 Fed. Appx. 772, 774–75 (Fed. Cir. 2015) (relying upon the dictionary definition); *In re Abbott Diabetes Care*, 696 F.3d 1142, 1151 (Fed. Cir. 2012) (relying upon the specification).

In *In re Imes*, the Court decided whether a “removable memory card” was a “wireless communication module” in a device for communicating digital camera image and video information over a network.⁸⁶ The examiner previously concluded that the “removable memory card” was “wireless” because to communicate information to a computer system, it must be removed from the camera and inserted into the computer system, thus no wire is utilized.⁸⁷ The Court held that this construction was inconsistent with the broadest reasonable interpretation, and also that the specification expressly defines wireless as methods and devices that carry waves through atmospheric space, rather than along a wire.⁸⁸ The metal contacts of a “removable memory card” do not carry a signal in such a way, and thus it is not a “wireless communication module.”⁸⁹

In reversing the Board’s claim construction, the Court has also relied upon a dictionary definition when the intrinsic evidence does not provide such a definition.⁹⁰ For example, in *In re Stoller*, the application was directed to a multilayered winter turf cover for a golf green.⁹¹ The examiner interpreted “laminated” as “covered or layered,” and the Board affirmed stating this was the broadest reasonable interpretation.⁹² The Court held that the Patent Office erred in construing “laminated” to require only layering, and that this interpretation was “not within the ambit of the broadest reasonable construction.”⁹³ Instead, the Court relied on the American Heritage Dictionary which defines “laminated” as “composed of layers *bonded* together[.]”⁹⁴ The Court also noted that the Board relied upon an online version of the same dictionary that defined “laminated” as “to make by *uniting* several layers[.]” but the Board failed to include the requisite bonding or uniting aspect of “laminated” in its claim construction.⁹⁵ Thus, the

⁸⁶ See *In re Imes*, 778 F.3d at 1252.

⁸⁷ See *id.*

⁸⁸ See *id.* at 1252–53.

⁸⁹ See *id.* at 1253.

⁹⁰ See *In re Stoller*, 598 Fed. Appx. 772, 774 (Fed. Cir. 2015)

⁹¹ See *id.* at 772.

⁹² *Id.* at 774.

⁹³ *Id.*

⁹⁴ *Id.*

⁹⁵ See *In re Stoller*, 598 F. App’x at 774.

Board erred in its construction, because the plain meaning of “laminated” required layers that are bonded together or otherwise form a unitary structure.⁹⁶

B. *The Patent Trial & Appeal Board’s Broadest Reasonable Interpretation Analysis*

1. *Forms of Evidence Relied Upon in Affirming the Examiner’s Construction*

Between October 2015 and December 2015, the PTAB has relied upon the specification, the prior art, the claim language itself, the ordinary meaning, and the dictionary definition in affirming the examiner’s claim construction.⁹⁷ In an overwhelming majority of cases, the Board relied upon the specification in its claim construction analysis.⁹⁸ Like the Federal Circuit, the Board has used the specification expressly to define a claim term.⁹⁹

The Board, however, often also relies on the specification when stating that it does *not* constrain the construction of a claim term.¹⁰⁰ For example, in *Ex Parte Yach*, the Board upheld the examiner’s broadest reasonable interpretation in

⁹⁶ *See id.*

⁹⁷ *See, e.g., Ex Parte Morand*, No. 2013-010542, 2015 WL 9304103 at *2, *4, *6 (P.T.A.B. December 16, 2015); *Ex Parte Burch*, No. 2013-010913, 2015 WL 8984838 at *2–3 (P.T.A.B. Dec. 11, 2015); *Ex Parte Betts*, No. 2014-000095, 2015 WL 9183453 at *2–4 (P.T.A.B. Dec. 14, 2015); *Ex Parte Gupta*, No. 2014-000833, 2015 WL 8770591 at *2–3 (P.T.A.B. Nov. 30, 2015); *Ex Parte Khelifa*, No. 2013-009147, 2015 WL 9245313 at *4–5, *7 (P.T.A.B. Dec. 16, 2015).

⁹⁸ *See Ex Parte Bausch*, No. 2013-009886, 2015 WL 9392587 at *4 (P.T.A.B. Dec. 22, 2015); *Ex Parte Robinson*, No. 2013-008842, 2015 WL 9251887 at *2 (P.T.A.B. Dec. 17, 2015); *Ex Parte Baran*, No. 2013-005836, 2015 WL 9304065 at *2 (P.T.A.B. Dec. 16, 2015); *Ex Parte Moore*, No. 2013-008316, 2015 WL 9304093 at *2–3 (P.T.A.B. Dec. 16, 2015); *Ex Parte Yach*, No. 2013-011011, 2015 WL 9183451 at *3–4 (P.T.A.B. Dec. 15, 2015); *Ex Parte Durham*, No. 2014-001694, 2015 WL 9770598 at *2 (P.T.A.B. Dec. 10, 2015); *Ex Parte Button*, No. 2013-008763, 2015 WL 6659198 at *2 (P.T.A.B. Oct. 27, 2015).

⁹⁹ *See Ex Parte Morand*, 2015 WL 9304103 at *3 (relying on passages from the specification to determine the broadest reasonable interpretation of the claim term at issue); *Ex parte Jubin*, No. 2013-008099, 2015 WL 9251876 at *2–3.

¹⁰⁰ *See Ex Parte Baran*, 2015 WL 9304065 at *3; *Ex Parte Yach*, 2015 WL 9183451 at *3; *Ex Parte Durham*, 2015 WL 9770598 at *2; *Ex Parte Button*, 2015 WL 6659198 at *2.

an application directed to an apparatus and methods for selecting a communication line from two or more lines on a communication device.¹⁰¹ In doing so, the Board stated that the specification did not include any definition of the claim term at issue, nor did the specification otherwise exclude the prior art's teachings from the scope of the broadest reasonable interpretation of the disputed limitation.¹⁰² Furthermore, the Board has implicitly relied upon the specification in affirming the examiner's claim construction, simply stating that the examiner's construction is consistent with the specification, without giving more explanation.¹⁰³

The Board has also relied upon the prior art to implicitly determine the meaning of a claim term in five cases.¹⁰⁴ For example, in *Ex parte Ning*, the Board found no clear definition in the specification and stated that exemplary embodiments are not a clear definition.¹⁰⁵ The Board upheld the examiner's broadest reasonable interpretation, finding no clear error with the examiner's reliance on the prior art for teaching or suggesting the definition of the claim term.¹⁰⁶

Similarly, the Board has used the claim language itself to imply the meaning of a claim term in two cases.¹⁰⁷ In *Ex parte Pandya*, the Board found that the claim did not define the disputed claim limitation specifically, and that the

¹⁰¹ *Ex Parte Yach*, 2015 WL 9183451 at *1, *4.

¹⁰² *See id.* at *3.

¹⁰³ *Ex Parte Bausch*, 2015 WL 9392587 at *4; *Ex Parte Moore*, 2015 WL 9304093 at *3; *Ex Parte Pandya*, No. 2014-001423, 2015 WL 8489866 *4-*5 (P.T.A.B. Dec. 4, 2015).

¹⁰⁴ *Ex Parte Burch*, No. 2013-010913, 2015 WL 8984838 at *3 (P.T.A.B. Dec. 11, 2015); *Ex Parte Ning*, No. 2013-006260, 2015 WL 8770522 at *7-8 (P.T.A.B. Nov. 27, 2015); *Ex Parte Salfati*, No. 2013-009026, 2015 WL 7450582 at *2-4 (P.T.A.B. Nov. 19, 2015); *Ex Parte Zhao*, No. 2013-006918, 2015 WL 7253317 at *3-4 (P.T.A.B. Nov. 13, 2015); *Ex Parte Pitha*, No. 2013-002885, 2015 WL 7719384 at *3 (P.T.A.B. Nov. 3, 2015).

¹⁰⁵ *See Ex parte Ning*, 2015 WL 8770522 at *7.

¹⁰⁶ *Id.* at *8.

¹⁰⁷ *See Ex parte Pandya*, 2015 WL 8489866 at *4-*5; *Ex parte Gupta*, No. 2014-000833, 2015 WL 8770591 at *2 (P.T.A.B. Nov. 30, 2015).

claim did not preclude the examiner's broadest reasonable interpretation of the disputed claim term.¹⁰⁸

Lastly, the Board has relied upon the dictionary definition of a claim term in affirming the examiner's claim construction in one case.¹⁰⁹ In *Ex parte Khelifa*, the Board rejected the applicants' proposed definition of the claim term, stating it was not consistent with the specification.¹¹⁰ Instead, the Board accepted the examiner's use of the Merriam-Webster online dictionary to define the claim term.¹¹¹

2. Forms of Evidence Relied Upon in Reversing the Examiner's Construction

Between October 2015 and December 2015, the Board has reversed the examiner's claim construction in two cases.¹¹² First, the Board relied upon the specification expressly in reversing the examiner's claim construction in *Ex Parte Jubin*.¹¹³ The application in *Ex Parte Jubin* was directed to a cellular phone base station and at issue was the broadest reasonable interpretation of "a number of different call events."¹¹⁴ Reviewing the applicant's specification, the Board found that the specification expressly described a list of "call events" as:

[C]all drops, the Handoff Direction Message is acknowledged, or the Handoff Direction Message is not acknowledged; alternatively, a number of calls in a row drop, a number of Handoff Direction Messages in a row get acknowledged, or a number of Handoff Direction Messages in a row do not get acknowledged.¹¹⁵

¹⁰⁸ See *Ex parte Pandya*, 2015 WL 8489866 at *4-5.

¹⁰⁹ See *Ex parte Khelifa*, No. 2013-009147, 2015 WL 9245313 at *4-6 (P.T.A.B. Dec. 16, 2015).

¹¹⁰ *Id.* at *5.

¹¹¹ *Id.* at *6.

¹¹² See *Ex parte Jubin*, No. 2013-008099, 2015 WL 9251876 (P.T.A.B. Dec. 17, 2015); *Ex parte Smith*, No. 2013-006172, 2015 WL 7273252 (P.T.A.B. Nov. 16, 2015).

¹¹³ *Ex Parte Jubin*, 2015 WL 9251876 at *4.

¹¹⁴ *Id.* at *3.

¹¹⁵ *Id.* at *2.

As such, in light of this express listing within the specification, the Board found the examiner's interpretation to be unreasonable, and thus reversed the examiner's claim construction of the claim term.¹¹⁶

Second, in *Ex Parte Smith*, the Board rejected the examiner's reliance on the prior art to implicitly define a claim term.¹¹⁷ The application was directed to a surgical system for penetrating tissue with an obturator tip and the claim term at issue was a "penetrating member" dimensioned and adopted to penetrate tissue.¹¹⁸ Examiner relied on a prior art reference that disclosed an obturator tip with a soft rounded surface that would not inadvertently penetrate the intra-abdominal organs and used a separate needle for penetration.¹¹⁹ Further, examiner argued that applying the broadest reasonable interpretation of "penetrating member" requires only that the penetrating member penetrate any kind of tissue, and also that while the prior art device may not be intended to penetrate in the same fashion as applicant's invention, it can penetrate in the same way as claimed.¹²⁰ The Board agreed with the applicant that, even under the broadest reasonable interpretation of "penetrate," the prior art reference did not describe an obturator tip as penetrating anything in the way claimed, and thus, reversed the examiner's claim construction of the claim term.¹²¹

IV. CONCLUSION

When performing claim construction, the Federal Circuit and the PTAB have often looked to similar forms of evidence in affirming or reversing the decisions below. In affirming the Board's claim construction, the Federal Circuit looks to the specification explicitly, the prior art, and the claim language to imply a claim term meaning, as well as the ordinary meaning of a claim term. Similarly, the PTAB has looked to the exact same forms of evidence in affirming the examiner's claim construction, as well as the dictionary definition. In reversing the claim construction from below, while both the Federal Circuit and the PTAB have relied upon an applicant's specification, the Federal Circuit further relied on the dictionary definition and the PTAB further rejected the examiner's

¹¹⁶ *See id.* at *4.

¹¹⁷ *Ex Parte Smith*, 2015 WL 7273252 at *2.

¹¹⁸ *Id.* at *1.

¹¹⁹ *See id.* at *2.

¹²⁰ *See id.*

¹²¹ *See id.*

reliance on the prior art to implicitly define a claim term. Thus, applicants can ensure that the meaning of a claim term is not construed unfavorably by providing a clear definition within the specification itself.

SUBSTITUTE CLAIMS IN *INTER PARTES* REVIEW—REAL OR ILLUSORY?

*Andrea G. Reister, Christopher K. Eppich, Christopher G. Higby, & Nicole D. Sharer**

I.	INTRODUCTION	604
II.	MECHANICS OF AMENDING CLAIMS	606
	A. <i>Reexamination</i>	606
	B. <i>Inter Partes Review</i>	607
III.	FEW SUBSTITUTE CLAIMS HAVE ISSUED FROM IPRS	609
IV.	THE DIFFICULTY IN AMENDING CLAIMS IN <i>INTER PARTES</i> REVIEW	611
V.	PRACTICAL GUIDANCE ON MEETING THE PATENT OWNER’S BURDEN.....	614
	A. <i>Construe Any New Terms</i>	615
	B. <i>Avoid Removing Claim Terms</i>	615
	C. <i>Explicitly State Written Description Support For Substitute Claims</i>	616
	D. <i>Explain, In Detail, Patentability Over Closest Prior Art</i>	616
VI.	CONCLUSION	618

* © 2016 Andrea G. Reister, Christopher K. Eppich, Christopher G. Higby, and Nicole D. Sharer. Andrea G. Reister and Christopher K. Eppich are partners at Covington & Burling, LLP, Christopher G. Higby is an associate at Covington & Burling, LLP, and Nicole D. Sharer is a J.D. Candidate at the George Washington University Law School. The views expressed herein are solely those of the authors and do not in any way represent the views of their employers.

I. INTRODUCTION

Patent owners have been amending patent claims post-issuance since reexamination proceedings were introduced in the 1980 Patent Act.¹ In *ex parte* reexamination proceedings, and more recently with *inter partes* reexamination proceedings, a patent owner facing an examiner's rejection over a statutory ground would submit amended claims for further examination by the United States Patent and Trademark Office ("Patent Office") in a process similar to amending claims during the original prosecution of the patent. During prosecution, the applicant must clearly point out the patentable distinctions that the claims present in view of the state of the art.² The ultimate burden, however, remains on the Examiner to analyze the novelty and nonobviousness of the claims.³

In 2012, Congress made several significant changes to the Patent Act in enacting the America Invents Act ("AIA").⁴ One change was the introduction of *inter partes* review ("IPR")—created as an inexpensive proceeding for a third party to challenge the validity of issued patents.⁵ During these post-grant proceedings, the patent owner has a mechanism to amend the claims of the challenged patent, also known as "substituting" claims.⁶

There are, however, significant differences between amending claims in a reexamination proceeding and substituting claims in IPR. The most significant is the burden placed upon the patent owner seeking the amendment. Unlike in reexamination, where the patent owner has no obligation to establish that it is entitled to the amended claims unless and until an Examiner rejects the claim, the patent owner, as the moving party, bears the burden to show entitlement to the relief requested, including by showing a patentable distinction for each

¹ See Bayh-Dole Act, Pub. L. No. 96-517, 94 Stat. 3015 (codified as amended at 35 U.S.C. §§ 301–307 (1980)).

² See, e.g., Manual of Patent Examination Procedure §§ 2131, 2141 (9th ed. Nov. 2015) [hereinafter MPEP].

³ See, e.g., MPEP § 1504.

⁴ Leahy-Smith America Invents Act, Pub. L. No. 112-29, 125 Stat. 284 (2011).

⁵ See generally Leahy-Smith America Invents Act, 35 U.S.C. §§ 311–319 (2012).

⁶ See 35 U.S.C. § 316(d)(1).

proposed substitute claim over the prior art.⁷ The patent owner has the burden because “[a]n *inter partes* review is more adjudicatory than examinational”⁸ Should a motion to amend be granted, the Patent Office would not examine the claims prior to issuing an *inter partes* review certificate.⁹

This burden of establishing that the patent owner is entitled to the substitute claims is a key difference between reexamination and post-grant proceedings, and one the Patent Trial and Appeal Board (“PTAB”) has not often found met by patent owners.¹⁰ Patent owners, however, may find seeking substitute claims as the leading option for survival of the claims. Accordingly, this article will: (a) review the mechanics of amending claims in reexamination and during IPR; (b) discuss the few successful motions to amend in IPR and the Federal Circuit’s response; (c) explain why patent owners have more difficulty amending claims in IPR as compared with reexamination; and (d) provide practical considerations to patent owners amending claims in IPR.

⁷ *Idle Free Sys., Inc. v. Bergstrom, Inc.*, No. IPR2012-00027, 2013 WL 5947697, at *19 (P.T.A.B. Jan. 7, 2014) (informative) (“As the moving party, a patent owner bears the burden to show entitlement to the relief requested.” (citing 37 C.F.R. § 42.20(c))).

⁸ *See Idle Free Sys., Inc. v. Bergstrom, Inc.*, No. IPR2012-00027, 2013 WL 5947697, at *6 (P.T.A.B. June 11, 2013).

⁹ *See* 35 U.S.C. § 318.

¹⁰ As of October 1, 2016, the PTAB has only granted five motions to amend requesting substitute claims in IPR. *See, e.g., Shinn Fu Co. v. The Tire Hanger Corp.*, No. IPR2015-00208, 2016 Pat. App. LEXIS 4327, at *37 (P.T.A.B. Apr. 22, 2016); *REG Synthetic Fuels, LLC v. Neste Oil Oyj*, No. IPR2014-00192, 2015 WL 3609359, at *2 (P.T.A.B. June 5, 2015); *Riverbed Tech., Inc. v. Silver Peak Sys., Inc.*, No. IPR2013-00402, 2014 WL 7405745, at *1 (P.T.A.B. Dec. 30, 2014) [hereinafter *Riverbed I*]; *Riverbed Tech., Inc. v. Silver Peak Sys., Inc.*, No. IPR2013-00403, 2014 WL 74057456, at *16 (P.T.A.B. Dec. 30, 2014) [hereinafter *Riverbed II*]; *Int’l Flavors And Fragrances Inc. v. United States*, No. IPR2013-00124, 2014 WL 2120542, at *18–19 (P.T.A.B. May 20, 2014) (informative).

II. MECHANICS OF AMENDING CLAIMS

A. Reexamination

Congress established the reexamination process to allow either a patent owner or a third party to request that the Patent Office review the validity of an issued patent on the basis of prior art patents and printed publications.¹¹ The Commissioner (Director) determines whether a substantial new question of patentability is raised by the prior art cited (*ex parte* reexamination) or a reasonable likelihood the requestor would otherwise prevail (*inter partes* reexamination),¹² then the claims in question are reexamined according to the procedures for initial examination.¹³ In response, the patent owner may file a statement on the new question and add new or amended claims, with the exception that proposed new or amended claims may not enlarge the scope of the original claims.¹⁴ In reexamination, as with the initial prosecution, once the patent owner meets certain procedural requirements for amendment of claims, the burden falls on the Examiner to “make a thorough investigation of the available prior art”¹⁵ “If the invention is not considered patentable . . . as claimed, the claims, or those considered unpatentable will be rejected.”¹⁶

Congress intended reexamination to be an efficient alternative to expensive and lengthy district court litigation.¹⁷ Reexaminations, however, did not and could not end all uncertainty over patent validity, or eliminate the need

¹¹ In 1980, Congress established *ex parte* reexamination. See Bayh-Dole Act, Pub. L. No. 96-517, 94 Stat. 3015 (codified as amended at 35 U.S.C. §§ 301–307 (1980)). In 1999, Congress created *inter partes* reexamination which permitted third-party challengers to respond to every pleading submitted by the patent holder and provided third-party challengers the right to appeal adverse decisions. See Optional Inter Partes Reexamination Procedure Act of 1999, Pub. L. 106–113, 113 Stat. 1501A-567 (1999) (codified as amended at 35 U.S.C. § 311–318 (1999)).

¹² 35 U.S.C. § 304, 312 (1999).

¹³ *Id.* §§ 305, 314.

¹⁴ *Id.*

¹⁵ 37 C.F.R. §§ 1.104(a) (2016).

¹⁶ *Id.* § 1.104(c).

¹⁷ H.R. REP. No. 96-1307, pt. 1, at 3–4 (1980) (“Reexamination will permit efficient resolution of questions about the validity of issued patents without recourse to expensive and lengthy infringement litigation.”).

for litigation, because a reexamination request can only be based on written prior art.¹⁸ A third party alleging a patent is invalid could not raise any issues based on: (1) prior public use; (2) prior sales; (3) any challenge based on § 101 (utility, eligibility); or (4) § 112 (indefiniteness, enablement, written description, best mode).¹⁹

Reexamination proceedings ended up being expensive and lengthy.²⁰ With the introduction of *inter partes* reexamination in 1999, third-party challengers could respond to every submission by the patent owner and appeal adverse decisions.²¹ Many patents in *inter partes* reexamination underwent two rounds of administrative review—the first conducted by examiners, the second by Patent Board judges.²² The average pendency for *inter partes* reexamination was thirty-six months as of September 30, 2014.²³

B. Inter Partes Review

In 2012, Congress converted *inter partes* reexamination from an examinational to an adjudicative proceeding, and renamed the proceeding “*inter*

¹⁸ Patent claims are reexamined only in light of patents or printed publications under 35 U.S.C. §§ 102 and 103, and only new or amended claims are examined under 35 U.S.C. §§ 112 and 132. *See* 37 C.F.R. § 1.552(a) (“Claims in an *ex parte* reexamination proceeding will be examined on the basis of patents or printed publications and, with respect to subject matter added or deleted in the reexamination proceeding, on the basis of the requirements of 35 U.S.C. [§] 112.”).

¹⁹ *See* H.R. REP. No. 112-98, pt. 1, at 45 (2011).

²⁰ *See id.*

²¹ *See id.*, at 46; *see also* 35 U.S.C. § 314 (1999) (providing third-party challengers an ability to respond to office action responses by the patent holder); 35 U.S.C. § 315(b) (1999) (providing third-party challengers the right to appeal adverse decisions).

²² *See* H.R. REP. No. 112-98, pt. 1, at 45.

²³ Average pendency is measured from filing date to certificate issue date for reexamination proceedings ending before September 30, 2014. *See* U.S. PAT. & TRADEMARK OFF., *Inter Partes Reexamination Filing Data - September 30, 2014* (SEPT. 30, 2014), http://www.uspto.gov/sites/default/files/documents/inter_parte_historical_stats_roll_up_EOY2014.pdf [hereinafter IPR Filing Data].

partes review.”²⁴ The intent of *inter partes* review was to provide a “faster, less costly alternative[] to civil litigation to challenge patents”²⁵ and “to establish a more efficient and streamlined patent system that will improve patent quality and limit unnecessary and counterproductive litigation costs.”²⁶ If the patent owner is faced with a potentially invalidating argument or prior art, he can amend his claims to narrow or clarify them, thus possibly saving them from cancellation.²⁷

After the PTAB institutes an IPR,²⁸ a patent owner may continue to argue the original claim is patentable in the Patent Owner Response while presenting a proposed substituted claim in a motion to amend.²⁹ The patent owner must file a motion to amend no later than the due date of the Patent Owner Response—usually three months after the institution.³⁰ The petitioner will generally have

²⁴ See H.R. REP. NO. 112-98, pt. 1, at 46–47 (“The Act converts *inter partes* reexamination from an examinational to an adjudicative proceeding, and renames the proceeding ‘*inter partes* review.’”).

²⁵ 157 CONG. REC. S952 (daily ed. Feb. 28, 2011) (statement of Sen. Grassley).

²⁶ Changes to Implement *Inter Partes* Review Proceedings, Post-Grant Review Proceedings, and Transitional Program for Covered Business Method Patents, 77 Fed. Reg. 48,680 (Aug. 14, 2012) (to be codified at 37 C.F.R. pt. 42) [hereinafter Changes to Implement IPR].

²⁷ See 37 C.F.R. § 42.121(a)(3) (2016) (The patent owner has a statutory right to submit a “reasonable number of substitute claims.”); see also Changes to Implement IPR, 77 Fed. Reg. at 48,690 (The motion “will not result automatically in entry of the proposed amendment into the patent.”).

²⁸ The patent owner is not given the opportunity to amend claims prior to institution. 37 C.F.R. § 42.107(d) (2016) (“No amendment. The preliminary response shall not include any amendment.”); see 35 U.S.C. § 316(d)(1) (2012).

²⁹ See Changes to Implement IPR, 77 Fed. Reg. at 48,706.

³⁰ See 37 C.F.R. § 42.121(a)(1) (2016) (“(1) *Due date*. Unless a due date is provided in a Board order, a motion to amend must be filed no later than the filing of a patent owner response.”); see also Office Patent Trial Practice Guide, 77 Fed. Reg. 48,756, 48,766 (Aug. 14, 2012) [hereinafter Practice Guide].

three months to file an opposition to the patent owner's motion to amend.³¹ The patent owner will then have one month to reply to the petitioner's opposition.³²

While the patent owner has a right to file one motion to amend³³ without authorization by the PTAB,³⁴ the patent owner is required to confer with the PTAB prior to filing.³⁵ The requirement to confer with the PTAB simply means that the patent owner must notify the petitioner and the PTAB of its intent to file a motion to amend in a conference call and specify the number and general scope of substitute claims.³⁶ The PTAB will provide the patent owner with initial feedback on whether their proposed number of substitute claims is reasonable.³⁷

III. FEW SUBSTITUTE CLAIMS HAVE ISSUED FROM IPRs

Although permitted under the rules, patent owner attempts to substitute claims during IPR have been largely unsuccessful.³⁸ As of October 1, 2016, there have only been five successful motions to amend requesting substitute claims in IPR.³⁹

³¹ Practice Guide, 77 Fed. Reg. at 48,767 (“A petitioner will be afforded an opportunity to fully respond to a patent owner’s motion to amend. . . . Petitioners may respond to new issues arising from proposed substitute claims including evidence responsive to the amendment. 35 U.S.C. [§§] 316(a) and 326(a). This includes the submission of new expert declarations that are directed to the proposed substitute claims.”).

³² *See id.* at 48,768.

³³ 35 U.S.C. § 316(d)(1).

³⁴ Changes to Implement IPR, 77 Fed. Reg. at 48,690.

³⁵ 37 C.F.R. § 42.121(a) (“*Motion to amend.* A patent owner may file one motion to amend a patent, but only after conferring with the Board.”).

³⁶ Changes to Implement IPR, 77 Fed. Reg. at 48,704 (response to comment 71).

³⁷ The PTAB presumes one substitute claim per challenged claim to be reasonable. 35 U.S.C. § 316(d); 37 C.F.R. § 42.121(a)(3).

³⁸ Based on Patent Office data current through April 30, 2016, the PTAB granted six of 118 motions to amend in IPR, covered business method review, and post-grant review proceedings. *See* IPR Filing Data, *supra* note 23.

³⁹ *See* Shinn Fu Co. v. The Tire Hanger Corp., No. IPR2015-00208, 2016 Pat. App. LEXIS 4327, at *37 (P.T.A.B. Apr. 22, 2016); REG Synthetic Fuels, LLC v. Neste Oil Oyj, No. IPR2014-00192, at *15 (P.T.A.B. June 5, 2015); *Riverbed I,*

In *Idle Free Systems, Inc. v. Bergstrom, Inc.*, an opinion that the PTAB has designated as “informative,” the PTAB offered guidance for patent owners on motions to amend claims.⁴⁰ The PTAB explained how it would apply the statutory and regulatory requirements governing motions to amend.⁴¹

The Federal Circuit seems to defer to the PTAB’s practice.⁴² Recently, in *Microsoft Corp. v. Proxyconn*, the Federal Circuit upheld the PTAB’s interpretation of its rules on motions to amend.⁴³ Proxyconn sought to amend its patent by replacing two of the challenged claims with substitute claims.⁴⁴ The petitioner, Microsoft, argued that the substitute claims were anticipated by a reference that was not the grounds for initiating the IPR.⁴⁵ The PTAB rejected Proxyconn’s argument that under 37 C.F.R. § 42.121(a)(2)(i), the PTAB could only deny the motion to amend for failure to “respond to a ground of unpatentability involved

No. IPR2013-00402, 2014 WL 7405745, at *21 (P.T.A.B. Dec. 30, 2014); *Riverbed II*, No. IPR2013-00403, 2014 WL 74057456, at *22 (P.T.A.B. Dec. 30, 2014); *Int’l Flavors & Fragrances Inc. v. United States*, No. IPR2013-00124, 2014 WL 2120542, at *10 (P.T.A.B. May 20, 2014) (informative).

⁴⁰ See *Idle Free Sys., Inc. v. Bergstrom, Inc.*, No. IPR2012-00027, 2013 WL 5947697, at *1 (P.T.A.B. June 11, 2013) (informative).

⁴¹ See *id.* at *5 (“[I]n the absence of special circumstance, a challenged claim can be replaced by only one claim, and a motion to amend should, for each proposed substitute claim, specifically identify the challenged claim which it is intended to replace.”); *id.* at *7 (“Some representation should be made about the specific technical disclosure of the closest prior art known to the patent owner, and not just a conclusory remark that no prior art known to the patent owner renders obvious the proposed substitute claims.”).

⁴² See, e.g., *In re Aqua Prods., Inc.*, 823 F.3d 1369, 1370 (Fed. Cir. 2016); *Nike, Inc. v. Adidas Ag*, 812 F.3d 1326, 1332 (Fed. Cir. 2016); *Synopsys, Inc. v. Mentor Graphics Corp.*, 814 F.3d 1309, 1324 (Fed. Cir. 2016); *Prolitec, Inc. v. ScentAir Techs., Inc.*, 807 F.3d 1353, 1365 (Fed. Cir. 2015); *Microsoft Corp. v. Proxyconn, Inc.*, 789 F.3d 1292, 1309 (Fed. Cir. 2015); *In re Cuozzo Speed Techs., LLC*, 793 F.3d 1268, 1283 (Fed. Cir. 2015), *aff’d sub nom. Cuozzo Speed Techs., LLC v. Lee*, No. 15-446, slip op. (June 20, 2016).

⁴³ *Microsoft Corp.*, 789 F.3d at 1308.

⁴⁴ *Id.* at 1305.

⁴⁵ *Id.*

in the trial” and denied Proxycconn’s motion based on the reference cited by Microsoft.⁴⁶

On appeal, Proxycconn argued that the PTAB’s denial of its motion was improper because the PTAB failed to rely on one of the listed criteria of 37 C.F.R. § 42.121.⁴⁷ The Federal Circuit affirmed the PTAB’s denial, finding that the PTAB’s conclusion that § 42.121(a)(2) is not an exhaustive list was reasonable.⁴⁸ By affirming the PTAB’s practice, the Federal Circuit ensured that the relative scarcity of granted motions to amend is likely to continue.

IV. THE DIFFICULTY IN AMENDING CLAIMS IN *INTER PARTES* REVIEW

Claim amendments in *inter partes* review share many characteristics with amendments in reexamination proceedings. For example, in both types of proceedings, the patent owner cannot enlarge the scope of the original patent claims or introduce new matter,⁴⁹ the amendments must be responsive to the prior art,⁵⁰ the amended claims are not presumed valid like issued claims in litigation,⁵¹ and intervening rights apply if the scope of the amended claim is not “substantially identical” to an original patent claim.⁵² The process for amending claims in IPR also contains substantial differences from that in reexamination, due to IPRs being adjudicatory in nature. These differences, especially the placement of the burden, are critical to understanding the historical lack of success in amending claims in IPR.

⁴⁶ *Id.*

⁴⁷ *Id.* at 1305–06.

⁴⁸ *Microsoft Corp.*, 789 F.3d at 1306.

⁴⁹ See 35 U.S.C. § 316(d)(1) (2012) (In IPR, a patent owner may only cancel or propose substitutes for each challenged claim.); 37 C.F.R. § 1.121(f) (2016) (In both ordinary examination and reexamination, “[n]o amendment may introduce new matter into the disclosure of an application.”).

⁵⁰ See 35 U.S.C. § 311 (IPR is limited to unpatentability based on patents or printed publications under 35 U.S.C. §§ 102 and 103); 37 C.F.R. § 42.121(a)(2)(i) (Amendments in IPR must “respond to a ground of unpatentability involved in the trial.”); *In re Freeman*, 30 F.3d 1459, 1468 (Fed. Cir. 1994) (“[A]mendment of claims during reexamination is limited to amendment in light of prior art raising a substantial new question of patentability.”).

⁵¹ See 35 U.S.C. § 316(e); *In re Etter*, 756 F.2d 852, 858 (Fed. Cir. 1985).

⁵² See 35 U.S.C. §§ 307(b), 318(c).

As an initial matter, the patent owner has fewer chances to amend claims in IPR than in reexamination. In traditional reexamination proceedings, the patent owner has the opportunity to respond to any rejection by including further statements and/or proposed amendments or new claims that place the patent in a condition where all proposed claims would be patentable.⁵³ Even after a second, final rejection, an amendment in an *ex parte* reexamination—but not an *inter partes* reexamination—will be approved if it places the proceeding in condition for the issuance of a reexamination certificate or in a better form for appeal.⁵⁴ In contrast, the PTAB only considers a motion to amend claims in IPR once, absent good cause.⁵⁵ If the PTAB denies the motion to amend, the patent owner can appeal the final written decision of the PTAB to the Federal Circuit.⁵⁶ The patent owner normally does not get a second chance to defend its amendments or make further amendments before the PTAB.

By far a more significant difference between amendments in reexamination and those in IPR is the placement of the burden. In reexamination, as in ordinary patent prosecution, the burden is on the examiner to “make a thorough investigation of the available prior art relating to the subject matter of the claimed invention.”⁵⁷ The examiner must then clearly explain the basis for each claim rejection.⁵⁸ This applies equally to both the issued patent claims and to proposed amended claims.

IPRs do not have an examiner. Consistent with the understanding of IPR as an adjudicatory proceeding, the moving party has the burden to show entitlement to the relief requested.⁵⁹ For issued patent claims, the burden is on the petitioner to show unpatentability.⁶⁰ But for proposed substitute claims, the

⁵³ See 37 C.F.R. § 1.550(b).

⁵⁴ See § 1.116(b)(2), (d)(2).

⁵⁵ 35 U.S.C. § 316(d)(1); 37 C.F.R. § 1.121(a).

⁵⁶ 35 U.S.C. § 319.

⁵⁷ 37 C.F.R. § 1.104(a).

⁵⁸ *Id.* § 1.104(c)–(e).

⁵⁹ See *MasterImage 3D Inc. v. RealD Inc.*, No. IPR2015-00040, 2015 WL 10709290, at *1 (P.T.A.B. July 15, 2015) (quoting *Idle Free Sys., Inc. v. Bergstrom, Inc.*, No. IPR2012-00027, 2013 WL 5947697, at *7 (P.T.A.B. June 11, 2013)).

⁶⁰ See 35 U.S.C. § 316(e); see also 137 CONG. REC. S1360, S1375 (daily ed. Mar. 8, 2011) (statement of Sen. Kyl) (describing IPR as “an adjudicative proceeding

patent owner is the moving party and bears the burden to show entitlement to the substitute claims.⁶¹ The patent owner must demonstrate that the amendment is responsive to a ground of unpatentability involved in the trial, that it does not enlarge the scope of the claims or introduce new subject matter, and that the amended claims have support in the written description.⁶²

In order to be responsive to a ground of unpatentability involved in the trial, each proposed substitute claim must have: (1) a “patentable distinction over the prior art;” (2) a “patentable distinction over all other proposed substitute claims for the same challenged claim;” and (3) if the substitute claim is presented as patentable over prior art on the same basis that another substitute claim on which it depends is patentable over the prior art, a patentable distinction over the other substitute claim on which it depends.⁶³ Once the patent owner has established a *prima facie* case that the proposed substitute claims are patentable, the burden of production—but not the burden of persuasion—shifts to the petitioner, who may either rebut the *prima facie* case through argument or identify additional prior art rendering the proposed substitute claims unpatentable.⁶⁴

The Federal Circuit has affirmed that the placement of the burden on the patent owner is consistent with the statute. In *Nike, Incorporated v. Adidas AG*, the patent owner argued that placing the burden of proving the patentability of substitute claims conflicted with Section 316(e)’s requirement that in “inter partes review . . . the petitioner shall have the burden of proving a proposition of unpatentability by a preponderance of the evidence.”⁶⁵ The Federal Circuit rejected this argument, finding that Congress had delegated authority for setting standards and procedures governing motions to amend to the Patent Office and that Section 316(a)(9) clearly indicated that the patent owner carries some affirmative duty to justify substitute claims.⁶⁶

in which the petitioner, rather than the Office, bears the burden of showing unpatentability”).

⁶¹ See *Nike, Inc. v. Adidas Ag*, 812 F.3d 1326, 1334 (Fed. Cir. 2016).

⁶² See 37 C.F.R. § 42.121(a)(2), (b).

⁶³ See *Idle Free Sys., Inc. v. Bergstrom, Inc.*, No. IPR2012-00027, 2013 WL 5947697, at *4 (P.T.A.B. June 11, 2013).

⁶⁴ See *MasterImage 3D, Inc.*, 2015 WL 10709290, at *1.

⁶⁵ *Nike, Inc.*, 812 F.3d at 1333.

⁶⁶ See *id.* at 1333–34.

Placing the burden on the patent owner to show entitlement to substitute claims is consistent with the underlying purpose of IPRs—to establish a more efficient and streamlined patent system that will improve patent quality and limit unnecessary and counterproductive litigation costs.⁶⁷ In order for the PTAB even to institute IPR, the petitioner must demonstrate “a reasonable likelihood” that “at least [one] of the claims challenged” will be held invalid in the IPR.⁶⁸ Congress envisioned that this “threshold will require challengers to front load their case” and “prevent challenges from ‘mushrooming’ after the review is instituted into additional arguments employing other prior art or attaching other claims.”⁶⁹

The same is true for motions to amend. By placing the burden on the patent owner, and only giving the patent owner a single chance to file a motion to amend, the rules encourage patent owners to limit their proposed substitute claims to those that are both necessary and most clearly patentable over the prior art. Unlike reexamination, this claim amendment process does not allow a complete remodeling of the claim structure.⁷⁰ The rules governing motions to amend focus the trial on the alleged grounds for invalidity and attempts by the patent owner to overcome these grounds, rather than on the patentability of additional claims fashioned out of whole cloth.

V. PRACTICAL GUIDANCE ON MEETING THE PATENT OWNER’S BURDEN

Although meeting the burden to show patentability for proposed substitute claims certainly requires an increased effort by the patent owner, a few

⁶⁷ See 157 CONG. REC. S936, S952 (daily ed. Feb. 28, 2011) (statement of Sen. Grassley).

⁶⁸ See 35 U.S.C. § 314(a) (2012).

⁶⁹ 157 CONG. REC. S1360, S1376 (daily ed. Mar. 8, 2011) (statement of Sen. Kyl).

⁷⁰ See *Idle Free Sys., Inc. v. Bergstrom, Inc.*, No. IPR2012-00027, 2013 WL 5947697, at *4 (P.T.A.B. June 11, 2013); see also *Global Tel*Link Corp. v. Securus Techs., Inc.*, No. IPR2014-01278, 2016 WL 783391, at *16 (P.T.A.B. Jan. 21, 2016) (denying motion to amend where “the correction is sought merely to correct the dependency of the claims to match the language of the claims as issued”); *U.S. Dep’t of Homeland Sec. v. Golden*, No. IPR2014-00714, 2015 WL 5818910, at *2 (P.T.A.B. Oct. 1, 2015) (denying motion to amend where it appears that the purpose of patent owner’s amendment is not to narrow the claims to overcome the prior art, but rather “to remove any matter in the claims supported only by the [later] disclosure . . . so that the claims can receive the April 5, 2006 priority date . . .”).

practice tips emerge from PTAB and Federal Circuit decisions. The patent owner should construe any new terms in the proposed substitute claim, avoid removing terms unless replaced with unambiguously narrower terms, explicitly link the substitute claims to the written description, and describe the state of the prior art as to any additional limitations. For any proposed substitute claim dependent on another substitute claim, the patent owner should analyze the nonobviousness and novelty of that dependent claim by treating the claim on which it depends as prior art.

A. *Construe Any New Terms*

First, the patent owner should identify how the proposed substitute claims are to be construed, especially when the proposed substitute claims introduce new claim terms.⁷¹ The PTAB likely will deny a motion to amend when the patent owner fails to provide a proper construction of new claim terms because, without a construction of new claim terms sufficient to support the distinction of the proposed substitute claim over the prior art, the patent owner has not met its burden to show patentability of the proposed substitute claims.⁷²

B. *Avoid Removing Claim Terms*

Second, the patent owner should avoid removing terms from the claims without replacing them with clearly narrower terms. The removal of terms raises a red flag for improper broadening under 35 U.S.C. § 316(d)(3) and 37 C.F.R. § 42.121(a)(2)(ii). For example, in *U.S. Department of Homeland Security v. Golden*, the PTAB found that the patent owner impermissibly broadened the substitute claims by removing lists of exemplary species from the original claims and replacing them with terms describing the genus.⁷³ Similarly, in *Medtronic, Inc. v. Norred*, the PTAB found that the replacement of “‘means for maintaining’ . . . ‘said ring member in said *seated* position about the aortic wall’” with “a stent system having a plurality of interconnected rods” broadened the claims.⁷⁴ In

⁷¹ See *Nichia Corp. v. Emcore Corp.*, No. IPR2012-00005, 2014 WL 574596, at *4 (P.T.A.B. Feb. 11, 2014).

⁷² See *id.*

⁷³ *U.S. Dep’t of Homeland Sec.*, 2015 WL 5818910, at *2 (internal quotations omitted).

⁷⁴ *Medtronic, Inc. v. Norred*, No. IPR2014-00395, 2015 WL 3957836, at *5, 15 (P.T.A.B. June 25, 2015).

many cases, the patent owner can avoid improper broadening by adding, rather than deleting or substituting, claim limitations in proposed substitute claims.

C. *Explicitly State Written Description Support For Substitute Claims*

Third, the patent owner should explicitly explain and identify, by column and line numbers, the written description support for each proposed substitute claim.⁷⁵ The PTAB does not have the burden to sort through the patent and the original patent application to determine whether each proposed substitute claim has written description support.⁷⁶ In *Global Tel*Link Corp. v. Securus Technologies, Inc.*, the PTAB denied a motion to amend where the patent owner failed to reference the original patent application a single time in the motion to amend, “let alone provide citations that would demonstrate written description support for the proposed corrected claims.”⁷⁷ The support must be for the claims as a whole, not just the new limitations. In *U.S. Department of Homeland Security*, the PTAB found that the patent owner failed to establish support in the written description in the absence of any explanation why a person of ordinary skill in the art would have recognized that the inventor possessed the claimed subject matter *as a whole*.⁷⁸

D. *Explain, In Detail, Patentability Over Closest Prior Art*

Fourth, the patent owner should describe the state of the prior art as to the additional claim limitations or terms. Under *Idle Free Systems, Inc.*, the PTAB requires that “[s]ome representation should be made about the specific technical disclosure of the closest prior art known to the patent owner”⁷⁹ For prior art of record, “[a] mere conclusory statement by counsel, in the motion to amend, to the effect that one or more added features are not described in any prior art, and would not have been suggested or rendered obvious by prior art, is on its face inadequate.”⁸⁰ For prior art not of record, but known to the patent owner, a

⁷⁵ See 37 C.F.R. § 42.121(b)(1) (2016).

⁷⁶ See *Nichia Corp.*, 2014 WL 574596, at *27.

⁷⁷ *Global Tel*Link Corp. v. Securus Techs., Inc.*, No. IPR2014-01278, 2016 WL 783391, at *16 (P.T.A.B. Jan. 21, 2016).

⁷⁸ See *U.S. Dep’t of Homeland Sec.*, 2015 WL 5818910, at *22.

⁷⁹ *Idle Free Sys., Inc. v. Bergstrom, Inc.*, No. IPR2012-00027, 2013 WL 5947697, at *7 (P.T.A.B. June 11, 2013).

⁸⁰ *Id.* at *8.

conclusory statement may be adequate, absent an allegation that the patent owner has violated its duty of candor.⁸¹ The PTAB and Federal Circuit's reasoning is that if other prior art known to the patent owner raised a substantial question of patentability, the patent owner would be obligated to make that prior art part of the record.⁸²

Following this guidance, in four of the five cases in which the PTAB has granted motions to amend in IPR as of October 1, 2016, the patent owner explained in detail the teachings of the prior art as they related to the additional limitations, and then explained how the invention in the proposed claims was distinguishable from the prior art.⁸³ This burden is often overlooked or misunderstood.⁸⁴ For example, in *HTC Corp. v. Advanced Audio Devices, LLC*, the patent owner argued that with almost 200 prior art references of record, it could not possibly discuss them all in its motion to amend.⁸⁵ Although the patent owner may have been right as to the feasibility of discussing every prior art

⁸¹ *Nike, Inc. v. Adidas Ag*, 812 F.3d 1326, 1350–51 (Fed. Cir. 2016); *MasterImage 3D Inc. v. RealD Inc.*, No. IPR2015-00040, 2015 WL 10709290, at *1 (P.T.A.B. July 15, 2015).

⁸² *See Nike, Inc.*, 812 F.3d at 1350–51.

⁸³ *See Shinn Fu Co. of Am., Inc. v. The Tire Hanger Corp.*, No. IPR2015-00208, 2016 Pat. App. LEXIS 4327 (P.T.A.B. Apr. 22, 2016); *REG Synthetic Fuels, LLC v. Neste Oil Oyj*, No. IPR2014-00192, 2015 WL 3609359, at *14 (P.T.A.B. June 5, 2015); *Riverbed I*, No. IPR2013-00402, 2014 WL 7405745, at *11 (P.T.A.B. Dec. 30, 2014) (patent owner arguing that “pre-existing data deduplication systems reduced network traffic” in one manner, but that “the proposed substitute claims describe a very different approach”); *Riverbed II*, No. IPR2013-00403, 2014 WL 74057456, at *11 (P.T.A.B. Dec. 30, 2014).

⁸⁴ Based on Patent Office data current through April 30, 2016, the PTAB denied 56 percent of motions to amend because the patent owner failed to establish patentability over the prior art. *See U.S. PAT. & TRADEMARK OFF., Patent Trial and Appeal Board Motion to Amend Study* (Apr. 30, 2016), <https://www.uspto.gov/sites/default/files/documents/2016-04-30%20PTAB%20MTA%20study.pdf> (Slide 6 shows 41 cases where the motions to amend to substitute claims were denied for “102/103 Anticipated/Obvious Over Art of Record” type rejections, along with an additional 24 of the 27 trials that denied motions to amend to substitute claims for “Multiple Statutory Reasons” including “Anticipated/Obvious;” these 65 cases out of a total of 116 denied motions to amend amount to 56 percent.).

⁸⁵ *See HTC Corp. v. Advanced Audio Devices, LLC*, No. IPR2014-01154, 2015 WL 9488115, at *8 (P.T.A.B. Dec. 29, 2015).

reference, that is not what the PTAB requires.⁸⁶ The fatal flaw in *HTC* was that the patent owner made “no effort . . . to discuss the state of the art as of [the priority] date, or provide any prior art references beyond those already of record that might be material to the added limitations.”⁸⁷

For proposed claims dependent on another proposed claim, the patent owner should analyze the patentability of the dependent proposed claims by treating the claim from which they depend as prior art. This is consistent with the requirement in *Idle Free Systems, Inc.*, that “the patent owner should provide meaningful reasons” for additional modifications to dependent claims.⁸⁸ Even in two of the cases where the PTAB found that the patent owner met its burden for the parent proposed substitute claims, it denied the motions to amend as to dependent substitute claims with additional modifications.⁸⁹ The PTAB analyzed the dependent claims by “assum[ing] the parent claims to be prior art.”⁹⁰

VI. CONCLUSION

When Congress introduced IPRs as an adjudicative proceeding to replace *inter partes* reexamination, patent owners retained the ability to amend challenged patent claims. Patent owners, however, should be aware that there are significant differences between amending claims in a reexamination and substituting claims in IPR. When seeking an amendment in IPR, the patent owner, as the moving party, bears the burden to show a patentable distinction of each proposed substitute claim over the prior art. This burden of establishing that the patent owner is entitled to the substitute claims is a key difference between reexamination and post-grant proceedings, and attempts to substitute claims during IPR have been largely unsuccessful. Patent owners can improve their chances of successful claim amendments by adhering to the requirements set forth by the PTAB, and affirmed by the Federal Circuit, in recent decisions.

⁸⁶ In *Shinn Fu Company of America, Incorporated*, the PTAB granted the motion to amend when patent owners grouped prior art references together according to their particular teachings and discussed only a representative few in their motion to amend. See *Shinn Fu Co. of Am., Inc.*, 2016 Pat. App. LEXIS 4327, at *26.

⁸⁷ *HTC Corp.*, 2015 WL 9488115, at *44.

⁸⁸ *Idle Free Sys., Inc. v. Bergstrom, Inc.*, No. IPR2012-00027, 2013 WL 5947697, at *9 (P.T.A.B. June 11, 2013).

⁸⁹ See *Riverbed I*, 2014 WL 7405745, at *18; *Riverbed II*, 2014 WL 74057456, at *19.

⁹⁰ *Riverbed I*, 2014 WL 7405745, at *17.

BEYOND CUOZZO

*Scott A. McKeown & Yasaswi Raparla**

I. INTRODUCTION620

II. BACKGROUND621

 A. *Broadest Reasonable Interpretation*.....622

 B. *District Court Claim Construction and Phillips*625

 C. *The Supreme Court Upholds BRI for IPRs*.....628

III. ANALYSIS630

 A. *BRI and Phillips Employ Equivalent Procedures*630

 B. *Factors Differentiating PTAB and District Court Claim
 Constructions*.....634

 1. *Statutory Presumption of Validity at District Court
 Proceedings*.....634

 2. *The Expert Agency Employs Judges That are
 Scientists and Engineers*.....636

IV. CONCLUSION637

LIST OF TABLES

1. Table 1. *BRI and Phillips Framework Comparison*632

* © 2016 Scott A. McKeown, Yasaswi Raparla.

I. INTRODUCTION

Inventions are often difficult to fully define and describe by words alone, and yet, as Judge Giles Rich famously wrote, “the name of the game is the claim.”¹ The Supreme Court’s decision in *Cuozzo Speed Techs., LLC v. Lee*² leaves the United States Patent and Trademark Office’s (“PTO”) broadest reasonable interpretation (“BRI”) claim interpretation rubric in place for American Invents Act (“AIA”) post-grant patent trial proceedings. Even if the High Court had decided to strike down BRI in favor of the district court’s *Phillips* analysis³, there would have been little practical impact. Both BRI and *Phillips* start with the plain and ordinary meaning as supported by the specification and prosecution history.⁴ Use of the word “broadest” in the PTO’s approach does not imply broader relative to a court’s construction. Rather, “broadest” is grounded in the intrinsic record as viewed by one of skill in the art.⁵ *Phillips* is also grounded in the context of the specification and cabined by the reason of a skilled artisan.⁶

That is, both standards employ identical procedures to reach a *reasonable*, technical construction in view of the intrinsic and extrinsic record. When constructions between the forums diverge, it is a reflection of institutional motivations, the relative expertise of the decision-makers, and other practical externalities. Practitioners navigating post-grant claim constructions will be more effective by recognizing and understanding those contextual factors.

¹ Giles S. Rich, *Extent of Protection and Interpretation of Claims – American Perspectives*, 21 INT’L REV. INDUS. PROP. & COPYRIGHT L. 497, 499 (1990).

² *Cuozzo Speed Techs., LLC v. Lee*, No. 15-446, slip op. (U.S. June 20, 2016).

³ See *Phillips v. AWH Corp.*, 415 F.3d 1303, 1316 (Fed. Cir. 2005) (outlining the hierarchy of evidentiary sources for understanding patent claim terms).

⁴ Compare Manual of Patent Examining Procedure § 2111 (9th ed. Rev. 7, Nov. 2015) (instructing examiners to begin with the ordinary and customary meaning) [hereinafter MPEP] with *Phillips*, 415 F.3d at 1312–13 (constructing terms according to ordinary and customary meaning in light of the specification).

⁵ MPEP § 2111 (requiring claim interpretation to be consistent with both “the use of the claim term in the specification and drawings” and “the interpretation that those skilled in the art would reach”).

⁶ See *Phillips*, 415 F.3d at 1312–13.

II. BACKGROUND

Claim construction is the process of defining claim terms to determine the scope of the claimed invention.⁷ Courts construe claims during infringement proceedings, where patents are presumed valid and claims may only be invalidated by clear and convincing evidence.⁸ Courts also may not consider claim amendments or alter the scope of the invention.⁹ Conversely, the PTO construes claims across varied pre-grant and post-grant agency proceedings to assess the patentability of the claims.¹⁰ There is no presumption of validity in patentability determinations, allowing the PTO to deny claims under a preponderance of the evidence rather than the higher burden of clear and convincing evidence.¹¹ This lower standard is driven by the public policy of forcing ambiguity from claims to arrive at a clearer scope of protection, or public notice function.¹² The inherent differences between the functions of forums drive the differing claim construction standards.

As noted, the PTO's focus is on proper public notice and clear claim scope.¹³ To achieve those goals, it considers claims under the broadest scope

⁷ *Markman v. Westview Instruments, Inc.*, 52 F.3d 967, 976 (Fed. Cir. 1995), *aff'd*, 517 U.S. 370 (1996) (describing claim construction as “determining the meaning and scope of the patent claims asserted to be infringed”).

⁸ *See* 35 U.S.C. § 282 (2012); *see also* *Microsoft Corp. v. i4i Ltd. P'ship*, 564 U.S. 91, 100 (2011); *Radio Corp. of Am. v. Radio Eng'g Labs., Inc.*, 293 U.S. 1, 2 (1934).

⁹ *See Phillips*, 415 F.3d at 1316 (quoting *Renishaw PLC v. Marposs Societa' Per Azioni*, 158 F.3d 1243, 1250 (Fed. Cir. 1998) (“The construction that stays true to the claim language and most naturally aligns with the patent’s description of the invention will be . . . the correct construction.”).

¹⁰ *See Ethicon, Inc. v. Quigg*, 849 F.2d 1422, 1427 (Fed. Cir. 1988) (discussing the differences between a court and the PTO’s procedures).

¹¹ MPEP § 706(I) (9th ed. Rev. 7, Nov. 2015) (“The standard to be applied in all cases is the ‘preponderance of the evidence’ test. In other words, an examiner should reject a claim if . . . it is more likely than not that the claim is unpatentable.”).

¹² *See Cuozzo Speed Techs, L.L.C. v. Lee*, No. 15-446, slip op. at 22 (U.S. June 20, 2016); *Phillips*, 415 F.3d at 1319, 1323–24.

¹³ *See* MPEP § 2111.01 (“When the specification sets a clear path to the claim language, the scope of the claims is more easily determined and the public notice function of the claims is best served.”).

reasonably supported by the accompanying patent specification.¹⁴ Procedures at the PTO allow applicants to amend claims in response to a patent examiner's construction.¹⁵ Claim amendments are often used to avoid cited prior art or to overcome written description and enablement rejections.¹⁶ Through this process of rejection and amendment, the patent applicant and patent examiner define the outer bounds of the claims.¹⁷ Meanwhile, courts evaluate claim language to determine the proper scope of the invention for enforcement purposes.¹⁸ Patent owners cannot amend claims during litigation, and the court generally picks one of the proposed claim constructions from the parties.¹⁹

Cuozzo Speed Techs. settled the proper claim construction standard for AIA post-grant proceedings by upholding the PTO's authority to employ BRI.²⁰ The Court also recognized the specialized nature of AIA trials sets them apart from court actions and endorsed the historical use of BRI in post-grant proceedings such as patent reexaminations and patent interferences.²¹

A. *Broadest Reasonable Interpretation*

The PTO occupies a unique role in the patent process as the statutorily authorized agency for issuing patents.²² During the examination phase, the PTO considers the patentability of claims in an *ex parte* manner where applicants are

¹⁴ See MPEP § 2111.

¹⁵ *Id.*

¹⁶ See *Regents of Univ. of Cal. v. Dakocytomation Cal., Inc.*, 517 F.3d 1364, 1373 (Fed. Cir. 2008) (“[T]he term ‘unique sequence’ was clearly added to overcome the enablement rejection.”); MPEP § 706.02(b) (“In all applications, an applicant may overcome a 35 U.S.C. 102 rejection by . . . amending the claims to patentably distinguish over the prior art.”); MPEP § 2163(II)(A)(3)(b) (discussing amendment process for a written description rejection).

¹⁷ See generally *Phillips*, 415 F.3d at 1317.

¹⁸ See *id.* at 1314, 1316.

¹⁹ See *In re Etter*, 756 F.2d 852, 859 (Fed. Cir. 1985); *Phillips*, 415 F.3d at 1328 (rejecting defendants' arguments in favor of a more restrictive definition).

²⁰ *Cuozzo Speed Techs, L.L.C. v. Lee*, No. 15-446, slip op. at 21, 24 (U.S. June 20, 2016).

²¹ *Id.* at 19, 21–22.

²² 35 U.S.C. § 2(a)(1) (2012).

free to amend claims in response to an examiner's rejections.²³ Statutory requirements empower examiners to reject ambiguous, unclear, or improperly broad claims.²⁴ In response, an applicant may clarify, narrow, or reframe the claims through amendments, yielding greater precision regarding the scope of claims.²⁵ As the issuing agency and the only forum in which an applicant can amend claims, the PTO has a responsibility to ensure claims do not remove knowledge from the public domain and properly inform the public of the invention.²⁶

The heightened 35 U.S.C. § 112(b) indefiniteness requirement²⁷ at the PTO highlights the Office's duty to refine claims to a greater degree before they pass examination.²⁸ The standard used in courts requires a "reasonable certainty" regarding the indefiniteness of the claim language, whereas the PTO may use a lower threshold to establish a *prima facie* case.²⁹ The lower indefiniteness standard at the PTO parallels the PTO's lack of presumption regarding the validity of

²³ See 35 U.S.C. § 132(a) (indicating that an applicant can amend in response to an examiner's rejection).

²⁴ See MPEP § 2164.08 (9th ed. Rev. 7, Nov. 2015) (improperly broad claims); MPEP § 2173.02(II) (clarity and precision); see also MPEP § 706(I) (describing that claims must be "patent eligible, useful, novel, nonobvious, enabled, and clearly described as provided in 35 U.S.C. [§§] 101, 102, 103 and 112 [before allowance] . . .").

²⁵ See *In re Zletz*, 893 F.2d 319, 321–22 (Fed. Cir. 1989).

²⁶ See *Aronson v. Quick Point Pencil Co.*, 440 U.S. 257, 262 (1979) ("[T]he stringent requirements for patent protection seek to assure that ideas in the public domain remain there for the free use of the public."); MPEP § 706(I) (listing novelty as a requirement); MPEP § 2111.01 (emphasizing the importance of the public notice function of the specification).

²⁷ See 35 U.S.C. § 112(b) (requiring the applicant to specifically point out and claim the subject matter of the invention).

²⁸ See *In re Packard*, 751 F.3d 1307, 1312 (Fed. Cir. 2014) (describing the *prima facie* standard for finding indefiniteness pre-issuance).

²⁹ Compare *Nautilus, Inc. v. Biosig Instruments, Inc.*, 134 S. Ct. 2120, 2129 (2014) (requiring patent claims to "inform those skilled in the art about the scope of the invention with reasonable certainty"), with *In re Packard*, 751 F.3d at 1322 (describing the pre-issuance standard as a "lower threshold" where "a claim is indefinite when it contains words or phrases whose meaning is unclear").

patents.³⁰ While courts are statutorily required to presume a patent is valid, examiners analyze patent claims without any presumption.³¹ Consequently, an applicant must overcome the burdens of production and persuasion to obtain a patent.³² Office Action responses and claim amendments facilitate the exchange between examiner and applicant to provide a public record regarding the history of the final claim language.³³

Tradition and current practice at the PTO is to give pending claims their broadest reasonable interpretation during the examination process.³⁴ Examiners read claims to their broadest scope that is reasonable in view of the specification, even where such an interpretation could render the claims unpatentable.³⁵ BRI developed from courts, distinguishing claim interpretation before and after the issuance of a patent.³⁶ Before issuance, an applicant is in control of the language of the claims through amendments, and broad interpretation of that language confronts ambiguity that could engender litigation.³⁷ BRI limits overly broad interpretations by imposing a reasonableness requirement of what one of “ordinary skill in the art” would understand the claims to mean in light of the specification.³⁸

Resolving the reasonableness of a broad reading continues to remain a challenge. BRI first considers claim terms under their ordinary and customary meaning to one of ordinary skill in the art.³⁹ Prior art references and applicant

³⁰ See *In re Morris*, 127 F.3d 1048, 1054 (Fed. Cir. 1997) (“It would be inconsistent with the role assigned to the PTO in issuing a patent to require it to interpret claims in the same manner as judges who, post-issuance, operate under the assumption the patent is valid.”).

³¹ *Id.*

³² See *id.*

³³ See *id.*

³⁴ MPEP § 2111 (9th ed. Rev. 7 Nov. 2015).

³⁵ See *In re Morris*, 127 F.3d at 1054 (regarding no presumption of validity at the PTO).

³⁶ See, e.g., *In re Carr*, 297 F. 542, 543–44 (D.C. Cir. 1924); see also *In re Kebrich*, 201 F.2d 951, 954 (C.C.P.A. 1953).

³⁷ See *In re Carr*, 297 F. at 543.

³⁸ See e.g., *In re Sneed*, 710 F.2d 1544, 1550 (Fed. Cir. 1983); *In re Prater*, 415 F.2d 1393, 1405 (C.C.P.A. 1969).

³⁹ MPEP § 2111.01(I).

submissions can provide a foundation for the plain reading of the claims.⁴⁰ Although the ordinary and customary meaning must be consistent with its use in the specification, it is improper to import limitations from the specification into the claims.⁴¹ The specification, including drawings or specific embodiments, may not be used as evidence to narrow broad claim language.⁴² The patent applicant may only act as a lexicographer and use a special definition if the specification is explicit and clear in defining claim terms.⁴³ Finally, the Federal Circuit acknowledges that external sources, such as prior art references, are sometimes helpful to establish how one of ordinary skill in the art would understand the claims.⁴⁴ These external sources of evidence, including dictionaries and treatises, may be used as evidence for ordinary and customary meaning only where their usage is consistent with the specification.⁴⁵

B. *District Court Claim Construction and Phillips*

District courts practice claim construction in infringement suits to determine if an accused invention falls within the scope of the patent claims.⁴⁶ Claim construction for litigation differs from examination at the PTO in three key ways: first, a patentee may not amend claims during litigation; second, the presumption of validity applies in litigation; and finally, litigation is a contested proceeding between two parties rather than a discussion between an applicant and the Patent Office.⁴⁷

⁴⁰ *Id.*

⁴¹ MPEP § 2111.01(II).

⁴² *See id.*

⁴³ MPEP § 2111.01(IV).

⁴⁴ *Vitronics Corp. v. Conceptronc, Inc.*, 90 F.3d 1576, 1584 (Fed. Cir. 1996) (“This prior art can often help to demonstrate how a disputed term is used by those skilled in the art . . . [and] may . . . be more indicative of what all those skilled in the art generally believe a certain term means.”).

⁴⁵ MPEP § 2111.01(III) (where a term is ambiguous, extrinsic evidence may be used to favor one definition out of many plausible choices).

⁴⁶ *See Markman v. Westview Instruments, Inc.*, 517 U.S. 370, 384 (1996) (“The two elements of a simple patent case, construing the patent and determining whether infringement occurred . . .”).

⁴⁷ *See, e.g.*, 35 U.S.C. § 132(a) (2012); *id.* § 282.

Without the ability to amend claims, patentees have limited options if their claims are found invalid.⁴⁸ One safeguard for patentees is that courts presume patents are valid once they leave the Patent Office.⁴⁹ Overcoming the presumption requires clear and convincing evidence, a much higher threshold than the preponderance standard at the PTO.⁵⁰ This system effectively traps courts into the habit of picking a winner between the two parties' proffered constructions.⁵¹ An unspoken habit is to give weight to the presumption of validity by favoring valid constructions for ambiguous claim language.⁵² Not surprisingly, given the presumptions and evidentiary standards benefitting patentees, the final constructions often favor validity.⁵³ In contrast, the PTO does not apply the same presumptions or evidentiary standards and often diverges from the parties' proffered constructions.⁵⁴ This difference in perspectives was what *Cuozzo* hoped to gain in overturning the use of BRI during IPRs.⁵⁵

Courts divide claim construction evidence into two categories: intrinsic evidence, including the claims, specification, and prosecution history; and extrinsic evidence, primarily consisting of dictionaries, inventor testimony,

⁴⁸ As compared to PTO procedures, which expressly allow for responses and amendments to findings of unpatentability. *See, e.g.*, 35 U.S.C. § 132(a) (indicating that an applicant can amend in response to an examiner's rejection).

⁴⁹ 35 U.S.C. § 282.

⁵⁰ *See* *Microsoft Corp. v. i4i Ltd. P'ship*, 564 U.S. 91, 91 (2011); *Radio Corp. of Am. v. Radio Eng'g Labs., Inc.*, 293 U.S. 1, 7 (1934).

⁵¹ *See* *Phillips v. AWH Corp.*, 415 F.3d 1303, 1314, 1327–28 (Fed. Cir. 2005).

⁵² *See id.* at 1327 (explaining that ambiguity in the claim language should be resolved to preserve patent's validity).

⁵³ James R. Barney & Charles T. Collins-Chase, *An Empirical Analysis of District Court Claim Construction Decisions, January to December 2009*, 2011 STAN. TECH. L. REV. 2, 17–18 (2011) (concluding patent owners won claim disputes twice as often as accused infringers).

⁵⁴ *See, e.g.*, *Oracle Corp. v. Clouding IP, LLC*, No. IPR2013-00088 at 9–10 (P.T.A.B. May 14, 2013) (eschewing the parties' construction for a separate and more precise definition).

⁵⁵ Because *Cuozzo* had received a favorable *Phillips* construction in the district court, he would likely have argued for a similar construction at the PTAB if the standard was changed from BRI to *Phillips*. *See* *Cuozzo Speed Techs, L.L.C. v. Lee*, No. 15-446, slip op. at 20 (U.S. June 20, 2016).

expert testimony, prior art, technical treatises, and articles.⁵⁶ Until the Federal Circuit settled the question in *Phillips*, courts inconsistently incorporated treatises and dictionaries into the plain and ordinary meaning.⁵⁷

In *Vitronics Corp. v. Conceptronic, Inc.*, the court instructed to first determine the ordinary meaning of words, unless it is inconsistent with the specification, as the specification was to be the “single best guide” to the meaning of a disputed term.⁵⁸ The court could then advise using prosecution history, both for its prior art references and any disclaimer of claim scope to further clarify a disputed term.⁵⁹ If a term was still ambiguous in light of the intrinsic evidence, the court allowed the use of extrinsic evidence.⁶⁰ Then in *Texas Digital*, the court emphasized that because dictionaries and treatises were created by unbiased third parties, and available equally to the courts and the parties, they were primary forms of evidence for use in claim construction.⁶¹ The impartiality and availability of dictionary and treatise evidence led the court to advise searching such sources for “dictionary meanings” most consistent with the intrinsic evidence rather than first looking to the specification.⁶² This approach directly opposed *Vitronics*, where extrinsic evidence only carried weight when the meaning of a claim term was ambiguous in light of all the intrinsic evidence.⁶³ The two branches of claim construction jurisprudence led to inconsistent and unpredictable decisions across cases.⁶⁴

⁵⁶ See *Vitronics Corp. v. Conceptronic, Inc.*, 90 F.3d 1576, 1582, 1584 (Fed. Cir. 1996).

⁵⁷ See Michael Saunders, *A Survey of Post-Phillips Claim Construction Cases*, 22 BERKELEY TECH. L.J. 215, 220–21 (2007).

⁵⁸ *Vitronics*, 90 F.3d at 1582.

⁵⁹ *Id.* at 1583.

⁶⁰ *Id.* at 1584.

⁶¹ *Tex. Dig. Sys., Inc. v. Telegenix, Inc.*, 308 F.3d 1193, 1202–05 (Fed. Cir. 2002), *cert. denied*, 538 U.S. 1058 (2003).

⁶² See *id.* at 1203.

⁶³ See *Vitronics*, 90 F.3d at 1585.

⁶⁴ See Joseph Scott Miller & James A. Hilsenteger, *The Proven Key: Roles and Rules for Dictionaries at the Patent Office and the Courts*, 54 AM. U. L. REV. 829, 870–71 (2005) (detailing the arbitrary nature of dictionary selection and its impact on claim construction).

The Federal Circuit resolved the evidentiary inconsistency by outlining proper claim construction methodology *en banc* in *Phillips v. AWH Corporation*.⁶⁵ *Phillips* rejected the *Texas Digital* approach, holding that dictionaries were not intrinsic evidence and underscoring the importance of the specification, claims, and prosecution history as in *Vitronics*.⁶⁶ The court reiterated, “there is no magic formula or catechism for conducting claim construction.”⁶⁷ Claim construction requires weighing many sources of potentially flawed evidence, and the use of extrinsic evidence should not “undermin[e] the public notice function of patents.”⁶⁸ The court did not place much emphasis on construing claims to preserve validity, instead accepting the practice as a last resort after applying “all the available tools of claim construction” to the ambiguous claims.⁶⁹ *Phillips* instructs to start with intrinsic evidence to determine the plain and ordinary meaning.⁷⁰ If the claim terms are unclear, then extrinsic evidence may be used to inform the plain and ordinary meaning.⁷¹ Finally, if the claims remain ambiguous even after weighing all evidence, a court may choose a valid interpretation to preserve the patentee’s property interest in rare instances where a single correct construction is undeterminable.⁷²

C. *The Supreme Court Upholds BRI for IPRs*

With *Cuozzo Speed Techs.*, both the Federal Circuit and the Supreme Court have now upheld the PTO’s rulemaking authority to implement BRI in AIA post-grant proceedings such as *inter partes* reviews (“IPRs”).⁷³ The dispute over proper claim construction in IPRs arose because the AIA does not explicitly mention the proper claim construction standard for IPRs and because they

⁶⁵ *Phillips v. AWH Corp.*, 415 F.3d 1303, 1328 (Fed. Cir. 2005) (en banc), *cert. denied*, 546 U.S. 1170 (2006).

⁶⁶ *Id.* at 1320–23 (“*Texas Digital* . . . placed too much reliance on extrinsic sources such as dictionaries, treatises, and encyclopedias and too little on intrinsic sources, in particular the specification and prosecution history.”).

⁶⁷ *Id.* at 1324.

⁶⁸ *Id.* at 1319.

⁶⁹ *Id.* at 1327.

⁷⁰ *See Phillips*, 415 F.3d at 1314.

⁷¹ *See id.*

⁷² *See* MPEP § 2111.01(IV)(A) (9th ed. Rev. 7 Nov. 2015).

⁷³ *In re Cuozzo Speed Techs., LLC*, 793 F.3d 1268, 1268 (Fed. Cir. 2015), *aff’d sub nom*, *Cuozzo Speed Techs., LLC v. Lee*, No. 15-446, slip op. (U.S. 2016).

contain elements of both litigation and examination.⁷⁴ IPRs appear adjudicatory as two contesting parties employ litigation procedures such as discovery before the PTO's Patent Trial and Appeals Board ("PTAB").⁷⁵ But, IPRs also afford patent owners the opportunity to amend claims.⁷⁶ The PTO has historically applied BRI for post-grant proceedings, particularly when allowing claim amendments.⁷⁷ Following that tradition, the PTO chose to apply BRI for IPRs despite the concerns of many practitioners.⁷⁸

Critics argue the BRI standard is unfair for patent owners and that the same claim construction standard should apply at the PTAB and courts.⁷⁹ The Court dismissed the argument and found IPR proceedings serve a purpose much broader than merely "helping resolve concrete patent-related disputes among parties[.]"⁸⁰ In particular, IPRs serve an important public purpose in ensuring patent claims are "kept within their legitimate scope."⁸¹ The Court noted that patent examination uses BRI precisely because the standard helps to protect the public interest in precise claim language.⁸² Without clear articulation from the statute, the PTO's BRI regulation represents a "reasonable exercise of the rulemaking authority that Congress delegated to the Patent Office."⁸³

⁷⁴ See 35 U.S.C. § 316(a)(4) (2012).

⁷⁵ See 37 C.F.R. § 42.51 (2016) (PTO discovery).

⁷⁶ 35 U.S.C. § 316(d)(1) (allowing for amendment of the patent during an IPR).

⁷⁷ See *In re Yamamoto*, 740 F.2d 1569, 1572 (Fed. Cir. 1984) (upholding the use of BRI during reexamination proceedings); *In re Reuter*, 670 F.2d 1015, 1019 (C.C.P.A. 1981) (upholding the use of BRI for reissue proceedings).

⁷⁸ Changes to Implement Miscellaneous Post Patent Provisions of the Leahy-Smith America Invents Act, 77 Fed. Reg. 46,615, 46,616 (Aug. 6, 2012) (codified at 37 C.F.R. pts. 1, 5, 10, 11, 41).

⁷⁹ See, e.g., Brief of the Federal Circuit Bar Association as Amicus Curiae in Support of Petitioner, *Cuozzo Speed Techs., LLC v. Lee*, 136 S. Ct. 2131 (2016) (No. 15-446), 2016 WL 837071, at *14-15.

⁸⁰ *Cuozzo Speed Techs., LLC v. Lee*, No. 15-446, slip op. at 20 (U.S. 2016).

⁸¹ *Id.* (quoting *Precision Instrument Mfg. Co. v. Auto. Maint. Mach. Co.*, 324 U.S. 806, 816 (1945)).

⁸² See *id.* at 21.

⁸³ *Id.*

III. ANALYSIS

While *Cuozzo Speed Techs.* settled the legal question of which claim construction standard to apply during AIA post-grant proceedings, the decision was never going to make a significant practical difference, because the standards are not the distinguishing factor in claim construction between courts and the PTAB. As noted above, both the BRI and *Phillips* frameworks employ the same procedures with respect to evidence and its weight. For instance, both standards start claim construction with the plain and ordinary meaning as understood by a person of skill in the art.⁸⁴ Other factors, such as the contested nature of courts and the technical expertise of PTAB judges, have a more significant impact on the final construction.⁸⁵ Because the claim construction standards are functionally identical, practitioners should understand and focus on the factors in each venue that drive the final construction.

A. *BRI and Phillips Employ Equivalent Procedures*

Although the PTO and district courts may arrive at differing constructions for the same claim, the primary differentiator is not the choice of standard. Critics of BRI commonly argue its broad scope conflicts with *Phillips*' emphasis on the plain and ordinary meaning of claims.⁸⁶ This distinction is misleading, because BRI also begins with the plain and ordinary meaning of a patent claim term. The PTO instructs patent examiners and administrative patent judges that:

The broadest reasonable interpretation does not mean the broadest possible interpretation. Rather, the meaning given to a claim term **must be consistent with the ordinary and customary meaning of the term** (unless the term has been given a special definition in the specification), and must be consistent with the

⁸⁴ Compare MPEP § 2111 (9th ed. Rev. 7 Nov. 2015) (instructing examiners to begin with the ordinary and customary meaning) with *Phillips v. AWH Corp.*, 415 F.3d 1303, 1312–13 (Fed. Cir. 2005) (constructing terms according to ordinary and customary meaning in light of the specification).

⁸⁵ See generally *Microsoft Corp. v. i4i Ltd. P'ship*, 564 U.S. 91, 99–100 (2011) (discussing the relationship between presumption of validity and the evidentiary standard); *Ethicon, Inc. v. Quigg*, 849 F.2d 1422, 1427 (Fed. Cir. 1988) (discussing the lack of presumption at the PTO and its effect on the evidentiary standard).

⁸⁶ *Phillips*, 415 F.3d at 1316.

use of the claim term in the specification and drawings. Further, the broadest reasonable interpretation of the claims must be consistent with the interpretation that those skilled in the art would reach.⁸⁷

This instruction mirrors *Phillips*'s construction guidelines—to give terms their ordinary and customary meaning as understood by “a person of ordinary skill in the art in question at the time of the invention[.]”⁸⁸ In fact, MPEP § 2111 specifically cites *Phillips* under section III when defining the concept of plain meaning.⁸⁹ The PTO's Trial Practice Guide for IPRs links BRI and *Phillips* by stating, “[a] claim in an unexpired patent shall be given its broadest reasonable construction in light of the specification of the patent in which it appears.”⁹⁰

The Federal Circuit similarly emphasizes the commonality between BRI and *Phillips*. In *Microsoft Corp. v. Proxyconn, Inc.*, the court stated that claim construction during an IPR must not be “unreasonable under general claim construction principles.”⁹¹ In addition, claims should always be read in light of the specification and teachings in the underlying patent, the PTO should consult the patent's prosecution history, and the construction “must be consistent with the one that those skilled in the art would reach.”⁹² In *TriVascular, Inc. v. Samuels*, the court invoked numerous citations from earlier decisions to highlight that “[u]nder a broadest reasonable interpretation, words of the claim must be given their plain meaning, unless such meaning is inconsistent with the specification and prosecution history.”⁹³ In particular, “[w]hile the broadest reasonable interpretation standard is broad, it does not give the Board an unfettered license to interpret the words in a claim without regard for the full claim language and

⁸⁷ MPEP § 2111 (emphasis added).

⁸⁸ *Phillips*, 415 F.3d at 1312–13.

⁸⁹ MPEP § 2111.01(III).

⁹⁰ 37 C.F.R. § 42.100(b) (2016).

⁹¹ *Microsoft Corp. v. Proxyconn, Inc.*, 789 F.3d 1292, 1298 (Fed. Cir. 2015) (emphasis in original).

⁹² *Id.* (citing *In re Cortright*, 165 F.3d 1353, 1358 (Fed. Cir. 1999)).

⁹³ *TriVascular, Inc. v. Samuels*, No. 2015-1631, slip op. at 6 (Fed. Cir. Feb. 5, 2016).

the written description.”⁹⁴ Well-respected former Federal Circuit Chief Judge Paul Michel did outline a minor procedural difference:

[T]he putative claim construction standard between courts and the Patent Office is the same—with the one minor difference being that courts may apply disclaimers made by a patent owner during prosecution . . . while the Patent Office properly forces an applicant or Patent Owner to put the explicit text in the claims if it is not already there.⁹⁵

Apart from situations in which applicants or patentees are introducing disclaimers into an open PTO record, there is no doctrinal difference between BRI and *Phillips*.

Table 1. BRI and *Phillips* Framework Comparison

The following table summarizes various sources of evidence to demonstrate the similarity between BRI and a *Phillips* claim construction. If properly applied, these tools should lead to identical constructions regardless of the forum.

Claim Interpretation	PTO BRI	District Court
Plain & ordinary meaning in light of the specification and consistent with the understanding of a person skilled in the art.	Yes, for undisputed terms. ⁹⁶	Yes, for undisputed terms. ⁹⁷
Intrinsic evidence.	Yes. ⁹⁸	Yes. ⁹⁹
Extrinsic evidence.	Yes, if needed. ¹⁰⁰	Yes, if needed. ¹⁰¹

⁹⁴ *Id.* at 7.

⁹⁵ Brief of Amicus Curiae Paul R. Michel in Support of Neither Party, *Cuozzo Speed Techs., LLC v. Lee*, 136 S. Ct. 2131 (2016) (No. 15-446) [hereinafter Brief of Paul R. Michel].

⁹⁶ *In re Cortright*, 165 F.3d 1353, 1358 (Fed. Cir. 1999); 37 C.F.R. § 42.100(b) (2016); MPEP § 2111.01(I) (9th ed. Rev. 7 Nov. 2015); *see also* Office Patent Trial Practice Guide, 77 Fed. Reg. 48,756, 48,764 (Aug. 14, 2012) (to be codified at 37 C.F.R. pt. 42).

⁹⁷ *Phillips v. AWH Corp.*, 415 F.3d 1303, 1313 (Fed. Cir. 2005).

⁹⁸ MPEP § 2111.01(II).

⁹⁹ *Phillips*, 415 F.3d at 1313.

Claim construction from prior litigation.	Yes if statements of the patent owner were filed in a proceeding before a Federal court or the PTO. ¹⁰²	Yes, depending on circumstances ¹⁰³
Claim construction from patent family members.	Yes. ¹⁰⁴	Yes. ¹⁰⁵
Claim differentiation.	Yes. ¹⁰⁶	Yes. ¹⁰⁷
Ability to amend claims.	Yes. ¹⁰⁸	No. ¹⁰⁹
Claims construed to preserve validity.	No. ¹¹⁰	Rarely. ¹¹¹

Both BRI and *Phillips* apply the plain and ordinary meaning standard in the context of intrinsic evidence, including the patent specification and prosecution history.¹¹² Use of the word “broadest” does not imply broader relative to a court’s construction.¹¹³ Rather, “broadest” is contextual, relative to

¹⁰⁰ MPEP § 2111.01(III).

¹⁰¹ *Phillips*, 415 F.3d at 1317.

¹⁰² 35 U.S.C. § 301 (2012).

¹⁰³ See generally Peter S. Menell et al., *Patent Claim Construction: A Modern Synthesis and Structured Framework*, 25 BERKELEY TECH. L.J. 713, 734 (2011).

¹⁰⁴ 35 U.S.C. § 120.

¹⁰⁵ *Omega Eng’g, Inc. v. Raytek Corp.*, 334 F.3d 1314, 1333–34 (Fed. Cir. 2003).

¹⁰⁶ 37 C.F.R. § 1.75(b) (2016).

¹⁰⁷ *Phillips v. AWH Corp.*, 415 F.3d 1303, 1314 (Fed. Cir. 2005).

¹⁰⁸ 35 U.S.C. § 316(d)(1).

¹⁰⁹ *Phillips*, 415 F.3d at 1327.

¹¹⁰ MPEP § 2111 (9th ed. Rev. 7 Nov. 2015).

¹¹¹ The Federal Circuit has not “applied [this] principle broadly” and has “not endorsed a regime in which validity analysis is a *regular component* of claim construction.” *Phillips*, 415 F.3d at 1327 (emphasis added) (internal citations omitted).

¹¹² MPEP § 2111.01(III); *Phillips*, 415 F.3d at 1313.

¹¹³ *TriVascular, Inc. v. Samuels*, No. 2015-1631, slip op. at 7 (Fed. Cir. Feb. 5, 2016).

the patent specification, and as viewed by one of skill in the art—just like *Phillips*.¹¹⁴ The standards employ identical procedures to reach a *reasonable*, technical construction in view of the intrinsic and extrinsic record.

B. Factors Differentiating PTAB and District Court Claim Constructions

Differences between the courts and the PTO in claim interpretation may be attributable to factors other than the claim construction standard.¹¹⁵ The court's use of the plain and ordinary meaning standard is an implicit bow to the work of the expert agency and resulting presumption of validity, and it also affects the evidentiary standard.¹¹⁶ Given the presumption of validity in district courts, invalidity must be shown by clear and convincing evidence;¹¹⁷ while at the PTAB, a petitioner must show unpatentability with a lower preponderance of the evidence standard under no presumption of validity.¹¹⁸ Regardless of the standard used for claim interpretation, it is easier to show a claim is unpatentable at the PTAB than invalid in a court because of the differing burdens of persuasion. Therefore, changing the claim construction standard will not change that fundamental difference or affect the outcome.

1. Statutory Presumption of Validity at District Court Proceedings

The statutory presumption of validity is a court's expression of:

[T]he deference that is due to a qualified government agency presumed to have properly done its job, which includes one or more examiners who are assumed to have some expertise in interpreting the references and to be familiar from their work

¹¹⁴ *Phillips*, 415 F.3d at 1313.

¹¹⁵ See MPEP § 2111.01.

¹¹⁶ See *id.* § 2111.01(IV) (instructing that claim construction presume the plain and ordinary meaning of terms unless the applicant clearly acts as a lexicographer).

¹¹⁷ See *Microsoft Corp. v. i4i Ltd. P'ship*, 564 U.S. 91, 91 (2011).

¹¹⁸ See, e.g., *Ethicon, Inc. v. Quigg*, 849 F.2d 1422, 1427 (Fed. Cir. 1988).

with the level of skill in the art and whose duty it is to issue only valid patents.¹¹⁹

In short, a court will defer to the overall agency expertise in properly conducting patent examination.¹²⁰ This deference to an agency's skill in conducting the examination process is distinguishable from the deference to administrative agencies' construction of statutes as dictated by *Chevron, USA, Inc.*¹²¹

PPC Broadband, Inc. v. Corning Optical Commc'ns RF provides an example where the presumption of validity introduced unrecited limitations. The PTAB decided that "continuity" in context of the patent referred only to physical, and not temporal, continuity.¹²² The court upheld the PTAB's BRI construction but, in dicta, volunteered that a district court construction would have required both physical and temporal continuity.¹²³ The court's narrower claim construction would have preserved the validity of the claims because the prior art did not demonstrate temporal continuity.¹²⁴ The court did not cite to fundamental differences in claim construction standards, but instead focused on the presumption of validity in the dictum.¹²⁵ That is, the court would have required the claims be limited to an unrecited feature. Considering unrecited features as the proper scope of a claim is the antithesis to long-standing PTO practice.¹²⁶

¹¹⁹ *Am. Hoist & Derrick Co. v. Sowa & Sons, Inc.*, 725 F.2d 1350, 1359 (Fed. Cir. 1984).

¹²⁰ *See id.*

¹²¹ *See Chevron U.S.A. Inc. v. Nat. Res. Def. Council, Inc.*, 467 U.S. 837, 842–43 (1984); *see generally* Laura Whitworth, *What's in a Claim?: The Importance of Uniformity in Patent Claim Construction Standards*, 98 J. PAT. & TRADEMARK OFF. SOC'Y 21, 28 (2016).

¹²² *PPC Broadband, Inc. v. Corning Optical Commc'ns RF*, 815 F.3d 747, 751–52 (2016).

¹²³ *See id.* at 756.

¹²⁴ *See id.*

¹²⁵ *See id.*

¹²⁶ *See McClain v. Ortmyer*, 141 U.S. 419, 424 (1891) ("The object of the patent law in requiring the patentee to [distinctly claim his invention] . . . is not only to secure to him all to which he is entitled, but to apprise the public of what is still open to them.").

2. The Expert Agency Employs Judges That are Scientists and Engineers

District court judges must deal with a broad universe of cases and are not required to have the engineering or scientific background required of PTO examiners or PTAB judges, whose focus is much narrower.¹²⁷ In contrast, the PTAB determines technical truth guided by its own technical and scientific training, with the input of the parties.¹²⁸ As technically and legally trained scientists and engineers, the PTAB analyzes each patent independently to assess the technical truth.¹²⁹ Complementing their technology expertise, many PTAB judges have examined, prosecuted, and litigated patents.¹³⁰

Forums lacking technical expertise often construe claims with unrecited requirements by choosing between competing party-constructions as opposed to technical correctness.¹³¹ Unlike the district courts, the PTAB is not picking a winner in a contested proceeding between two parties because the agency is reviewing the claims on its own discretion.¹³² It is not a battle of two claim constructions—that is, if an accused infringer argues an overly narrow construction to avoid infringement, the patentee’s construction (likely nuanced to avoid invalidity and maintain infringement) does not win by default; instead, the technical truth—as determined by the originally issuing agency—rules the day.¹³³ The PTAB will often disagree with both parties and select its own unique construction.¹³⁴ The combination of technical expertise and assessing claims

¹²⁷ *PTAB Brochure*, U.S. PAT. & TRADEMARK OFF., https://www.uspto.gov/ip/boards/bpai/ptab_brochure_v2_4_10_14.pdf (last visited Aug. 27, 2016) (listing basic qualifications for Administrative Patent Judges as years of patent experience and technical degrees).

¹²⁸ *See id.*

¹²⁹ *Id.*

¹³⁰ *See id.*

¹³¹ *See generally* U.S. Surgical Corp. v. Ethicon, Inc., 103 F.3d 1554, 1568 (Fed. Cir. 1997) (“Claim construction is a matter of resolution of disputed meanings and technical scope . . .”).

¹³² *See* 35 U.S.C. § 311(a) (2012) (outlining the lack of a standing requirement for filing an IPR); *see also* 35 U.S.C. § 314(a).

¹³³ *See, e.g.,* Oracle Corp. v. Clouding IP, LLC, No. IPR2013-00088 at 9–10 (P.T.A.B. May 14, 2013).

¹³⁴ *See id.*

independently of parties affords the PTAB insight that may lead to a different conclusion than a district court.

IV. CONCLUSION

Contextual differences between the PTAB and district courts drive different claim construction outcomes between the PTO and courts. While district courts apply a presumption of validity that raises the burden on alleged infringers to clear and convincing evidence, the PTAB requires only a preponderance of the evidence to find invalidity.¹³⁵ Combined with the technical skill of PTAB judges, the lower standard at the PTO undoubtedly requires greater precision and care from patent owners than at district courts. This difference is by design, as the PTO's mandate for public notice imbues a different perspective than district court proceedings. Courts must adjudicate between two parties and generally select one of the parties' proffered constructions, whereas PTAB judges often invoke their own 'true' constructions wholly apart from the parties' suggestions.¹³⁶

As Judge Michel advises, practitioners should not be overly concerned with claim construction standards.¹³⁷ The PTAB dropping BRI to adopt *Phillips* language would not harmonize claims because, when properly applied, the PTO and district court claim construction frameworks are procedural paths to the same destination.¹³⁸ BRI and *Phillips* are doctrinally indistinguishable as both begin with the plain and ordinary meaning of claim terms and adopt the context of the patent specification as understood by a person of ordinary skill in the art.¹³⁹ The term "broadest" in BRI is not relative to a *Phillips* construction, but instead describes interpreting the patent specification as viewed by one of skill in the art.¹⁴⁰ Ultimately, the standards employ similar procedures to achieve an identical construction that is reasonable in view of the intrinsic and extrinsic record. When the procedures are properly applied, any differences between court and PTAB claim constructions are the result of differences in forum

¹³⁵ See *supra* Part III.A.

¹³⁶ See *supra* Part III.B.

¹³⁷ Brief of Paul R. Michel, *supra* note 95, at 6–7

¹³⁸ See *id.* at 8.

¹³⁹ See *Phillips v. AWH Corp.*, 415 F.3d 1303, 1312 (Fed. Cir. 2005); MPEP § 2111.

¹⁴⁰ MPEP § 2111 (9th ed. Rev. 7 Nov. 2015).

procedure, evidentiary standards, presumption of validity, or the perspective and authority of the adjudicator in differing venues.

A RACE TO THE FEDERAL CIRCUIT: HOW THE DIFFERING CLAIM CONSTRUCTION STANDARDS AND STANDARDS OF REVIEW INFLUENCE PATENT INVALIDATION

*Leora Ben-Ami & Corinne Stone**

I. INTRODUCTION640

II. BACKGROUND640

 A. *The America Invents Act*640

 B. *Claim Construction*.....643

 1. Claim Construction Before the Patent Trial and Appeal Board644

 2. Claim Construction Before the District Courts645

 C. *The Appeals Process*648

 1. Appellate Review of Patent Trial and Appeal Board Constructions649

 2. Appellate Review of District Court Constructions.....651

 D. *Issue of Concurrent Jurisdiction in Claim Constructions*651

III. ANALYSIS652

 A. *Identical PTAB and District Court Constructions*.....652

 B. *Different PTAB and District Court Constructions*654

IV. CONCLUSION656

* © 2016 Leora Ben-Ami, Corinne Stone. Leora Ben-Ami is an intellectual property partner at Kirkland & Ellis, LLP in New York, New York. Ms. Ben-Ami’s practice includes all areas of technology, primarily including biotechnology, medical devices, pharmaceuticals and chemistry. Corinne Stone graduated from the George Washington University Law School in May 2016.

I. INTRODUCTION

Prior to 2011, patent litigation generally was confined to actions before the federal district courts and *inter partes* reexamination in the Patent Office. With the passage of the America Invents Act, however, the system changed, with the Patent Office becoming another regular venue in which to re-litigate patent validity. In either forum, ultimate resolution is based on the claim construction determined. Since the district court and the Patent Office are different types of forums, with different rules and standards, actions filed in both forums concurrently can lead to inconsistent claim interpretations. The decisions of these two forums are both subject to appeal to the same court, the Court of Appeals for the Federal Circuit. The Federal Circuit must apply the correct standard of review to claim construction, and to the extent that standard differs depending on the forum having decided the construction originally, inconsistent constructions may result. This article discusses the standards of the various forums regarding claim interpretation and claim construction review.

II. BACKGROUND

A. *The America Invents Act*

Congress passed the Leahy-Smith America Invents Act (“AIA”) in 2011.¹ The AIA was the first major patent reform bill in over sixty years, and it revolutionized American patent law by establishing a first-to-file system and new alternatives to standard district court litigation at the Patent Office.² The AIA introduced three primary post-grant proceedings to challenge the claims of already granted patents.³ These proceedings include *inter partes* review, post-grant review, and covered business method review.⁴

¹ Leahy-Smith America Invents Act, Pub. L. No. 112-29, 125 Stat. 284 (2011).

² Kayla Fossen, *The Post-Grant Problem: America Invents Falling Short*, 14 MINN. J.L. SCI. & TECH. 573, 582–85 (2013).

³ Jason Mock, *Post-Grant Proceedings at the USPTO and the Rising Tide of Federal Circuit Appeals*, 25 FED. CIR. B.J. 15, 15 (2015).

⁴ *Id.*

Inter partes review (“IPR”) was “created to take the place of *inter partes* reexamination.”⁵ IPRs occur when a third party challenges the validity of one, some, or all of a patent’s claims as being not novel and/or obvious over specific prior art that the third party sets forth.⁶ IPRs can be filed any time after nine months following the grant of the patent, but the petitioner *must* file within one year of being served with a complaint alleging infringement of the patent at issue in the petition for *inter partes* review.⁷ IPRs occur in two stages: the institution stage and the final decision stage.⁸ The standard for getting a petition for IPR instituted is whether there exists “a reasonable likelihood that the petitioner would prevail with respect to at least 1 of the claims challenged in the petition.”⁹ The Patent Office must then determine whether to institute the IPR within three months after receiving a response to the petition, or, if no response is filed, then three months from the last date a response could have been filed.¹⁰ The decision of whether to institute an IPR is final and non-appealable.¹¹

Once instituted, the Patent Trial and Appeal Board (“PTAB” or “Board”) will apply the broadest reasonable interpretation standard, described below, to its construction of the claims challenged in the IPR petition, which the PTAB will analyze for lack of novelty and obviousness.¹² “The PTAB’s final written decision on the merits of the proceedings is appealable to the Federal Circuit.”¹³

⁵ *Id.* at 17 (citing H.R. REP. NO. 112-98, pt. 1, at 46–47 (2011), reprinted in 2011 U.S.C.C.A.N. 67, 76–78 (“Congress intended to ‘convert[] *inter partes* reexamination from an examinational to an adjudicative proceeding, and rename[] the proceeding ‘*inter partes* review.’”)).

⁶ *Id.* at 17 (citing 35 U.S.C. § 311(b) (2012)).

⁷ *Id.* at 19. (citing 35 U.S.C. §§ 311(c), 315(b)).

⁸ See Laura Whitworth, *What’s in a Claim?: The Importance of Uniformity in Patent Claim Construction Standards Between District Court Litigation and Inter Partes Review*, 98 J. PAT. & TRADEMARK OFF. SOC’Y 21, 30 (2016).

⁹ 35 U.S.C. § 314(a).

¹⁰ See *id.* § 314(b).

¹¹ See *id.* § 314(d).

¹² See *Cuozzo Speed Techs., LLC v. Lee*, No. 15-446, slip op. at 13 (U.S. June 20, 2016).

¹³ Whitworth, *supra* note 8, at 30.

Post-grant review (“PGR”) proceedings also allow a third party to allege invalidity to a patent, however, only within the first nine months of the patent’s issuance.¹⁴ PGRs can be used in a wider variety of circumstances than IPRs, as a petitioner may assert lack of novelty and obviousness, as well as ineligible subject matter, indefiniteness, and lack of enablement and proper written description.¹⁵ To be successful in a petition for PGR, the petitioner must demonstrate that it is more likely than not that one or more claims challenged in the petition are unpatentable.¹⁶ Similar to IPRs, PGRs are completed in two phases and must first be instituted by the Patent Office, subject to the above-stated standard,¹⁷ and then are decided on the merits by the PTAB.¹⁸

Finally, a third type of post-grant proceeding created by the AIA is the covered business method (“CBM”) review process. The CBM process is available to petitioners who have been sued or charged with infringement and are seeking invalidation of claims directed to business methods as defined by § 18(a)(1)(B) of the AIA.¹⁹ Under that section, a business method is “a patent that claims a method or corresponding apparatus for performing data processing or other operations used in the practice, administration, or management of a financial product or service.”²⁰ CBMs are performed in roughly the same manner as a PGR, with a few minor exceptions, including the variety of prior art that can be asserted.²¹

When one of these post-grant proceedings is initiated or a district court case is filed, one of the first tasks the administrative law judge or district court must complete is claim construction. Since patent claims define both the scope of the patent property right for infringement purposes and the scope of that right

¹⁴ 35 U.S.C. § 321(c).

¹⁵ Compare 35 U.S.C. § 321(b), with *id.* § 311(b).

¹⁶ 35 U.S.C. § 324(a).

¹⁷ Compare 35 U.S.C. § 324(c), with *id.* § 314(b).

¹⁸ 35 U.S.C. § 326(c).

¹⁹ See Mock, *supra* note 3, at 20–21.

²⁰ 125 Stat. 284 § 18(d)(1) (2011).

²¹ Mock, *supra* note 3, at 20–21.

when assessing invalidity, determining the meaning of the claims is often critical to infringement and validity.

B. *Claim Construction*

The principles of claim construction have developed to further the underlying premise of the patent system—that is, balancing the patentee’s right to exclusivity with the public’s right to notice of the patented invention.²² Claim construction in patent law is the process of interpreting claim terms to determine the patent’s boundaries.²³ Claim construction is necessary to guide infringement and invalidity analysis when patentees seek to enforce their rights in court.²⁴ Claim construction is both a legal and factual interpretation of the claims of a patent.²⁵ Historically, courts were primarily responsible for claim construction in an adversarial setting, but since the passage of the AIA, the Patent Office must now undertake adversarial claim construction, where each party typically has wholly different interpretations of what it interprets the claim terms to mean, as well.²⁶ Claim construction must occur prior to the assessment of infringement, validity, or enforceability of the patent.²⁷

²² See Whitworth, *supra* note 8, at 23–24.

²³ See J. Jonas Anderson & Peter S. Menell, *Informal Deference: A Historical, Empirical, and Normative Analysis of Patent Claim Construction*, 108 NW. U.L. REV. 1, 3 (2013).

²⁴ *Id.* at 3–4.

²⁵ See *Teva Pharms. U.S.A., Inc. v. Sandoz, Inc.*, No. 13-854, slip op. at 5–6 (U.S. Jan. 20, 2015); *Markman v. Westview Instruments, Inc.*, 517 U.S. 370, 377 (1996); *but see Cybor Corp. v. FAS Techs., Inc.*, 138 F.3d 1448, 1455 (Fed. Cir. 1998) (“Thus, the Supreme Court was addressing under which category, fact or law, claim construction should fall and not whether it should be classified as having two components, fact and law.”).

²⁶ See 37 C.F.R. § 42.100(b) (2014). In addition to federal courts, the International Trade Commission considers claim construction as part of determining whether there is a violation of section 337 of the Tariff Act of 1930. 19 U.S.C. § 1337 (2012).

²⁷ See Whitworth, *supra* note 8, at 25.

1. Claim Construction Before the Patent Trial and Appeal Board

The Board construes a claim according to its “broadest reasonable construction in light of the specification of the patent in which it appears.”²⁸ This broadest reasonable interpretation (“BRI”) standard has been used during patent examination and other proceedings before the Patent Office for over thirty years.²⁹ Upon passage of the AIA, Congress did not specify a different standard for the PTAB to use during the newly created post-grant proceedings, nor did it mandate that the Board use the district court standard for claim constructions.³⁰ The Patent Office continued to use its BRI standard to construe claims, and the Supreme Court upheld its use of a standard different from that of the district court in *Cuozzo Speed Technologies, LLC*, stating:

The [AIA] . . . grants the Patent Office authority to issue “regulations . . . establishing and governing inter partes review . . .” The Court of Appeals held that this statute gives the Patent Office the legal authority to issue its broadest reasonable construction regulation. We agree. . . . [N]either the statutory language, its purpose, or its history suggest that Congress considered what standard the agency should apply when reviewing a patent claim in inter parties review. . . . [The statute] leaves open the question of which claim construction standard is “proper.” . . . [B]roadest reasonable construction helps to protect the public[,] . . . encourages the applicant to draft narrowly[,] . . . [and] helps prevent a patent from tying up too much knowledge, while helping members of the public draw useful information from the disclosed invention and better understand the lawful limits of the claim. . . . [P]ast practice supports [BRI] The Patent Office has used this standard for more than 100 years. . . . [W]e cannot find unreasonable the Patent Office’s decision to prefer a degree of inconsistency in the

²⁸ 37 C.F.R. § 42.100(b).

²⁹ See James Stein et al., *Spotlight on Claim Construction Before PTAB*, 11 BUFF. INTEL. PROP. L.J. 73, 76 (2015) (citing 77 Fed. Reg. 48,680, 48,697 (Aug. 14, 2012) (to be codified at 37 C.F.R. pt. 42)).

³⁰ See *id.* (citing 77 Fed. Reg. 48,680, 48,698–99).

standards used between the courts and the agency, rather than among agency proceedings.³¹

The Court also reasoned that it should apply *Chevron* deference to the Patent Office's regulation requiring BRI during *inter partes* review.³² Since the Court found § 301(d) in the AIA, which states that the Patent Office should "determine the proper meaning of a patent claim," to be ambiguous, the Patent Office could issue regulations interpreting that language so long as "the Patent Office's regulation is a reasonable exercise of its rulemaking authority."³³ The Court ultimately found the BRI standard to be reasonable.³⁴

2. Claim Construction Before the District Courts

Claim construction in district court is a legal question to be resolved by a judge as opposed to a jury.³⁵ In federal court, *Phillips v. AWH Corporation* provides the current method for claim construction, as it established a hierarchical system of reviewing intrinsic and extrinsic evidence to arrive at the term's plain and ordinary meaning.³⁶ In construing claims, trial courts must first examine the intrinsic evidence, including the claim language, the written description and, if introduced, the prosecution history of the patent, because it is the "most significant source of the legally operative meaning of disputed claim language."³⁷ Further, the judge is required to examine patent claim terms and

³¹ *Cuozzo Speed Techs., LLC v. Lee*, No. 15-446, slip op. at 12–13, 16–17, 20 (U.S. June 20, 2016).

³² *See id.* at 13.

³³ *Id.* at 17.

³⁴ *Id.*

³⁵ *Markman v. Westview Instruments Inc.*, 517 U.S. 370, 388 (1996).

³⁶ *See Phillips v. AWH Corp.*, 415 F.3d 1303, 1317 (Fed. Cir. 2005) (en banc).

³⁷ *Vitronics Corp. v. Conceptoronic, Inc.*, 90 F.3d 1576, 1582 (Fed. Cir. 1996) (stating intrinsic evidence is defined as the claim language, the written description, and, if introduced, the prosecution history); *see also Phillips*, 415 F.3d at 1317; *Phonometrics, Inc. v. N. Telecom Inc.*, 133 F.3d 1459, 1464 (Fed. Cir. 1998).

phrases “through the viewing glass of a person skilled in the art.”³⁸ As a threshold matter, the trial court must determine whether there is ambiguity in any claim term requiring construction.³⁹

To construe an ambiguous claim, the court should first look to the specification because claims “must be read in view of the specification, of which they are a part.”⁴⁰ The specification is highly relevant to the claim’s construction and is usually the single best guide into the meaning of the disputed term.⁴¹ There are two specific instances in which the specification is of particular importance: First, where the specification includes a special definition given to the claim term by the patentee that is different from the ordinary meaning;⁴² second, where the “specification may reveal an intentional disclaimer, or disavowal, of claim scope by the inventor.”⁴³

³⁸ *Brookhill-Wilk 1, LLC v. Intuitive Surgical, Inc.*, 334 F.3d 1294, 1298 (Fed. Cir. 2003); *see also* *Hockerson-Halberstadt, Inc. v. Avia Grp. Int’l, Inc.*, 222 F.3d 951, 955 (Fed. Cir. 2000) (stating claim terms are afforded “their ordinary and accustomed meaning as understood by one of ordinary skill in the art”).

³⁹ *Vitronics Corp.*, 90 F.3d at 1582 (directing the trial judge to “look to the words of the claims themselves, both asserted and nonasserted, to define the scope of the patented invention”).

⁴⁰ *Phillips*, 415 F.3d at 1315 (quoting *Markman*, 52 F.3d at 979, *aff’d*, 517 U.S. 370 (1996)).

⁴¹ *See id.*; *see also* *Honeywell Int’l, Inc. v. ITT Indus., Inc.*, 452 F.3d 1312, 1318 (Fed. Cir. 2006) (“The public is entitled to take the patentee at his word . . .”).

⁴² *See* *Elekta Instrument S.A. v. O.U.R. Sci. Int’l, Inc.*, 214 F.3d 1302, 1307 (Fed. Cir. 2000) (“While we have held many times that a patentee can act as his own lexicographer to specifically define terms of a claim contrary to their ordinary meaning, the written description in such a case must clearly redefine a claim term so as to put a reasonable competitor or one reasonably skilled in the art on notice that the patentee intended to so redefine that claim term.”) (internal quotations omitted) (quoting *Process Control Corp. v. HydReclaim Corp.*, 190 F.3d 1350, 1357 (Fed. Cir. 1999)).

⁴³ *Phillips*, 415 F.3d at 1316; *see also* *Edwards Lifesciences LLC v. Cook, Inc.*, 582 F.3d 1322, 1329–30 (Fed. Cir. 2009) (holding where a specification uses a term only in a specific context, that term should not be construed to have a

When construing claims, a judge must also consider three additional rules of construction concerning the import of the specification. First, a claim should not be construed to exclude the preferred embodiment disclosed in a specification.⁴⁴ Second, when more than one embodiment is present, the court should not interpret claim terms in a way that would exclude disclosed examples or embodiments in the specification.⁴⁵ Nonetheless, the Federal Circuit has held that where an interpretation of a term is required to cover all embodiments, but that interpretation is contrary to the ordinary meaning of the claim term and there is no evidence that the patentee was acting as his own lexicographer, the claim may be interpreted to exclude one or more of the embodiments.⁴⁶ Third, limitations may not be imported from the specification into the claim.⁴⁷

Next, the court should look to the prosecution history, which “consists of the complete record of the proceedings before the [United States Patent and Trademark Office] and includes the prior art cited during the examination of the patent.”⁴⁸ The prosecution history is useful because it “can often inform the meaning of the claim language by demonstrating how the inventor understood

broader scope) (citing *SciMed Life Sys., Inc. v. Advanced Cardiovascular Sys., Inc.*, 242 F.3d 1337, 1341 (Fed. Cir. 2001)).

⁴⁴ *Vitronics Corp.*, 90 F.3d at 1583.

⁴⁵ See *Phillips*, 415 F.3d at 1323 (recognizing that the embodiments in a patent often are examples meant to teach a person of ordinary skill in the art how to make and use the invention, but should not be construed to limit the invention only to a specific embodiment); see also *Verizon Servs. Corp. v. Vonage Holding Corp.*, 503 F.3d 1295, 1305 (Fed. Cir. 2007).

⁴⁶ See *Baran v. Med. Device Techs., Inc.*, 616 F.3d 1309, 1315–16 (Fed. Cir. 2010) (holding that if a term is used in the specification to differentiate two different embodiments and if it is used in the claims to describe the invention, it is proper to construe the claims to cover only one of the two embodiments, because the differentiation concedes coverage of one of the embodiments).

⁴⁷ See *Kara Tech. Inc. v. Stamps.com Inc.*, 582 F.3d 1341, 1348 (Fed. Cir. 2009) (“The patentee is entitled to the full scope of his claims, and we will not limit him to his preferred embodiment or import a limitation from the specification into the claims”).

⁴⁸ *Phillips*, 415 F.3d at 1317 (internal citations omitted).

the invention and whether the inventor limited the invention in the course of prosecution, making the claim scope narrower than it otherwise would be.”⁴⁹

Finally, if the intrinsic evidence does not resolve the ambiguity about the meaning of a claim, the court may look to extrinsic evidence, or evidence outside of the patent record, including expert and inventor testimony and dictionaries.⁵⁰ When looking at extrinsic evidence to construe a claim, judges are often required to make subsidiary findings of fact.⁵¹ After *Teva*, review of these extrinsic evidence-based factual findings by appellate courts are for clear error.⁵² The ruling in *Teva* does create the possibility that district court constructions may be less vulnerable on appeal where there are explicit findings of fact to shield the rulings from *de novo* review.⁵³ How successful such measures will be remains to be seen.

C. *The Appeals Process*

The Federal Circuit has exclusive appellate jurisdiction over claim construction from both the Board and the district court.⁵⁴ Not only are the claim construction standards being reviewed differently between the Board and the district court, but the standards of review used during the appeals process by the Federal Circuit differ drastically between the Board and district courts.

On an appeal from the district court, the Supreme Court held in *Teva Pharmaceuticals USA, Inc. v. Sandoz, Inc.* that the Federal Circuit must apply the clear error standard of review to factual findings made during claim

⁴⁹ *Id.*

⁵⁰ See *Vitronics Corp. v. Conceptronc, Inc.*, 90 F.3d 1576, 1584 (Fed. Cir. 1996) (allowing extrinsic evidence to help the court come to the proper understanding of claims but not to contradict intrinsic evidence or vary the scope of the claims) (internal quotations omitted).

⁵¹ Craig E. Countryman, *Area Summaries: 2015 Patent Decisions of the Federal Circuit*, 65 AM. U.L. REV. 769, 776 (2016).

⁵² Peter Lee, *The Supreme Assimilation of Patent Law*, 114 MICH. L. REV. 1413, 1431 (2016).

⁵³ Countryman, *supra* note 51, at 780.

⁵⁴ See *Markman v. Westview Instruments, Inc.*, 517 U.S. 370, 376 (1996).

construction.⁵⁵ The ultimate claim interpretation remains a legal determination, and is subject to *de novo* review.⁵⁶ In his dissent, Justice Thomas noted that this two-standard review would hinder uniformity that is so desired in the patent system.⁵⁷ He noted that prior cases construing the same claim would not necessarily bind later interpretations.⁵⁸ Justice Thomas forewarned that the two-standard review would encourage gaming on appeal as victors at the district court would seek to capitalize on the clear error standard by arguing that the district court made many fact-findings, while the loser would argue that there were no fact-findings and the Federal Circuit should apply *de novo* review.⁵⁹ Finally, he feared that the two-standard review would attenuate the line between fact and law “result[ing] in fewer claim construction decisions receiving precedential effect, thereby injecting uncertainty into the world of invention and innovation.”⁶⁰

1. Appellate Review of Patent Trial and Appeal Board Constructions

As stated in the AIA, the Federal Circuit has appellate jurisdiction over final written decisions made by the Board in IPRs, PGRs, and CBMs.⁶¹ Because IPRs have been the most popular post-grant proceeding at the Patent Office, this paper will proceed using IPRs as a representative of Patent Office post-grant proceedings.

In *In re Cuozzo Technologies*, the Federal Circuit reviewed the Patent Office’s claim construction standard and the Board’s final determination.⁶² In that case, the Federal Circuit affirmed the Board’s use of the BRI standard to

⁵⁵ See *Teva Pharms. U.S.A., Inc. v. Sandoz, Inc.*, No. 13-854, slip op. at 1–2 (U.S. Jan. 20, 2015).

⁵⁶ See *id.*

⁵⁷ See *id.* at 14 (Thomas, J., dissenting).

⁵⁸ See *id.*

⁵⁹ *Id.* at 15.

⁶⁰ *Teva Pharms. U.S.A., Inc.*, No. 13-854, slip op. at 15.

⁶¹ See 35 U.S.C. §§ 319, 329 (2012).

⁶² See *In re Cuozzo Speed Techs., LLC*, 793 F.3d 1271, 1271 (Fed. Cir. 2015).

construe claims in IPRs.⁶³ There, the panel, consisting of Judges Newman, Cleverger and Dyk, relied on the Patent Office's hundred-year history of using the BRI standard in various proceedings, as well as the AIA's grant of authority to the Patent Office to use its discretion to promulgate rules.⁶⁴ The panel stated that the Federal Circuit "has approved of the broadest reasonable interpretation standard in a variety of proceedings, including initial examinations, interferences, and post-grant proceedings such as reissues and reexaminations. Indeed, that standard has been applied in every PTO proceeding involving unexpired patents."⁶⁵

On appeal in *Cuozzo Speed Technologies*, the Supreme Court held that the Patent Office was authorized by statute to regulate the IPR proceedings and enact the BRI standard for those proceedings.⁶⁶ The Court reasoned that the BRI standard is consistent with other Patent Office proceedings involving claim construction, and that it protects the public from overbroad patent protection by encouraging narrow claim drafting.⁶⁷ Interestingly, the Court acknowledged that the BRI standard in an IPR proceeding and the "ordinary meaning standard" at the district court level "may produce inconsistent results and cause added confusion."⁶⁸ The Court responded that the prospect "has long been present in our patent system," but that "the possibility of inconsistent results is inherent to Congress' regulatory design."⁶⁹

Similarly, as with other appellate courts' review of agency decisions, factual determinations contained within the Board's final written decisions are reviewed by the Federal Circuit for substantial evidence, and the ultimate issue of claim construction is reviewed *de novo*.⁷⁰ Claim construction is typically

⁶³ *Id.* at 1276–1280, *aff'd*, *Cuozzo Speed Techs., LLC v. Lee*, No. 15-446, slip op. at 20 (U.S. June 20, 2016).

⁶⁴ *Id.* at 1276, 1278.

⁶⁵ *Id.* at 1276.

⁶⁶ *Cuozzo Speed Techs.*, No. 15-446, slip op. at 12–13.

⁶⁷ *Id.* at 19.

⁶⁸ *Id.*

⁶⁹ *Id.*

⁷⁰ *See In re Cuozzo Speed Techs., LLC*, 793 F.3d 1268, 1280 (Fed. Cir. 2015).

viewed as a question of law, although underlying facts are reviewed for substantial evidence.⁷¹

2. Appellate Review of District Court Constructions

In *Teva Pharmaceuticals USA, Inc. v. Sandoz, Inc.*, the Supreme Court reviewed the deference that the Federal Circuit should provide to a factual finding relating to claim construction made by a district court.⁷² There, the Court found that Federal Rule of Civil Procedure 52(a)(6), which states that the applicable appellate standard of review for findings of fact made by lower trial courts is clear error, should be applicable to findings of fact made by a lower trial court in the course of construing claims.⁷³ This ruling clarified the previous claim construction standards set by *Markman*, which merely held that the ultimate determination of a claim construction was a question of law that was reviewed *de novo* by appellate courts, but at the same time, did not create an exemption to the general rule that appellate courts review factual findings by lower courts for clear error.⁷⁴ Thus, facts found during district court claim constructions are reviewed for clear error, while the ultimate issue of claim construction, a legal issue, is reviewed *de novo*.

D. Issue of Concurrent Jurisdiction in Claim Constructions

The advent of post-grant proceedings before the PTAB outlined in the AIA conflated the roles of the Patent Office and federal courts. Previously, the patent system was virtually bifurcated, with the Patent Office handling all issues related to the prosecution of a patent before the patent was granted, while post-grant procedures, namely infringement and invalidation litigation, occurred in federal courts.⁷⁵ Since the passage of the AIA, post-grant proceedings to invalidate a patent, which require construing the claims of the patent in question, now also occurs before the Patent Office.⁷⁶ Because there is a discrepancy

⁷¹ *Id.*

⁷² See *Teva Pharms. U.S.A., Inc. v. Sandoz, Inc.*, No. 13-854, slip op. at 1 (U.S. Jan. 20, 2015).

⁷³ See *id.* at 1–2; see also FED. R. CIV. P. 52(a)(6).

⁷⁴ See *Teva Pharms. U.S.A., Inc.*, No. 13-854, slip op. at 6–7.

⁷⁵ See Whitworth, *supra* note 8, at 37.

⁷⁶ See *id.* at 23.

between the standards for claim construction applied in the Patent Office, which uses BRI, and the federal courts, which uses ordinary and customary meaning under *Phillips*, a number of potential issues can arise.

It is possible that the differing standards will result in inconsistencies of patent validity decisions stemming from differing claim constructions. Alternatively, the Patent Office and district court may come to the same constructions despite the differing standards. Finally, it is possible that one of the two venues, either the district court or the PTAB, will adopt the other's claim construction. This potential for inconsistent constructions, however, has created a system in which patent owners and alleged infringers race to the Federal Circuit to appeal an adverse decision first. The race stems from the different standards of review given to the district court and Board's constructions.

III. ANALYSIS

As explained above, there are two major scenarios that can result when a patent is involved in proceedings both in district court, often an infringement proceeding, and before the Patent Office, often an attempt to invalidate through an IPR. The first scenario is that both the district court and the Board arrive at the same or exceedingly similar constructions of the claims. This may happen in one of three ways: First, the Board may adopt the district court's construction of the terms; second, a district court may adopt the Board's construction of the claims; third, the Board and district court judge may arrive at the same constructions for the same or differing reasons. A second scenario that may result from concurrent proceedings in district court and at the Patent Office is that the two bodies may arrive at differing or even opposite constructions. It is in these cases that a race to the Federal Circuit for review of the adverse construction ensues.

A. *Identical PTAB and District Court Constructions*

Often the Board adopts a construction previously issued by the district court in a *Markman* order for an infringement case.⁷⁷ One example of this occurred in *Google v. Simpleair*.⁷⁸ The patent in question there was directed to "wired and non-wired data transmission communication systems" that "allows

⁷⁷ See *Google Inc. v. Simpleair Inc.*, No. CBM2014-00170, 2015 WL 331089, at *12 (P.T.A.B. May 13, 2014).

⁷⁸ See generally *id.*

users to be notified of information anywhere and at any time.”⁷⁹ After being sued in the Eastern District of Texas, Google filed a petition requesting CBM review of Simpleair’s asserted patent.⁸⁰ Typically, in CBM review, the Board interprets claims “according to the broadest reasonable construction in light of the specification of the patent in which they appear.”⁸¹ By the time the Board began claim construction during CBM review, the Eastern District of Texas had previously construed several terms of the patent in question.⁸² The Board then adopted the District Court’s constructions, stating, “upon considering the District Court’s claim construction order, we determine that the construction of each of these claim terms is consistent with its broadest reasonable interpretation in light of the Specification. Accordingly . . . we adopt the District Court’s constructions of the claim terms”⁸³

Similarly, in *Kyocera v. Softview*, the Board adopted the District of Delaware’s constructions of patent claims directed to “a browser that extends the web to mobile devices by supporting full-page browsing with zoom and pan . . . to describe web content.”⁸⁴ The Board stated that they would construe claim terms as “they were construed by the district court in co-pending litigation.”⁸⁵

Occasionally, the Board and district court arrive at the same conclusion in their constructions despite using completely different reasoning.⁸⁶ In *Rackspace Hosting*, the patent in question concerned graphical user interfaces and display

⁷⁹ *Id.* at *3.

⁸⁰ *Id.* at *2.

⁸¹ *Id.* at *10 (citing 37 C.F.R. § 42.300(b)).

⁸² See *Google Inc.*, 2015 WL 331089 at *10.

⁸³ *Id.* at *12.

⁸⁴ *Kyocera Corp. Motorola Mobility LLC v. Softview LLC*, Nos. IPR2013-00004, IPR2013-00257, 2014 WL 1382058, at *4 (P.T.A.B. Mar. 27, 2014).

⁸⁵ *Id.* at *7.

⁸⁶ Compare *Rackspace Hosting, Inc. v. Rotatable Techs. LLC*, No. IPR2013-00248, 2013 WL 8595952, at *8–9 (P.T.A.B. Oct. 1, 2013), with *Rotatable Techs. LLC v. Nokia*, No. 2:12-CV-265-JRG, 2013 WL 3992930, at *7 (E.D. Tex. Aug. 2, 2013).

methods for selectively rotating windows on a computer display.⁸⁷ There, the Board proposed claim constructions that were previously defined by the Eastern District of Texas.⁸⁸ Both the Board and the Eastern District of Texas arrived at largely the same constructions, but did so using different methods of analysis.⁸⁹ The Board came to its conclusion based on the antecedent basis required of the claims, whereas the Eastern District of Texas relied on prosecution file history and used the patentee's admissions that the term provided the antecedent basis for other claim language to distinguish the claim over the art.⁹⁰ For another term, the Eastern District of Texas looked to the specification and determined that one of ordinary skill in the art would have understood the term in context, whereas the Board used a technical dictionary to define the term in question.⁹¹ Occasionally, the Federal Circuit grants stays of the pending district court litigation—prior to claim construction, but until the pending Patent Office proceeding is resolved—to allow the district courts and the Board to benefit from one another's constructions.⁹²

B. *Different PTAB and District Court Constructions*

There are also occasions in which the Board and the district courts come to different conclusions during the claim construction process. In *Vibrant Media Inc. v. General Electric*, a key issue during the claim construction was whether specific embodiments limited a claim term.⁹³ On one hand, the Delaware District Court found, during its construction of the patent claims, that the terms

⁸⁷ *Rackspace Hosting, Inc.*, 2013 WL 8595952, at *3.

⁸⁸ *Id.* at *8–18; Jacob Oyloe, *Claim Constructions in PTAB vs. District Court*, LAW360 (Oct. 6, 2014), <http://www.law360.com/articles/581715/claim-constructions-in-ptab-vs-district-court>.

⁸⁹ *See Oyloe, supra* note 88.

⁹⁰ *See id.*

⁹¹ *See id.*

⁹² *See Benefit Funding Sys. LLC v. Advance Am. Cash Advance Ctrs. Inc.*, 767 F.3d 1383, 1384–85 (Fed. Cir. 2014) (finding that a stay of infringement litigation was warranted pending PTAB resolution of CBM review).

⁹³ *See Vibrant Media, Inc. v. General Elec. Co.*, No. IPR2013-00170, 2013 WL 8595515, at *6 (P.T.A.B. July 29, 2013).

construed were broader than the embodiments described in the specification.⁹⁴ On the other hand, the Board construed the claims to be limited by the embodiments described in the specification.⁹⁵

Another key example of where the Board and a district court disagreed on a claim construction that created a disparity in the outcomes of a district court case and a PTAB proceeding covering the same patent was *Versata v. SAP America*.⁹⁶ These two related appeals, one from the district court judgment and another from a Board determination, concern a patent held by Versata directed to a computer-based hierarchical product-pricing engine.⁹⁷ After claim construction was completed, an Eastern District of Texas jury held for Versata, finding that its patent was directly infringed.⁹⁸ The Court of Appeals for the Federal Circuit affirmed the jury's verdict of infringement.⁹⁹ Shortly thereafter, SAP petitioned the Board for CBM review of the Versata patent.¹⁰⁰ The Board instituted CBM review, and, after construing the claims differently than the Eastern District of Texas, held some claims to be unpatentable for being directed to patent ineligible subject matter in violation of 35 U.S.C. § 101.¹⁰¹ On appeal, the Federal Circuit confirmed that the Board was permitted to use BRI to construe claims, despite the fact that those claims had been previously construed by the Eastern District of Texas using the *Phillips* standard of ordinary meaning.¹⁰² The Court also affirmed the Board's finding that some of Versata's claims were directed to unpatentable subject matter.¹⁰³ Thus, these results created a problem, wherein

⁹⁴ See Oylo, *supra* note 88.

⁹⁵ See *id.*

⁹⁶ Compare *Versata Software, Inc. v. SAP Am., Inc.*, 717 F.3d 1255 (Fed. Cir. 2013) with *Versata Dev. Grp., Inc. v. SAP Am., Inc.*, 793 F.3d 1306 (Fed. Cir. 2015).

⁹⁷ *Versata Software, Inc.*, 717 F.3d at 1258; *Versata Dev. Grp., Inc.*, 793 F.3d at 1315.

⁹⁸ See *Versata Software, Inc.*, 717 F.3d at 1259–60.

⁹⁹ *Id.* at 1256 (affirming the jury's infringement verdict and damages award).

¹⁰⁰ See *Versata Dev. Grp., Inc.*, 793 F.3d at 1310.

¹⁰¹ *Id.* at 1313.

¹⁰² See *id.* at 1328.

¹⁰³ See *id.* at 1333.

Versata's previous award of damages for SAP's infringement of its patent became unenforceable, as the patent's claims were held invalid as being unpatentable.¹⁰⁴

IV. CONCLUSION

District courts construe claims by giving terms their plain and ordinary meaning.¹⁰⁵ As part of this construction, a district court will assess the intrinsic evidence and may or may not rely on extrinsic evidence.¹⁰⁶ On review at the Federal Circuit, any underlying factual findings, such as which expert is better qualified to testify as to a particular meaning, are reviewed for clear error.¹⁰⁷ Any legal conclusion, such as the ultimate claim construction, is reviewed *de novo*.¹⁰⁸

The Board construes claims by applying the BRI of claim terms in light of the specification.¹⁰⁹ While the ultimate claim construction is a legal question that is reviewed on appeal under the same *de novo* standard as from a district court, any factual findings are reviewed under the substantial evidence standard.¹¹⁰ On appeal, the Federal Circuit will apply the BRI standard within these claim construction constructs and will apply these appellate review standards.¹¹¹

For district court litigation, the court is often assessing patent validity and infringement. At the Board proceedings, the Board is only assessing validity.¹¹² When the district court's claim construction differs from the Board's interpretation due to the differing claim construction standards, this injects uncertainty. For example, a district court may construe a term to mean X based

¹⁰⁴ See *id.* at 1336.

¹⁰⁵ See *Phillips v. AWH Corp.*, 415 F.3d 1303, 1312 (Fed. Cir. 2005) (en banc).

¹⁰⁶ *Id.* at 1317.

¹⁰⁷ See *Teva Pharms. U.S.A., Inc., v. Sandoz, Inc.*, 135 S. Ct. 831, 838 (2015).

¹⁰⁸ *Id.* at 841.

¹⁰⁹ See *Versata Dev. Grp., Inc. v. SAP Am., Inc.*, 793 F.3d 1306, 1327 (Fed. Cir. 2015).

¹¹⁰ *Id.* at 1336.

¹¹¹ See *Cuozzo Speed Techs., LLC v. Lee*, No. 15-446, slip op. at 17 (U.S. June 20, 2016).

¹¹² *Id.* at 5.

on the plain and ordinary meaning standard, and finds that the patent remains valid and infringed. If the Board, applying the broadest reasonable interpretation, construes a term to mean Y and thus the patent is invalid, the costly district court litigation may be rendered irrelevant.¹¹³ Alternatively, a patent that survives Board review is also likely to prevail in the district court proceeding. Nonetheless, it is possible that the district court construes a claim term differently from the Board and finds the patent invalid or not infringed.

After *Cuozzo Speed Technologies* and *Teva*, litigants must consider four standards: First, under *Cuozzo*, the Board will construe claims under the BRI standard consistent with the specification.¹¹⁴ Second, the Federal Circuit will review any fact finding within the Board's claim construction for substantial evidence and will review any legal determination *de novo*.¹¹⁵ Third, at the district court, the court will construe claim terms by giving them their plain and ordinary meaning.¹¹⁶ Fourth, under *Teva*, the Federal Circuit will review any fact finding within the district court's claim construction for clear error, and will review any legal determination *de novo*.¹¹⁷

¹¹³ See generally *Fresenius USA, Inc. v. Baxter Int'l, Inc.*, 721 F.3d 1330 (Fed. Cir. 2013). There, Fresenius, a manufacturer of hemodialysis machines, sued Baxter in 2003 in the Northern District of California for declaratory judgment stating that three of Baxter's patents were invalid. After numerous decisions and appeals, in 2012, the district court reached a final judgment, holding Baxter's patents were valid and that Fresenius infringed. While the district court litigation was ongoing, a third party filed an *ex parte* reexamination with the Patent Office. In March 2010, the Board of Patent Appeals and Interferences ("BPAI") affirmed an examiner's determination that the relevant claims of the Baxter patent would have been obvious in light of prior art overlooked in the initial proceeding. On appeal, the Federal Circuit found that because the district court's final judgment related only to liability and still left open the issue of damages, it could affirm the BPAI's determination that the Baxter patent was invalid. The Court then ordered that the district court's judgment be vacated with instructions to dismiss the case.

¹¹⁴ See *id.* at 13.

¹¹⁵ See *Versata Dev. Grp., Inc.*, 793 F.3d at 1336.

¹¹⁶ See *Phillips v. AWH Corp.*, 415 F.3d 1303, 1314 (Fed. Cir. 2005) (en banc).

¹¹⁷ See *Teva Pharms. U.S.A., Inc. v. Sandoz, Inc.*, 135 S. Ct. 831, 841 (2015).

The combination of varying standards and different procedural timelines forces litigants to prepare for several contingencies. As mentioned above, even a victory at the district court level can be rendered naught by a subsequent finding of invalidity at the Board. An even stranger situation can arise when the litigants appeal both the Board's decision and the district court's decision to the Federal Circuit. Because the Federal Circuit will apply different standards of claim construction on review, as well as different standards of review for the factual findings, the Federal Circuit could issue anomalous opinions upholding both the district court's finding of validity and infringement while also upholding the Board's decision of invalidity. Alternatively, the court may hold the first case until the second is briefed, and then hear both cases together with a likely result of a claim construction that is viable under both standards of review.

**IMPACT OF TEVA ON ITC INVESTIGATIONS:
THE ROLE OF EXPERTS AT MARKMAN HEARINGS**

*Jim Adduci, James Ton-that, & Jack DaSilva**

I.	INTRODUCTION	660
II.	MARKMAN HEARINGS AT THE INTERNATIONAL TRADE COMMISSION	662
	A. <i>Analysis of ITC Markman Hearings</i>	663
	B. <i>The Costs and Benefits of Markman Hearings at the ITC</i>	666
III.	HOW MUCH DEFERENCE DOES THE FEDERAL CIRCUIT OWE ITC CLAIM CONSTRUCTION?	668
IV.	LEVERAGING EXPERT TESTIMONY AT MARKMAN HEARINGS	670
V.	JUDICIAL OUTLOOK	674
VI.	CONCLUSION	676

* © 2016 James Adduci, Partner at Adduci, Mastriani & Schaumberg, LLP. The views and opinions expressed in this article are those of the author and do not necessarily reflect those of the firm or its clients. James Ton-that, Associate at Adduci, Mastriani & Schaumberg, LLP. Jack DaSilva, The George Washington University School of Law '16. Thank you to all panelists who participated in the American Intellectual Property Law Association *Quarterly Journal's* Spring 2016 Symposium for your insightful discussions.

I. INTRODUCTION

Nearly two decades ago, the United States Supreme Court held in *Markman v. Westview Instruments* that judges, and not juries, should construe patent claims.¹ Ever since, separate claim construction hearings (“*Markman* hearings”) have occurred with increasing frequency at the United States International Trade Commission (“ITC” or “Commission”).² During *Markman* hearings, the parties present arguments and evidence demonstrating the validity of a particular interpretation of certain terms or claims of the patents-in-dispute prior to trial on the merits of the dispute.³ In the ITC, as in district courts, claim construction is the most critical issue in many patent disputes.⁴ Moreover, claim construction is determinative of other important litigation issues such as infringement, validity, enforceability, enablement, and remedies.⁵

At the ITC, claim construction is uniquely significant because the ITC is the only forum awarding injunctive-type relief *as a matter of right*, after the Supreme Court ruling in *eBay v. MercExchange*.⁶ In *eBay*, the Supreme Court

¹ *Markman v. Westview Instruments, Inc.*, 517 U.S. 370, 388 (1996).

² See Electronic Document Information System (EDIS), UNITED STATES INTERNATIONAL TRADE COMMISSION, <https://edis.usitc.gov/edis3-external/app> (follow “Search” hyperlink; then follow “Search Investigations” hyperlink; then search “investigation number” for “970-485”) [hereinafter EDIS Search Results]. Authors compiled information from these investigations into a table analyzing the length of each stage of the investigation, including days from institution to the *Markman* hearing, the number of days of trial, and the average length of various phases of investigations by year. This table is on file with the authors.

³ See Gwendolyn Dawson, *Matchmaking in the Realm Of Patents: A Call for the Marriage of Patent Theory and Claim Construction Procedure*, 79 TEX. L. REV. 1257, 1269–70 (2001).

⁴ See Audio tape: Steven Anzalone, Remarks at AIPLA Quarterly Journal Symposium (Mar. 18, 2016) (on file with author) (stating that claim constructions may be even more important at the ITC than district court, because 40 percent of investigations go to trial, while only 2-3 percent of district court cases proceed to trial).

⁵ See Peter S. Menell et al., *Patent Claim Construction: A Modern Synthesis and Structured Framework*, 25 BERKELEY TECH. L.J. 713, 714 (2010).

⁶ See Colleen V. Chien & Mark A. Lemley, *Patent Holdup, the ITC, and the Public Interest*, 98 CORNELL L. REV. 1, 14 (2012); see also *eBay Inc. v. MercExchange, LLC*, 547 U.S. 388, 391 (2006) (requiring showing of (1) irreparable injury; (2)

terminated the longstanding district court practice of awarding injunctive relief as a remedy for patent infringement without requiring any additional showing that equitable relief was warranted.⁷ At the ITC, however, failure to provide the additional showing required in district courts does not prevent the issuance of exclusionary remedies for unfair importation practices.⁸ Since the Supreme Court decision *eBay* in 2006, the number of ITC investigations instituted per year (on average) has increased.⁹ The heightened standard for awarding injunctions in district court, and this standard's inapplicability to investigations at the ITC, is one likely reason for the increased number of ITC investigations.

In contrast to district court judges, which have held *Markman* hearings with increasing frequency in the wake of *Markman v. Westview Instruments*,¹⁰ ITC Administrative Law Judges ("ALJs") did not hold *Markman* hearings in any form until 2003.¹¹ This disparity between ITC and district court practice arises from a few critical distinctions: (1) there is no jury to segregate from claim construction; (2) the ITC has a much tighter timetable for Section 337 investigations than district court patent litigation; and (3) *Markman* orders are not subject to immediate Commission review.¹² Despite these reasons, ALJs are now holding *Markman* hearings with increasing regularity.¹³

inadequacy of legal remedies; (3) hardship warranting equitable remedy; and (4) public interest after proving infringement to award injunctive relief, before a district court can award injunctive relief).

⁷ See *eBay Inc.*, 547 U.S. at 392–93.

⁸ See *Spansion, Inc. v. Int'l Trade Comm'n*, 629 F.3d 1331, 1358–59 (Fed. Cir. 2010).

⁹ Section 337 Statistics, UNITED STATES INTERNATIONAL TRADE COMMISSION, https://www.usitc.gov/press_room/337_stats.htm (last visited Oct. 2, 2016) (indicating that 31 investigations were instituted in 2009; the high was in 2011 with 69 instituted investigations).

¹⁰ See *Dawson*, *supra* note 3, at 1269.

¹¹ EDIS, *supra* note 2; see also MICHAEL J. MCKEON ET AL., ITC UPDATE: REMEDIES, ENFORCEMENT & OTHER DEVELOPMENTS 25 (2009) ("Judge Terrill was the first to hold an interim *Markman* hearing and issue a construction order in September 2003.").

¹² See MCKEON ET AL., *supra* note 11, at 25.

¹³ See EDIS Search Results, *supra* note 2.

In January 2015, the Supreme Court, in *Teva Pharmaceuticals USA v. Sandoz*, modified the standard of review for claim construction,¹⁴ and, in so doing, may have significantly altered ALJs' motivations to hold *Markman* hearings, as well as the format of those hearings. In *Teva*, the Supreme Court recognized that elements of a court's claim construction may have factual underpinnings which "must be reviewed for clear error on appeal[.]" instead of *de novo*.¹⁵ An example of one such factual underpinning is the use of expert testimony during *Markman* hearings.¹⁶ Thus, by relying on expert testimony, ALJs could potentially insulate their claim constructions from *de novo* review by the United States Court of Appeals for the Federal Circuit ("Federal Circuit").¹⁷

This article explores how *Teva* incentivizes ALJs to hold *Markman* hearings and why ALJs may be more willing to allow, and rely on, expert testimony at *Markman* hearings.

II. MARKMAN HEARINGS AT THE INTERNATIONAL TRADE COMMISSION

Markman hearings at the ITC differ from district court hearings in that ALJs exercise more discretion than their district court counterparts when determining whether,¹⁸ when,¹⁹ and how²⁰ to hold *Markman* hearings. Moreover,

¹⁴ See *Teva Pharms. USA, Inc. v. Sandoz, Inc.*, 135 S. Ct. 831, 835 (2015) ("We hold that the appellate court must apply a 'clear error,' not a *de novo*, standard of review.").

¹⁵ See *id.* at 841.

¹⁶ See Ryan Davis, *4 Lessons from a Year of Claim Construction Under Teva*, LAW360 (Jan. 25, 2016, 5:41 PM), <http://www.law360.com/articles/747198/4-lessons-from-a-year-of-claim-construction-under-teva>.

¹⁷ See *id.* (stating that "the promise of getting deference for factual findings under [*Teva*] may entice some judges to hear more extrinsic evidence").

¹⁸ See Certain Protective Cases for Electronic Devices and Components Thereof, Inv. No. 337-TA-955 at 11 (USITC Apr. 30, 2015) [hereinafter Judge Bullock's Ground Rules] (Order No. 2) (stating that *Markman* hearings are held at ALJ's discretion if ALJ "determines that a *Markman* hearing would be beneficial to the Investigation"); Certain Radio Frequency Identification ("RFID") Products and Components Thereof, Inv. No. 337-TA-979 at 7 (USITC Jan. 15, 2016) [hereinafter Judge McNamara's Ground Rules] (Order No. 2) (stating "the Administrative Law Judge may order early claim construction, or alternatively, may provide the parties with an opportunity to submit proposals requesting early claim construction").

ALJ *Markman* claim constructions are not subject to interlocutory review.²¹ Each ALJ exercises their discretionary authority by issuing Ground Rules describing procedural and substantive guidelines regarding their investigation management priorities, including their stance on the use of *Markman* hearings.²² ALJs presumably vary in their individual assessment of the benefits and drawbacks of *Markman* hearings, and this leads to variant *Markman* practices among ALJs.

A. *Analysis of ITC Markman Hearings*

Despite the ALJs' early aversion to utilizing *Markman* hearings, claims are now frequently construed in advance of the evidentiary hearing at a separate *Markman* hearing.²³ Most of these hearings were held in the past six years.²⁴ ALJ

¹⁹ See 19 C.F.R. § 210.51(a) (2016) (imbuing ALJs with control over and responsibility for setting procedural schedule and timing of investigation).

²⁰ See 19 C.F.R. § 201.13(g) (providing for witness questioning at public hearing, without limitations unique to *Markman* hearings); *id.* § 210.36(d) (stating that parties have right to present evidence "essential to a fair hearing[,] without limitation on expert testimony at *Markman* hearings); see also *Certain Touchscreen Controllers and Products Containing the Same*, Inv. No. 337-TA-957 at 26 (USITC May 26, 2015) [hereinafter Judge Essex's Ground Rules] (Order No. 2) (stating that "expert opinion testimony on technical issues may be offered by the parties" without limitations on *Markman* hearings).

²¹ In the Matter of: *Certain Mobile Telephones and Wireless Communication Devices Featuring Digital Cameras, and Components Thereof*; Notice of Commission Determination That June 22, 2010, Initial Determination is an Order Rather Than an Initial Determination, 75 Fed. Reg. 65,654 (Oct. 26, 2010) (stating that ITC rules do "not include claim construction in the list of issues that must be decided in the form of an initial determination").

²² See, e.g., Judge Bullock's Ground Rules, *supra* note 18, at 11; Judge McNamara's Ground Rules, *supra* note 18, at 8; Judge Essex's Ground Rules, *supra* note 20, at 17.

²³ See, e.g., EDIS Search Results, *supra* note 2; *Certain Table Saws Incorporating Active Injury Mitigation Technology And Components Thereof*, Inv. No. 337-TA-965 at 4-5 (USITC Feb. 9, 2016) [hereinafter *Certain Table Saws*] (Order No. 7).

²⁴ See EDIS Search Results, *supra* note 2.

Delbert Terrill held the first ITC *Markman* hearing on September 9, 2003.²⁵ In contrast, district courts held *Markman* hearings as early as 1995²⁶ in response to the Federal Circuit's *en banc* rehearing of *Markman v. Westview Instruments*,²⁷ but before the Supreme Court had the opportunity to affirm the Federal Circuit's prescribed practice.²⁸ Empirical analysis in this Section suggests that the ITC's reluctant utilization of *Markman* hearings likely resulted from time constraints on an investigation's procedural schedule.

ALJs have held *Markman* hearings in two disparate formats: (1) tutorials held immediately prior to the evidentiary hearing, and (2) full claim construction hearings held well in advance of the evidentiary hearing.²⁹ The tutorial format, comprising just one stage of a full and continuous hearing (evidentiary hearings routinely last several days to two weeks), does not provide parties the opportunity to draft infringement arguments based on an ALJ's claim construction prior to the evidentiary hearing.³⁰ In contrast, a full claim construction hearing, held in advance of the evidentiary hearing, gives ALJs time to inform the parties of their constructions through a *Markman* order.³¹ But *Markman* hearings also require additional time during an already crowded litigation schedule. The balance of these time demands likely informs each ALJ's use of *Markman* hearings.

Immediately after ALJ Delbert Terrill held the first *Markman* tutorial in 2003, few ALJs added any version of a *Markman* hearing to their procedural

²⁵ See MCKEON ET AL., *supra* note 11, at 25; see Certain Home Vacuum Packaging Mach., Inv. No. 337-TA-496 at 1 (USITC Sept. 9, 2003) [hereinafter Certain Home Vacuum Packaging] (hearing transcript).

²⁶ See, e.g., *Moll v. Northern Telecom, Inc.*, No. 94-5451, 1996 WL 11355, at *1 (E.D. Pa. Jan. 3, 1996), *aff'd*, 119 F.3d 17 (Fed. Cir. 1997).

²⁷ See *Markman v. Westview Instruments, Inc.*, 52 F.3d 967, 967 (Fed. Cir. 1995) (*en banc*), *aff'd*, 517 U.S. 370 (1996).

²⁸ *Markman v. Westview Instruments, Inc.*, 517 U.S. 370, 371, 391 (1996).

²⁹ See EDIS Search Results, *supra* note 2; see also Tony V. Pezzano & Kent R. Stevens, *ITC Judge E. James Gildea Joins the Ranks of ITC Judges Holding Pre-Trial Markman Hearings*, CADWALADER IP INSIGHT, Sept. 2010, at 27.

³⁰ See Andrew Y. Piantnicia, *The Road to a Successful Markman Hearing*, LAW360 (May 22, 2008, 12:00 AM), <http://www.law360.com/articles/57110/the-road-to-a-successful-markman-hearing>.

³¹ See ROBERT C. KAHRL, *PATENT CLAIM CONSTRUCTION* § 12.02[A] (2d ed. 2015).

schedules.³² Starting in 2010, however, *Markman* hearings became much more common.³³ That year, ALJs held almost as many *Markman* hearings as in the previous six years combined, and now, *Markman* hearings remain a frequent occurrence.³⁴ The prevalence of *Markman* hearings suggests that many ALJs and litigants value these hearings more than the time lost from adding a major event to their procedural schedules.

Because it is a major event, *Markman* hearings prolong procedural schedules. *Markman* hearings occur an average of 182 days after institution, and evidentiary hearings occur on average 138 days after the *Markman* hearing, or a total of 320 days after institution.³⁵ Those investigations without *Markman* hearings proceed to an evidentiary hearing 295 days after institution, on average.³⁶ *Markman* hearings typically last one day, and evidentiary hearings following *Markman* hearings average 6.38 days, for a total of 7.38 days, on average, of oral argument.³⁷ In contrast, evidentiary hearings in investigations without *Markman* hearings average 5.8 days.³⁸ Thus, adding a *Markman* hearing to the rushed litigation schedule at the ITC quantifiably lengthens the time from institution to trial and the length of trial.³⁹

This extension is unsurprising because discovery must be bifurcated, time must be allotted for pre- and post-*Markman* briefing, and time must be devoted by the ALJ for the drafting and issuance of a *Markman* order. Notably, based on our research, familiarity with *Markman* practice does not lead necessarily to an earlier evidentiary hearing date.⁴⁰ For example, the ALJs most experienced with *Markman* hearings scheduled evidentiary hearings even later

³² See EDIS Search Results, *supra* note 2.

³³ See *id.*

³⁴ See *id.* (showing that ALJs held 9 *Markman* hearings in 2010, none in 2009, 2 in 2008, 2 in 2007, 1 in 2006, 1 in 2005, and 3 in 2004).

³⁵ See *id.*

³⁶ See *id.*

³⁷ See EDIS Search Results, *supra* note 2.

³⁸ See *id.*

³⁹ See *id.* (showing that average days to trial in investigations having a *Markman* hearing is 320 and trial length is 6.38 days, while only 295 days elapse for investigations not holding a *Markman* hearing and trial length is 5.82 days).

⁴⁰ See *id.*

on average than their counterparts in investigations utilizing *Markman* hearings.⁴¹ Therefore, the delayed hearing dates and longer evidentiary hearings were likely not the artifact of any unfamiliarity with *Markman* practice. In investigations with certain characteristics, such as multiple patents or technical language, the benefits accruing from *Markman* hearings likely outweigh the absence of interlocutory review and the additional time expended.

B. *The Costs and Benefits of Markman Hearings at the ITC*

Whether or not to hold a *Markman* hearing is an issue of some contention among ALJs and parties because of the balance of benefits and drawbacks afforded by *Markman* hearings, which are unique to each investigation.⁴² *Markman* hearings offer clarity with respect to the scope and meaning of the patents-in-suit. But, ITC litigation proceeds on a greatly-accelerated timetable, compared to district court litigation.⁴³ This accelerated schedule makes the addition of any litigation-style event challenging.

The benefits of *Markman* hearings include facilitating disposition of the investigation on summary determination, fostering settlement, and simplifying arguments at the evidentiary hearing.⁴⁴ Several investigations terminate after issuance of *Markman* orders and before the evidentiary hearing, likely as a result of unfavorable (or favorable depending on the party's point of view) claim constructions.⁴⁵ This lowers costs for litigants, reducing the time parties must devote to an investigation that otherwise would have proceeded through extensive discovery, motions practice, a hearing before an ALJ, and resolution of

⁴¹ See *id.* (showing that ALJ Bullock held 25 *Markman* hearings requiring 324 days on average to reach trial and that ALJ Pender held 18 *Markman* hearings requiring 329 days on average to reach trial).

⁴² Michael Newman et al., *Markman at the ITC and Its Effect on an Investigation*, GLOBAL IP MATTERS (Sept. 20, 2016), <https://www.globalipmatters.com/2016/09/20/markman-at-the-itc-and-its-effect-on-an-investigation>.

⁴³ See Note, *Recasting the U.S. International Trade Commission's Role in the Patent System*, 126 HARV. L. REV. 2337, 2350–51 (2013) [hereinafter *Recasting the USITC's Role*].

⁴⁴ See Timothy M. Salmon, *Procedural Uncertainty in Markman Hearings: When Will the Federal Circuit Show the Way*, 18 J. C.R. & ECON. DEV. 1031, 1037–38 (2004).

⁴⁵ See EDIS Search Results, *supra* note 2.

the dispute through a final initial determination.⁴⁶ Additionally, lowering costs for litigants would reduce the resources expended by the ITC.

Even when a *Markman* hearing does not result in summary determination or settlement, the parties and the ITC still benefit. After issuance of a *Markman* order, parties are only required to present evidence of infringement and invalidity based on one set of claim interpretations, instead of one for each party (and possibly a third presented by the Office of Unfair Import Investigations).⁴⁷ Theoretically, *Markman* orders also further dispute resolution by reducing preparatory expenses for the parties and allowing the parties to present more refined arguments to ALJs.⁴⁸

These benefits are counterbalanced by the unique scheduling constraints of the ITC. Specifically, *Markman* hearings add a major event to a time-sensitive litigation schedule, sometimes requiring extension of the target date.⁴⁹ Nevertheless, a *Markman* hearing could streamline proceedings. In the event that the Commission or the Federal Circuit reverses an ALJ's claim construction where the ALJ held a *Markman* hearing, a second evidentiary hearing may not be necessary because the parties could draft their briefs based on the claim construction rejected in that hearing.⁵⁰ Moreover, a hearing on remand may not be required at all if the Commission or the Federal Circuit affirms the ALJ's claim construction, saving the parties and the ITC time and money.⁵¹ In contrast, in the absence of a *Markman* hearing, the parties still may need to present evidence and arguments on infringement and invalidity based on multiple claim constructions at a hearing on remand.⁵²

Nonetheless, the drawbacks of *Markman* hearings are primarily based on the Federal Circuit's previous practice of reviewing claim constructions *de novo*,

⁴⁶ See *Cybor Corp. v. FAS Techs., Inc.* 138 F.3d 1448, 1475–76 (Fed. Cir. 1998).

⁴⁷ See Judge Bullock's Ground Rules, *supra* note 18, at 11, 25.

⁴⁸ See Edward Brunet, *Markman Hearings, Summary Judgment, and Judicial Discretion*, 9 LEWIS & CLARK L. REV. 93, 113 (2005).

⁴⁹ See Shaun R. Snader & Veronica S. Ascarrunz, *Trends: Claim Construction at the ITC*, LAW360 (Oct. 20, 2010, 5:19 PM), <http://www.law360.com/articles/200702/trends-claim-construction-at-the-itc> (see fn.2).

⁵⁰ See *id.*

⁵¹ See *id.*

⁵² See Salmon, *supra* note 44, at 1056–58.

which has resulted in high reversal rates of claim constructions from trial courts.⁵³ *Teva* has the potential to alter ALJs' cost-benefit calculus when considering whether to hold *Markman* hearings.

III. HOW MUCH DEFERENCE DOES THE FEDERAL CIRCUIT OWE ITC CLAIM CONSTRUCTION?

In *Teva*, the Supreme Court shook up *Markman* review by recognizing that claim constructions resting on factual underpinnings deserve greater deference, *i.e.*, review for clear error.⁵⁴ *Teva* ended nearly two decades of Federal Circuit claim construction review under the *de novo* standard.⁵⁵ Although *Teva* mandates that clear error is the appropriate standard of review for the factual underpinnings of a district court's claim construction, the Federal Circuit reviews *agency* factual findings not for clear error, as they do for district courts, but for substantial evidence.⁵⁶ Moreover, the Federal Circuit frequently bases its claim constructions on purely intrinsic evidence, avoiding *Teva's* edicts.⁵⁷ Despite the Federal Circuit's preference for intrinsic evidence, ALJs' factual findings in *Markman* hearings likely have as much, or possibly more, insulation from reversal on review at the Federal Circuit as district court claim constructions because of the more deferential substantial evidence standard of review.⁵⁸

⁵³ David L. Schwartz, *Pre-Markman Reversal Rates*, 43 LOY. L.A. L. REV. 1073, 1094–95 (2010) (stating that claim construction reversals or findings of error are as high as 38%).

⁵⁴ *Teva Pharms. USA, Inc. v. Sandoz, Inc.*, 135 S. Ct. 831, 838 (2015).

⁵⁵ See Kayvan Noroozi, *Teva v. Sandoz: SCOTUS Tells Federal Circuit to Raise Its Standards (of Review)*, NOROOZI PC (Jan. 29, 2015), <http://noroozi.la/teva-v-sandoz-with-deference-scotus-tells-federal-circuit-to-raise-its-standards-of-review/>.

⁵⁶ See *Motorola Mobility, LLC v. Int'l Trade Comm'n*, 737 F.3d 1345, 1348 (Fed. Cir. 2013); see also 5 U.S.C. § 706(2)(E) (2012).

⁵⁷ See, e.g., *Vasudevan Software, Inc. v. MicroStrategy, Inc.*, 782 F.3d 671, 676 (Fed. Cir. 2015); Stacey Cohen & William Casey, *1 Year Later, Teva Providing Less Certainty Than Expected*, LAW360 (Jan. 19, 2016, 12:50 PM), <http://www.law360.com/articles/651341/1-year-later-teva-providing-less-certainty-than-expected>.

⁵⁸ See generally Charles Sanders & Jonathan Auerbach, *How Teva Will Affect Section 337 Investigations*, LAW360 (Aug. 19, 2015, 10:14 AM), <http://www.law360.com/articles/689735/print?section=appellate>.

In *Teva*, the Supreme Court identified two reasons for mandating clear error review of factual findings inherent to claim construction: (1) Federal Rule of Civil Procedure 52(a)(6) requires clear error review of all factual findings, without exception; and (2) trial judges gain more familiarity than appellate judges with the specific scientific problems and principles necessary for claim construction.⁵⁹ The latter reason also applies to ALJs because they adjudicate Section 337 investigations similarly to trial judges' adjudication of patent suits. The Administrative Procedure Act ("APA"), however, governs ITC proceedings instead of the Federal Rules of Civil Procedure.⁶⁰

Although the Federal Rules of Civil Procedure do not apply to ITC adjudications,⁶¹ the APA supplies a similar standard of review for ITC adjudications.⁶² Under the APA, the Federal Circuit must "review[] the Commission's . . . factual findings for substantial evidence[,]"⁶³ while district court claim constructions receive deference in the absence of clear error.⁶⁴ Thus, the APA provides statutory support for applying deference to ITC determinations of fact during claim construction analogous to the statutory support provided by the Federal Rules of Civil Procedure for deference to district court fact-findings.

Although the Supreme Court has opined that the substantial evidence standard may be less rigorous than the clearly erroneous standard, "the difference is a subtle one—so fine that (apart from the present case) [the Court has] failed to uncover a single instance in which a reviewing court conceded that use of one standard rather than the other would in fact have produced a different outcome."⁶⁵ So, practically speaking, *Teva's* reasoning for granting deference to

⁵⁹ *Teva, Pharms. USA, Inc.*, 135 S. Ct. at 836–38.

⁶⁰ See 19 U.S.C. § 1337(c) (2012) ("[A] final determination of the Commission . . . may [be] appeal[ed] . . . to the . . . Federal Circuit . . . in accordance with chapter 7 of title 5."); see also Sanders & Auerbach, *supra* note 58.

⁶¹ Sanders & Auerbach, *supra* note 58.

⁶² 5 U.S.C. § 706(2)(E) (2012) (providing for substantial evidence standard of review).

⁶³ *Motorola Mobility, LLC v. Int'l Trade Comm'n*, 737 F.3d 1345, 1348 (Fed. Cir. 2013); see also 5 U.S.C. § 706(2)(E); Sanders & Auerbach, *supra* note 58.

⁶⁴ See *Teva Pharms. USA, Inc. v. Sandoz, Inc.*, 135 S. Ct. 831, 835 (2015).

⁶⁵ *Dickinson v. Zurko*, 527 U.S. 150, 153, 162–63 (1999).

district court claim constructions should extend to Federal Circuit review of ITC claim constructions.⁶⁶ Nevertheless, as discussed in further detail below, litigants are struggling to invoke *Teva's* deference at the Federal Circuit.

IV. LEVERAGING EXPERT TESTIMONY AT MARKMAN HEARINGS

In *Teva*, the Supreme Court provided practitioners and courts guidance by identifying situations that do and do not warrant deferential review.⁶⁷ Specifically, the *Teva* court advised that when details of a patent's "background science," "the meaning of a term in the relevant art," or expert credibility are in dispute, the Federal Circuit must review the trial court's factual findings for clear error.⁶⁸ Therefore, claim constructions that necessarily rely on these types of factual findings invoke *Teva's* deference on review. Moreover, when litigants provide expert testimony related to these factual findings, they invite the ALJ to base their claim construction on such extrinsic evidence, also triggering *Teva's* deference. Using expert testimony, however, may necessitate the addition of *even* more events to the ITC litigation schedule, altering the cost benefit analysis performed by ALJs.

Teva also recognizes that the Federal Circuit may still review *de novo* certain claim constructions arising from determinations of fact.⁶⁹ This recognition reflects the Federal Circuit's recent practice of applying the *de novo* standard of review whenever possible.⁷⁰ In several patent disputes since *Teva*, the Federal Circuit has avoided *Teva's* dictates by construing claims entirely on the basis of intrinsic evidence.⁷¹ The Federal Circuit's jurisprudence demonstrates that simply hearing expert testimony,⁷² discussing expert testimony,⁷³ or even relying

⁶⁶ See Sanders & Auerbach, *supra* note 58.

⁶⁷ See *Teva Pharms. USA, Inc.*, 135 S. Ct. at 840–42.

⁶⁸ *Id.* at 841.

⁶⁹ See *id.*

⁷⁰ See, e.g., *Info-Hold, Inc. v. Applied Media Techs. Corp.*, 783 F.3d 1262, 1265 (Fed. Cir. 2015); *Enzo Biochem, Inc. v. Applera Corp.*, 780 F.3d 1149, 1153 (Fed. Cir. 2015).

⁷¹ See *Shire Dev., LLC v. Watson Pharms., Inc.*, 787 F.3d 1359, 1364 (Fed. Cir. 2015); *Info-Hold*, 783 F.3d at 1265; *Enzo Biochem*, 780 F.3d at 1153; Sanders & Auerbach, *supra* note 58.

⁷² See *Shire Dev.*, 787 F.3d at 1368.

⁷³ See *Info-Hold*, 783 F.3d at 1268.

on expert testimony may fail to ensure deferential review by the Federal Circuit.⁷⁴ Nonetheless, relying on expert testimony to construe a highly technical claim term in accord with the knowledge of those of skill in the art may require deferential review by the Federal Circuit.

Several recent Federal Circuit claim construction decisions further elucidate when the Federal Circuit rejects deferential review and how litigants can leverage *Teva*. Post-*Teva*, seven Federal Circuit opinions have reversed, and four opinions have affirmed, district court claim constructions despite the presence of extrinsic evidence.⁷⁵ Collectively, these cases demonstrate that the Federal Circuit will only invoke *Teva's* deference where lower courts clearly and definitively rely on extrinsic evidence to construe technical terms.

First, the mere act of hearing expert testimony does not necessitate deferential review under *Teva*. In *Shire Development*, the Federal Circuit rejected the appellee's argument that the District Court's construction deserved deference "because the district court 'heard' [expert witness] testimony during a *Markman* hearing"⁷⁶ The Federal Circuit reasoned that in the absence of any indication that the District Court made any factual findings underlying its constructions, *Teva's* deference does not apply.⁷⁷

⁷⁴ See *Enzo Biochem*, 780 F.3d at 1156.

⁷⁵ See, e.g., *CardSoft, LLC v. Verifone, Inc.*, 807 F.3d 1346, 1348 (Fed. Cir. 2015) (reversed); *Akamai Techs., Inc. v. Limelight Networks, Inc.*, 805 F.3d 1368, 1374, 1382 (Fed. Cir. 2015) (reversed); *Ethicon Endo-Surgery, Inc. v. Covidien, Inc.*, 796 F.3d 1312, 1323, 1338 (Fed. Cir. 2015) (reversed); *Lighting Ballast Control LLC v. Philips Elecs. N. Am. Corp.*, 790 F.3d 1329, 1338, 1342 (Fed. Cir. 2015) (affirmed); *TomTom, Inc. v. Adolph*, 790 F.3d 1315, 1322, 1329 (Fed. Cir. 2015) (reversed); *Cephalon, Inc. v. Abraxis Bioscience, LLC*, 618 F.App'x. 663, 665, 667 (Fed. Cir. 2015) (affirmed); *Shire Dev.*, 787 F.3d at 1361, 1368 (reversed); *EON Corp. IP Holdings LLC v. AT&T Mobility LLC*, 785 F.3d 616, 620, 624 (Fed. Cir. 2015) (affirmed); *Info-Hold*, 783 F.3d at 1265, 1269 (reversed); *Flexiteek Ams., Inc. v. Plasteak, Inc.*, 603 F.App'x. 994, 996–97, 999 (Fed. Cir. 2015) (affirmed); *Enzo Biochem*, 780 F.3d at 1153, 1157 (reversed).

⁷⁶ *Shire Dev.*, 787 F.3d at 1368.

⁷⁷ *Id.* at 1368 ("The Supreme Court held that we 'should review for clear error those factual findings that underlie a district court's claim construction.' The Court did not hold that a deferential standard of review is triggered any time a district court hears or receives extrinsic evidence. Here, there is no

Second, the extrinsic evidence offered to the trial court must be unquestionably extrinsic. In *TomTom*, the Federal Circuit rejected the accused infringer's assertion that the District Court's findings regarding inventor testimony comparing intrinsic evidence and prior art deserved deference under *Teva*.⁷⁸ The Federal Circuit held that intrinsic evidence remains intrinsic evidence even after an expert testifies regarding such evidence.⁷⁹ Similarly, in *Info-Hold*, the District Court relied on the notice of allowance cited by the patent-in-suit to determine what a claim term meant to a person of ordinary skill in the art.⁸⁰ The Federal Circuit declined to classify such a notice of allowance as either intrinsic or extrinsic evidence but declined to grant deferential review of the District Court's claim construction.⁸¹

Third, a trial court's reliance on extrinsic evidence must be proper and necessary to their claim construction. In *Teva*, on remand, the Federal Circuit accepted as not clearly erroneous the District Court's findings of fact supporting a legal conclusion, namely the meaning of a claim term in the context of the patents-in-suit.⁸² The Federal Circuit, however, stated that these factual findings did not grant *Teva's* deference to the District Court's ultimate determination of the meaning of a claim term because this determination remained a legal conclusion.⁸³ Instead, the Federal Circuit found that the prosecution history and the specification, *i.e.*, intrinsic evidence, properly resolved this determination.⁸⁴ Likewise, in *Enzo Biochem*, the Federal Circuit admitted that the District Court's interpretation of the specification, based on expert testimony, required review for clear error.⁸⁵ But, the Federal Circuit based its analysis on the totality of the

indication that the district court made any factual findings that underlie its constructions . . .").

⁷⁸ See *TomTom*, 790 F.3d at 1326.

⁷⁹ *Id.*

⁸⁰ *Info-Hold*, 783 F.3d at 1265.

⁸¹ *Id.* at 1266.

⁸² See *Teva Pharms. USA, Inc. v. Sandoz, Inc.*, 789 F.3d 1335, 1341–42 (Fed. Cir. 2015).

⁸³ *Id.* at 1342–44.

⁸⁴ *Id.* at 1342–43.

⁸⁵ *Enzo Biochem, Inc. v. Applera Corp.*, 780 F.3d 1149, 1156 (Fed. Cir. 2015).

specification and applied *de novo* review instead, stating that one factual finding did not override such intrinsic evidence.⁸⁶

Fourth, litigants will successfully trigger *Teva's* protection if they provide expert testimony to explain a term's meaning to those of skill in the art, *i.e.*, to "establish a usage of trade or locality."⁸⁷ In *Lighting Ballast*, on remand, the Federal Circuit found the District Court's consideration of expert testimony deserved deference because the evidentiary record supported the testimony⁸⁸ and the testimony directly answered the legal question-at-issue (connotation of structure under § 112 ¶ 6).⁸⁹ Absent other evidence to base a contrary claim construction upon, the Federal Circuit reviewed for clear error and deferred to the District Court's claim construction.⁹⁰ In *Cephalon*, the Federal Circuit acknowledged, "how the relevant scientific community understands [claim terms] is [] a question of fact reviewable for clear error."⁹¹ In that case, the District Court resolved the meaning of technical words primarily through extrinsic evidence—expert testimony and textbooks.⁹² The Federal Circuit agreed with the District Court's claim construction, again in the absence of contrary evidence⁹³. In *Flexiteek Americas*, the Federal Circuit affirmed the District Court's claim construction, because the expert declarations relied upon by the District Court agreed with figures in the patent's specification and statements made during a reexamination.⁹⁴ In doing so, the Federal Circuit implicitly deferred to the District Court's claim construction by noting that the specification provided no

⁸⁶ *Id.*

⁸⁷ *Teva Pharms. USA, Inc. v. Sandoz, Inc.*, 135 S. Ct. 831, 837–38 (2015) (quoting *Great Northern Ry. Co. v. Merchants Elevator Co.*, 259 U.S. 285, 292 (1922)).

⁸⁸ *Lighting Ballast Control LLC v. Philips Elecs. N. Am. Corp.*, 790 F.3d 1329, 1339 (Fed. Cir. 2015).

⁸⁹ *Id.* (citing *Rembrandt Data Techs., LP v. AOL, LLC*, 641 F.3d 1331, 1341 (Fed. Cir. 2011)).

⁹⁰ *Id.* at 1338–39.

⁹¹ *Cephalon, Inc. v. Abraxis Bioscience, LLC*, 618 F.App'x. 663, 665 (Fed. Cir. 2015).

⁹² *See id.*

⁹³ *See id.* at 665–67.

⁹⁴ *See Flexiteek Ams., Inc. v. Plasteak, Inc.*, 603 F.App'x. 994, 998 (Fed. Cir. 2015).

alternative definition of the claim term-at-issue.⁹⁵ In summary, these three cases demonstrate that the Federal Circuit is more likely to review for clear error disputes of highly technical issues, where the knowledge required for resolution is not “usually contained in the general storehouse of knowledge and experience.”⁹⁶

V. JUDICIAL OUTLOOK

Ultimately, the use of experts at *Markman* hearings will depend on the discretion of ALJs. Because expert testimony might necessitate the addition of *even* more events to the ITC litigation schedule, parties may need to depose testifying experts in advance of *Markman* hearings. The *Markman* hearings themselves may become longer than the usual single day⁹⁷ to accommodate cross-examination of these expert witnesses. On the other hand, some ALJs may decide to permit expert participation only in the form of concise, argument-free *Markman* tutorials. It is indisputable, however, that *Teva* will have a significant impact on judges and practitioners alike in the disposition of patent litigation.

Claim constructions may be the most important judicial action prior to trial in patent litigation. But the judiciary also is cognizant that patent litigation is expensive and *Markman* constructions suffer from a high reversal rate, leading to unpredictable claim scope.⁹⁸ Thus *Teva*, like every SCOTUS opinion pertaining to patent litigation, similarly may lead to an increase in litigation costs.

Nevertheless, *Teva* does not necessarily require judicial action that increases litigant costs because *Teva* is permissive and has only minor effects on current judicial practices. For example, judges already adhere to *Phillips*, which dissuades them from considering proffered extrinsic evidence unless the intrinsic evidence fails to inform the judge substantially of the claim term(s)-in-suit.⁹⁹

⁹⁵ See *id.* at 998.

⁹⁶ *Teva Pharms. USA, Inc. v. Sandoz, Inc.*, 135 S. Ct. 831, 838 (2015) (quoting *Graver Tank & Mfg. Co. v. Linde Air Products Co.*, 339 U.S. 605, 610 (1950)).

⁹⁷ See EDIS Search Results, *supra* note 2 (showing that all *Markman* hearings held to date lasted only one day).

⁹⁸ See *Cybor Corp. v. FAS Techs. Inc.*, 138 F.3d 1448, 1476 (Fed. Cir. 1998) (Rader, J., dissenting).

⁹⁹ See *Phillips v. AWH Corp.*, 415 F.3d 1303, 1317–19 (Fed. Cir. 2005); see also J. Jonas Anderson & Peter S. Menell, *Informal Deference: A Historical, Empirical,*

Moreover, judges also recognize that simply wrapping claim constructions in the facts will not prevent reversal on appeal. Finally, many judges already attempt to limit the number of patent claims in dispute to frame the parties' arguments and improve the quality of their claim constructions.

Accordingly, litigants and trial judges should refrain from offering and relying on extrinsic evidence to craft claim constructions where extrinsic evidence is unnecessary. This is especially so where litigants or judges resort to extrinsic evidence in an attempt to avoid *de novo* review and the associated high reversal rates. Although *de novo* review may be treated as an opportunity to construe claims differently than the trial judge, appellate judges generally treat the trial judge's construction with respect.¹⁰⁰ Federal Circuit judges likely can determine when the trial judge struggled with or understood the claims, and the respect they give to the construction reflects that understanding.

Moreover, the utility of expert testimony in claim construction is limited. Claim constructions are unique to each set of facts and reliance on experts should not be reflexive. Judges are more than capable of construing claims based on court submissions. Expert testimony is most useful where there is insufficient or an absence of intrinsic evidence in the record. Under those circumstances, if the term had a particular meaning in the art, experts can walk judges through technical materials (*i.e.*, patents from a certain year) by explaining the meaning of the terms. Thus, the best way for judges to utilize this type of expert testimony is to wire their findings of fact as tightly as possible into their construction in order to insulate their construction from reversal. In complex cases, the judge could, and probably should, utilize experts even if the parties do not to more efficiently perform their judicial duties.

It still is too early to draw conclusions regarding the Federal Circuit's practice after *Teva*. But the reversal rate likely will decrease over time, and *de novo* review will become less frequent. Therefore, if litigants restrain their use of experts to appropriate circumstances, their investment in a qualified expert will be rewarded with the judiciary's respect, while superfluous expert testimony will earn litigants increased fees and judicial skepticism. But even if litigants respond to these judicial sentiments, improving predictability and lowering litigation expense can only be achieved through Congressional action.

and Normative Analysis of Patent Claim Construction, 108 NW. U. L. REV. 1, 5–6 (2013).

¹⁰⁰ See Jack DaSilva, Notes from AIPLA Quarterly Journal Symposium (Mar. 18, 2016) (on file with author) [hereinafter Symposium Notes].

VI. CONCLUSION

ITC *Markman* hearings complicate the compressed procedural schedules of investigations, carry the threat of remand from the Commission, and remain a function of each ALJ's discretion. Despite these drawbacks, *Markman* hearings are becoming more common at the ITC. Practically speaking, *Teva* may do little to alter an ALJ's consideration of extrinsic evidence and the Federal Circuit has shown reluctance in applying *Teva* deference. Yet practitioners still can use experts to their advantage where the intrinsic evidentiary record is sparse to describe meanings known in the relevant art or to teach elements of technically complex patents. Practitioners, however, risk losing their creditability with a judge if they offer extrinsic evidence only to cloak the resulting claim construction from *de novo* review and should therefore limit their use of such evidence.

AUTHOR INDEX

AUTHOR, TITLE	VOL.	ISS.	PG.	YEAR
Abate, Mark, Alexandra Valenti, & Marcia Sundeen, <i>How to Win Your Case When You Win It and When You Lose It: Strategies to Avoid the Impact of ITC Exclusion Orders</i>	44	3	369	2016
Adduci, Jim, James Ton-that, & Jack DaSilva, <i>Impact of Teva on ITC Investigations: The Role of Experts at Markman Hearings</i>	44	4	659	2016
Beith, Erik A. (Note), <i>Is The Lanham Act Still Constitutional? "Use In Commerce" After Lopez</i>	44	2	327	2016
Ben-Ami, Leora & Corinne Stone, <i>A Race to the Federal Circuit: How the Differing Claim Construction Standards and Standards of Review Influence Patent Invalidation</i>	44	4	639	2016
Berdine, Jake & Matt Rosenberg, <i>Creating Leverage: A Practitioner's Guide to Inter Partes Review and Its Effects on Intellectual Property License Negotiations</i>	44	1	1	2016
Crabtree, Brenda (Note), <i>Using Patent Protection to Help the Least-Developed Countries</i>	44	3	483	2016
DeAbrantes, Nicole (Note), <i>Vaccines...Patent Eligible Now or No? An Assessment of the Patent Eligibility of an Ebola Vaccine in Light of Recent Supreme Court Decisions</i>	44	3	521	2016
Gershoni, Michael (Note), <i>An Argument Against Reinventing the Wheel: Using an Obviousness Analysis to Bring Consistency and Clarity to Patent Eligibility Determinations of Software</i>	44	2	295	2016

<i>Patents After Alice Corp.</i>				
Goldstein, Jorge A., Michelle K. Holoubek, & Krishan Y. Thakker, <i>The Time Has Come to Amend 35 U.S.C. § 101</i>	44	2	171	2016
Harris, John R., <i>The Patent System Is Under Assault — Startups, Should You Care? Ten Things About Patents That Startups Need To Consider</i>	44	1	27	2016
Hrubiec, Peter & David Marsh, <i>Claim Construction Evidence During Patent Prosecution in the USPTO and Appeals to the Federal Circuit</i>	44	4	585	2016
Jay, William M., <i>Changing the Claim- Construction Standard of Review</i>	44	4	553	2016
Dr. Martin, Alice, Ph.D., J.D. & Dr. Kimberly Vines, Ph.D., J.D., <i>Further Erosion of Patent Protection for Diagnostics: The Federal Circuit Denies En Banc Rehearing in Ariosa Diagnostics, Inc. V. Sequenom Inc.</i>	44	3	437	2016
McKeown, Scott & Yasawi Raparla, <i>Beyond Cuozzo</i>	44	4	619	2016
Million-Perez, H. Rachael, <i>Addressing Dual- Use Technology in an Age of Bioterrorism: Patent Extensions to Inspire Companies Making Dual Use Technology to Create Accompanying Countermeasures</i>	44	3	387	2016
Nagakoshi, Yuzuki & Katsuya Tamai, <i>Japan Without FRANDS? Recent Developments on Injunctions and FRAND-Encumbered Patents in Japan</i>	44	2	243	2016
Reister, Andrea G., Christopher K. Eppich, Christopher G. Higby, & Nicole D. Sharer, <i>Substitute Claims in Inter Partes Review — Real or Illusory?</i>	44	4	603	2016

Rosenberg, Matt & Jake Berdine, <i>A Reasonable Approach to Reasonableness: A Proposal to Improve RAND Application in Patent Arbitration Proceedings</i>	44	3	459	2016
Soussou, George (Note), <i>Terror in the United States: How the Terrorist Attacks of September 11th Impacted the Patent System in Addition to the National Security of the United States of America</i>	44	1	111	2016
Valoir, Tamsen, <i>Breast Cancer, Politics, and Patents</i>	44	1	63	2016
Xin, Xiaoban (Note), <i>Patent Eligibility of 3D-Printed Organs</i>	44	1	143	2016
Yohannan, Kristin L. & Douglas A. Behrens, <i>A Study of Patent Exhaustion: AIPLA'S Amicus Brief in Lexmark International, Inc. v. Impression Products, Inc.</i>	44	2	209	2016

TITLE INDEX

TITLE, AUTHOR	VOL.	ISS.	PG.	YEAR
<i>A Race to the Federal Circuit: How the Differing Claim Construction Standards and Standards of Review Influence Patent Invalidation</i> , Ben-Ami, Leora & Corinne Stone	44	4	639	2016
<i>A Reasonable Approach to Reasonableness: A Proposal to Improve RAND Application in Patent Arbitration Proceedings</i> , Rosenberg, Matt & Jake Berdine	44	3	459	2016
<i>A Study of Patent Exhaustion: AIPLA'S Amicus Brief in Lexmark International, Inc. v. Impression Products, Inc.</i> , Yohannan, Kristin L. & Douglas A. Behrens	44	2	209	2016
<i>An Argument Against Reinventing the Wheel: Using an Obviousness Analysis to Bring Consistency and Clarity to Patent Eligibility Determinations of Software Patents After Alice Corp.</i> , Gershoni, Michael (Note)	44	2	295	2016
<i>Addressing Dual-Use Technology in an Age of Bioterrorism: Patent Extensions to Inspire Companies Making Dual Use Technology to Create Accompanying Countermeasures</i> , Million-Perez, H. Rachael	44	3	387	2016
<i>Beyond Cuozzo</i> , McKeown, Scott & Yasawi Raparla	44	4	619	2016
<i>Breast Cancer, Politics, and Patents</i> , Valoir, Tamsen	44	1	63	2016
<i>Changing the Claim-Construction Standard of Review</i> , Jay, William M.	44	4	553	2016
<i>Claim Construction Evidence During Patent Prosecution in the USPTO and Appeals to the Federal Circuit</i> , Hrubiec, Peter &	44	4	585	2016

- David Marsh
- Creating Leverage: A Practitioner's Guide to Inter Partes Review and Its Effects on Intellectual Property License Negotiations*,
Berdine, Jake & Matt Rosenberg 44 1 1 2016
- Further Erosion of Patent Protection for Diagnostics: The Federal Circuit Denies En Banc Rehearing in Ariosa*
Diagnostics, Inc. V. Sequenom Inc., Dr. Martin, Alice, Ph.D., J.D. & Dr. Kimberly Vines, Ph.D., J.D. 44 3 437 2016
- How to Win Your Case When You Win It and When You Lose It: Strategies to Avoid the Impact of ITC Exclusion Orders*, Abate, Mark, Alexandra Valenti, & Marcia Sundeen 44 3 369 2016
- Impact of Teva on ITC Investigations: The Role of Experts at Markman Hearings*, Adduci, Jim, James Ton-that, & Jack DaSilva 44 4 659 2016
- Is The Lanham Act Still Constitutional? "Use In Commerce" After Lopez*, Beith, Erik A. (Note) 44 2 327 2016
- Japan Without FRANDS? Recent Developments on Injunctions and FRAND-Encumbered Patents in Japan*, Nagakoshi, Yuzuki & Katsuya Tamai 44 2 243 2016
- Patent Eligibility of 3D-Printed Organs*, Xin, Xiaoban (Note) 44 1 143 2016
- Substitute Claims in Inter Partes Review—Real or Illusory?*, Reister, Andrea G., Christopher K. Eppich, Christopher G. Higby, & Nicole D. Sharer 44 4 603 2016

<i>Terror in the United States: How the Terrorist Attacks of September 11th Impacted the Patent System in Addition to the National Security of the United States of America,</i> Soussou, George (Note)	44	1	111	2016
<i>The Patent System Is Under Assault—Startups, Should You Care? Ten Things About Patents That Startups Need To Consider,</i> Harris, John R.	44	1	27	2016
<i>The Time Has Come to Amend 35 U.S.C. § 101,</i> Goldstein, Jorge A., Michelle K. Holoubek, & Krishan Y. Thakker	44	2	171	2016
<i>Using Patent Protection to Help the Least-Developed Countries,</i> Crabtree, Brenda (Note)	44	3	483	2016
<i>Vaccines...Patent Eligible Now or No? An Assessment of the Patent Eligibility of an Ebola Vaccine in Light of Recent Supreme Court Decisions,</i> DeAbrantes, Nicole (Note)	44	3	521	2016

SUBJECT INDEX

SUBJECT

AUTHOR, TITLE

VOL. ISS. PG. YEAR

SUMMARY OF ARTICLE

ITC – Exclusion Orders

Abate, Mark, Alexandra Valenti, & Marcia

Sundeen, *How to Win Your Case When**You Win It and When You Lose It:**Strategies to Avoid the Impact of ITC**Exclusion Orders*

44 3 369 2016

Facing an exclusion order from the International Trade Commission can seem an insurmountable obstacle. The prospect of a company's product being excluded from importation into the U.S. is a severe remedy. But if your client is subjected to an exclusion order and comes to you with the question "what now?," your answer need not be "nothing." In reality, there are many avenues to explore in the face of this draconian penalty. This article will examine efficient and cost-effective strategies that can be employed to avoid the harsh impact of an exclusion order.

ITC - Hearings

Adduci, Jim, James Ton-that, & Jack

DaSilva, *Impact of Teva on ITC**Investigations: The Role of Experts at**Markman Hearings*

44 4 659 2016

The 2015 Supreme Court decision in *Teva Pharmaceuticals USA v. Sandoz*, modified the standard of review for claim construction, and, in so doing, may have altered ITC ALJs' motivations to hold *Markman* hearings. In *Teva*, the Supreme Court recognized that elements of a court's claim construction may have factual underpinnings which "must be reviewed for clear error on appeal[.]" instead of *de novo*. An example of one such factual underpinning is the use of expert testimony during *Markman* hearings. Thus, by relying on expert testimony, ALJs could potentially insulate their claim constructions from *de novo* review by

the Federal Circuit. Moreover, when litigants provide expert testimony related to these factual findings, they invite the ALJ to base their claim construction on such extrinsic evidence, triggering *Teva's* deference. Using expert testimony may necessitate the addition of *even* more events to the compressed ITC litigation schedule, altering the cost benefit analysis performed by ALJs. Practically speaking, *Teva* may do little to alter an ALJ's consideration of extrinsic evidence and the Federal Circuit has shown reluctance in applying *Teva* deference. Yet practitioners still can use experts to their advantage where the intrinsic evidentiary record is sparse to describe meanings known in the relevant art or to teach elements of technically complex patents.

Patents – Arbitration Proceedings

Rosenberg, Matt & Jake Berdine, A

Reasonable Approach to Reasonableness: A

Proposal to Improve RAND Application in

Patent Arbitration Proceedings

44 3 459 2016

There has been a substantial amount of recent debate regarding the best approach for determining what is reasonable and non-discriminatory for the royalty rate of a patent that has been subjected to arbitration. One approach that courts have recently implemented in litigation is a modified version of the *Georgia-Pacific* factors. Another approach that scholars have suggested is to transfer the burden for establishing fee shifting to the losing party, such that the losing party must pay all fees unless its position was "reasonably justified in law and fact or that special circumstances make an award unjust." This Article advocates for a hybrid of these two approaches that would increase the efficiency and effectiveness of arbitrators in resolving patent disputes by encouraging parties to agree that their arbitrators will apply a modified *Georgia-Pacific* analysis and incorporate reciprocal fee-shifting terms into their arbitration provisions. These changes will furnish a

clear framework for determining an appropriate royalty and incentivize parties to settle their disputes. The proposed framework will also streamline arbitration resulting from prior dispute resolution agreements between the parties and aid compliance with Standard Setting Organization (SSO) requirements.

Patents – Claim Construction Evidence

Hrubiec, Peter & David Marsh, *Claim*

Construction Evidence During Patent

Prosecution in the USPTO and Appeals to

the Federal Circuit

44 4 585 2016

In the wake of the decision in *Phillips v. AWH Corp.*, the Court of Appeals for the Federal Circuit (“Federal Circuit”) and the Patent Trial and Appeal Board (“PTAB”) at the USPTO have relied on various forms of intrinsic and extrinsic evidence in determining the meaning of a claim term during claim construction review. This Article analyzes how both the Federal Circuit and the PTAB have evaluated how claims have been interpreted during *ex parte* prosecution, focusing on the evidence relied upon during the patent application process. Such evidence may be the specification explicitly, the prior art, claim language, the ordinary meaning of the claim term, and the dictionary definition. Looking at a cross-section of recent cases in each of the Federal Circuit and the PTAB, it becomes clear that while both bodies have relied on these various tools for evidence of a claim term meaning, in the majority of cases, a clear definition in the specification is the best way for an applicant to ensure claims are construed favorably.

Patents – Claim Construction Standard of

Review

Ben-Ami, Leora & Corinne Stone, *A Race to*

the Federal Circuit: How the Differing

Claim Construction Standards and

Standards of Review Influence Patent

Invalidation

44 4 639 2016

With the passage of the America Invents Act, the Patent Office has become another regular venue, in addition to district courts, to re-litigate patent validity. In either forum, ultimate resolution is based on the claim construction determined. Since the district court and the Patent Office are different types of fora, with different rules and standards, actions filed in both fora concurrently can lead to inconsistent claim interpretations. The decisions of these two fora are both subject to appeal to the Court of Appeals for the Federal Circuit. The Federal Circuit must apply the correct standard of review to claim construction, and to the extent that standard differs depending on the forum having decided the construction originally, inconsistent constructions, and even dispositions, may result for the same case at the appellate level. This article explores the implications of these differing standards and the sometimes anomalous decisions that result.

Patents – Claim Construction Standard of Review

Jay, William M., *Changing the Claim-*

Construction Standard of Review 44 3 521 2016

This Article explores the history of appellate review of patent claim construction, culminating in the Supreme Court's decision in *Teva Pharmaceuticals USA, Inc. v. Sandoz Inc.*, which the author litigated. The Article explains that the Supreme Court's decision—applying *de novo* review to questions of law, but deferring to factual findings made in the course of claim construction—finds its roots in principles of law and procedure that come not from the patent realm at all, but which the Supreme Court sees as common to all forms of appellate review. The Article also identifies some preliminary trends in the Federal Circuit's cases applying the Supreme Court's *Teva* decision.

Patents – Claim Construction Standard of Review

44 2 295 2016

McKeown, Scott & Yasawi Raparla, *Beyond*

Cuozzo

The recent U.S. Supreme Court decision in *Cuozzo Speed Technologies* settled the law with respect to claim construction standards in AIA post-grant proceedings. Because Congress was unclear in its intention, the Court deferred to the USPTO's choice to use the broadest reasonable interpretation (BRI) standard. Nevertheless, even if the Court had struck down BRI in favor of the *Phillips* analysis used in district court, there would have been little practical impact. The two standards are virtually indistinguishable besides the use of the term "broadest" in the name for BRI. For instance, both BRI and *Phillips* start with the plain and ordinary meaning of claim terms, as modified by the context of the specification and prosecution history. Use of the word "broadest" in the PTO's standard does not imply broader relative to a court's construction. Rather, "broadest" is relative to the patent specification as viewed by one of skill in the art, just as in a *Phillips* construction. Both standards also employ identical procedures to reach a reasonable, technical construction in view of the intrinsic and extrinsic record. Constructions between the forums actually diverge as a function of institutional motivations, the expertise of the decision-makers, and other practical externalities. Practitioners advocating in post-grant proceedings must recognize those factors and should incorporate lessons from the USPTO's constructions in previous proceeding.

Patents – Eligibility of 3D Printed Organs

Xin, Xiaoban (Note), *Patent Eligibility of 3D-*

Printed Organs

44 2 171 2016

In *Myriad*, the Supreme Court held that an isolated gene is not patent eligible because the product was isolated from its natural state and not significantly different from a natural gene. Following *Myriad*, the Federal Circuit and several district courts have held other artificial or synthetic

compositions patent ineligible because they closely resembled natural products. This development of patent law would have a negative impact on the industry in which the successful products are copies of natural products, such as 3D-printed organs. Under current law, patent eligibility of a 3D-printed organ would depend on the similarity between the printed organ and its natural counterpart. Organs with non-natural functional and/or structural characteristics are likely to meet the requirement for patent eligibility. On the other hand, 3D-printed organs indistinguishable from a natural organ may be deemed products of nature and face patent eligibility challenges. Although these organs could be claimed together with certain non-natural components or precursors to pass the patent eligibility test, composition claims on a 3D-printed organ that is an exact copy of its natural counterpart could be highly challenging.

Patents - Eligibility of Diagnostics

Dr. Martin, Alice, Ph.D., J.D. & Dr.

Kimberly Vines, Ph.D., J.D., *Further*

Erosion of Patent Protection for

Diagnostics: The Federal Circuit Denies

En Banc Rehearing in Ariosa

Diagnostics, Inc. V. Sequenom Inc 44 3 437 2016

Both the district court held and the Federal Circuit affirmed that the patent claims at issue in *Ariosa v. Sequenom* were directed to patent ineligible subject matter under 35 U.S.C. § 101. Method claims directed to judicial exceptions (laws of nature, natural phenomena, and abstract ideas) are analyzed using a rigid framework as defined by the Supreme Court in *Mayo v. Prometheus*. The denials of Sequenom's petition for an en banc rehearing by the Federal Circuit followed by the recent denial of Sequenom's petition for a writ of certiorari by the Supreme Court insure that the current rigid *Mayo* framework will remain in force. This is despite the urgings from members

of the Federal Circuit for the Supreme Court to clarify the Mayo test. This article discusses § 101 jurisprudence following the *Myriad*, *Mayo*, and *Ariosa* decisions and the detrimental effect it has had on the prosecution of patent applications directed to diagnostic inventions.

Patents – Eligibility of Software

Gershoni, Michael (Note), *An Argument*

Against Reinventing the Wheel: Using an

Obviousness Analysis to Bring

Consistency and Clarity to Patent

Eligibility Determinations of Software

Patents After Alice Corp. 44 2 295 2016

This note examines the current state of 35 U.S.C. § 101 jurisprudence and suggests that Congress codify the term “inventive concept,” used by the Supreme Court in its *Alice Corp. v. CLS Bank International* decision, as an innovation embodied and claimed by the invention that is not obvious to a person skilled in the art. Expressly defining “inventive concept” will stabilize the effects of uncertainty as to the issue of whether and when computer software is patentable after the Alice decision. This note further suggests secondary evidence, modeled after the secondary indicia of non-obviousness, to inject added certainty, objectivity, and predictability into §101 litigation.

Patents – Eligibility Under Section 101

Goldstein, Jorge A., Michelle K. Holoubek,

& Krishan Y. Thakker, *The Time Has*

Come to Amend 35 U.S.C. § 101 44 2 171 2016

The most recent decisions of the U.S. Supreme Court on subject matter eligibility (*Mayo v. Prometheus* (2012), *AMP v. Myriad Genetics* (2013), and *Alice Corp. v. CLS Bank* (2014)) have introduced an inventiveness test into the interpretation of 35 USC §101. The test is meant to assure that patent claims not preempt the basic building blocks of human invention, the so called Exceptions to eligibility: natural laws, natural phenomena and abstract ideas. The inventiveness test requires that the claimed invention be "markedly different," "distinct in a relevant way," "more than routine or conventional" (and other such vague concepts) than the Exceptions. Decisions from the Court of Appeals for the Federal Circuit, the Federal District courts, as well as implementations by the USPTO are showing that the inventiveness test is ill-defined, impracticable, and procedurally prejudicial to patent holders; because of the uncertainty it has raised, it is also detrimental to the clarity and viability of the U.S. patent system. We propose a simple amendment to 35 USC §101 that will reverse these trends, by removing inventiveness from the statutory interpretation. We also propose the introduction of physical implementation into the statutory term "process." These proposed amendments are constitutional in that they do not eliminate the Supreme Court's concerns of not patenting the Exceptions: Preemption will be maintained by the effective use of other sections of the patent law, such as an expanded concept of absolute worldwide novelty (under the America Invents Act), non-obviousness (under KSR), and enablement, written description and clarity (under 35 USC §112).

Patents – Eligibility of Vaccines

DeAbrantes, Nicole (Note),

Vaccines...Patent Eligible Now or No? An Assessment of the Patent Eligibility of an Ebola Vaccine in Light of Recent Supreme Court Decisions

44 3 521 2016

The sudden outbreak of the Ebola virus in several West African countries caused great concern for individuals around the world. Although several vaccines are in development, no vaccine has proved to be both effective and safe. This outbreak has raised concerns regarding the speed of vaccine development. The U.S. Center for Disease Control and Prevention (“CDC”) made a vaccine years ago and applied for a patent with the hope of making the vaccine available to the public. Patent protection for vaccines would incentivize private companies to invest more money in vaccine research. The USPTO’s recent Interim Guidance in the wake of *Alice* aims to clear up the confusion introduced by the Myriad guidelines for the patentability of nature-based products. Most importantly, the Interim Guidance establishes a “markedly different” characteristic – nature-based products are patent eligible if the product contains a markedly different characteristic from the naturally occurring counterpart. This note compares the Myriad guidelines to the Interim Guidance following *Alice*, arguing that *Alice* may establish an easier path to patentability for vaccines. This note also contains a case study focusing on the recent Ebola outbreak to illustrate how certain claims may be treated differently depending on the analysis being applied.

Patents – Exhaustion

Yohannan, Kristin L. & Douglas A.

Behrens, *A Study of Patent Exhaustion:*

AIPLA’S Amicus Brief in Lexmark

International, Inc. v. Impression

Products, Inc.

44 2 209 2016

AIPLA filed an amicus brief in *Lexmark International, Inc. v. Impression Products, Inc.*, which was pending before the U.S. Court of Appeals for the Federal Circuit and dealt with the issue of patent exhaustion. This Article analyzes the issue of patent exhaustion in view of the Supreme Court decisions in *Kirtsaeng* and *Quanta*. The questions

presented were whether the Federal Circuit should overrule *Jazz Photo* in view of *Kirtsaeng* and whether the Federal Circuit should overrule *Mallinckrodt* in view of *Quanta*. In both instances AIPLA argued that the Federal Circuit should keep its precedent intact. The Federal Circuit agreed with AIPLA's views in its decision of the *en banc* appeal.

Patents – Extensions

Million-Perez, H. Rachael, *Addressing Dual-*

Use Technology in an Age of Bioterrorism:

Patent Extensions to Inspire Companies

Making Dual Use Technology to Create

Accompanying Countermeasures 44 3 387 2016

This Article explores the intersection of national security and patent law, specifically incentives for countermeasure development. It narrowly focuses on the term “dual-use technology” – technology that, once created, can be simultaneously used for societal advancement or detriment, and thus requires countermeasures. Although the U.S. government has implemented countermeasure development incentives in the past, each fails to specifically stimulate dual-use technology countermeasure development. As a potential solution, this Article proposes a three-year patent-term extension in exchange for dual-use technology countermeasure development. This incentive is not offered to supplant current legislation; rather, it seeks to supplement legislation by addressing a specific, yet highly important, issue with a simple and practical solution.

Patents – Injunctive Relief

Nagakoshi, Yuzuki & Katsuya Tamai,

Japan Without FRANDS? Recent

Developments on Injunctions and

FRAND-Encumbered Patents in Japan 44 2 243 2016

Whether or not owners of FRAND-encumbered standard essential patents (hereinafter SEPs) are entitled to injunctive relief is an increasingly important topic in the fields of intellectual property and antitrust law around the world. Courts and administrative authorities around the world are searching for the appropriate balancing point between an absolute right to injunction and an absolute denial of injunction. This article first introduces the Japanese approach to SEP injunctive relief by analyzing the approach taken by the courts and administrative offices in two recent cases: The Intellectual Property High Court's May 2014 opinions in *Apple v. Samsung* and the Tokyo District Court's February 2015 decision in *Imation v. One Blue*. The subsequent section addresses the draft revision of the Guidelines for the Use of Intellectual Property Under the Antimonopoly Act published by the Japan Fair Trade Commission in July 2015, in the wake of *Apple* and *Imation*. Following these introductions to recent developments in Japan, a comparison with Europe is made. The development of case law, administrative guidelines, and private practice to enhance more clarity in FRAND declarations and "code of conduct" for parties would have an important impact on the realization of the aim of the Patent Act through encouraging both invention and affordable access to technology.

Patents – Inter Partes Review

Berdine, Jake & Matt Rosenberg, *Creating Leverage: A Practitioner's Guide to Inter Partes Review and Its Effects on*

Intellectual Property License Negotiations 44 1 1 2016

By replacing the *inter partes* reexamination ("IPX") system with the *inter partes* review ("IPR") proceeding, Congress gave the United States Patent and Trademark Office ("USPTO") unprecedented tools to eradicate invalid patents that the USPTO issued by mistake. The America Invents Act structured the IPR system to significantly

reduce the costs associated with defending against patent suits, particularly when the asserting entity has patents of questionable validity or is simply seeking nuisance value for the suit. The likelihood of invalidation, truncated timeline, estoppel effects, amendment provisions, settlement flexibility, and ability to stay co-pending litigation, each make the USPTO an attractive forum for defendants in patent assertion situations.

When evaluating a company's alternatives to licensing a particular intellectual property portfolio, attorneys must focus on their best alternative to a negotiated agreement ("BATNA"). Because a patent infringement suit can cost up to \$5 million for each side to litigate, litigation can create an incredibly unappealing BATNA for prospective licensees, even if they have a strong belief that they do not actually infringe the patent. Because of the advantages associated with IPRs over district court litigation, defendants may now have a tool to induce favorable settlements. The coercive tactic of investing capital before a negotiation session and arriving with a fully-prepared and ready to file petition may be the appropriate solution for patent assertion defendants.

Patents – Inter Partes Review

Reister, Andrea G., Christopher K. Eppich,
Christopher G. Higby, & Nicole D.

Sharer, *Substitute Claims in Inter Partes*

Review—Real or Illusory?

44 4 603 2016

In 2012, Congress enacted the America Invents Act which introduced *inter partes* review ("IPR") as an adjudicative proceeding to replace *inter partes* reexamination. Although patent owners retained the ability to amend challenged patent claims, patent owners should be aware that there are significant differences between amending claims in a reexamination and substituting claims in an IPR. The burden of establishing that the patent owner is entitled to

the substitute claims is the most significant difference between reexamination and IPR, and attempts to substitute claims during an IPR have been largely unsuccessful. Patent owners can improve their chances of successful claim amendments by adhering to the requirements set forth by the PTAB, and affirmed by the Federal Circuit, in recent decisions.

Patents – Policy

Crabtree, Brenda (Note), *Using Patent*

Protection to Help the Least-Developed

Countries 44 3 483 2016

When discussing patent protection at the international level, it is frequently assumed that people in Least Developed Countries (LDCs) are, and will continue to be, victims of these systems, especially with regards to issues such as affordable access to medicines. LDCs generally do not have the resources needed to establish robust patent systems of their own, but people are not limited to using the patent systems in their home countries. This article examines potential means by which people in LDCs may benefit from the international patent system and the systems of wealthy nations by analyzing three questions in the context of pharmaceutical patent protection: (1) whether patent protection can allow for affordable access to medicines; (2) whether it can promote economic growth; and (3) whether it can encourage domestic innovation in LDCs. The article concludes that people in LDCs can be empowered through use of the patent systems of developed nations to stimulate growth and innovation in their home countries.

Patents - Policy

Harris, John R., *The Patent System Is Under*

Assault – Startups, Should You Care? Ten

Things About Patents That Startups Need

To Consider 44 1 27 2016

The U.S. patent system is under extreme assault. The emergence of “patent trolls” has brought attention to issues in the patent system to whole new sectors of the economy that are not used to dealing with patents. The U.S. Supreme Court has muddied the waters on the patentability of computer-implemented and medical diagnostic method inventions, increasing the uncertainty as to patents. Congress passed a comprehensive patent reform bill in 2011 (the “AIA”) that was supposed to improve the system, but it just added complexity and uncertainty. The USPTO’s Patent Trial and Appeal Board (PTAB) has become known as a “patent death squad.” Despite the assaults, the U.S. Patent Office continues to receive record numbers of patent applications -- but at the same time, relying on the AIA and recent Supreme Court decisions, increasingly refuses to grant deserving patents.

Based on all these assaults—is it time to give up on patenting? Perhaps not, but intellectual property strategies are in flux. Companies that have patents, or think they may need patents, will want to consider these ten points about patents: (1) patents assist in enterprise value creation and enhancement; (2) patents signal quality to investors; (3) patents help establish and reflect ownership of technology and inventions; (4) patents can be a weapon to assert against competitors; (5) patents help understand and avoid the IP of competitors and others in the market; (6) patents can provide a vehicle for revenue generation / licensing / monetization; (7) patents facilitate collaborative research and open innovation (OI); (8) patents can help block competitors; (9) the patent laws will continue to change; and (10) although trade secrecy and copyrights offer some alternative protections, there is really no alternative to patents.

Patents – Policy

Soussou, George (Note), *Terror in the* 44 1 111 2016

*United States: How the Terrorist Attacks
of September 11th Impacted the Patent
System in Addition to the National
Security of the United States of America*

Any patent application presented to the United States Patent and Trademark Office can be deemed secret in the interest of national security. The applicant cannot receive the benefits of a patent until the government removes the secrecy order. This situation exists because of the Invention Secrecy Act, which became law in 1951. The United States government has used the Invention Secrecy Act as a means to protect the national security of the country. This note looks at the history of invention secrecy in the United States, and looks to assess and balance the interests of individual inventors with the interests of the government for national security. After an assessment of the case law, the statistics of secrecy orders, and the historical context of national security for the United States, this note suggests additional safeguards for individuals subject to the Invention Secrecy Act. This note assesses the practicality of the Court of Appeals for the Federal Circuit and the Foreign Intelligence Surveillance Act Courts and suggests that the Court of Appeals for the Federal Circuit be utilized as a forum for individuals to challenge secrecy orders under the Invention Secrecy Act.

Patents - Policy

Valoir, Tamsen, *Breast Cancer, Politics, and*

Patents 44 1 63 2016

This note explores the abysmal medical and political history of breast cancer and traces its continuing political importance to a recent Supreme Court case. Perhaps believing some of the mis-information generally available about the patents and the cost and availability of testing, the Supreme Court held that the Myriad patents on isolated breast cancer genes are not patent eligible because the breast cancer genes are—or were—natural products.

This puts at risk many medical patents since many of our medicines are or derive from natural products, and thus shifts the economic balance significantly. Yet Myriad continues to hold significant market share in the breast cancer testing market, and costs have not significantly changed for consumers. Not surprisingly, Myriad is now keeping what was once patented, thus beginning to enter the public domain on patent expiry at 20 years, a trade secret. Whatever the drivers behind the Supreme Court's decision, it is hard to see a public benefit from this holding.

Trademarks – Use

Beith, Erik A. (Note), *Is The Lanham Act Still Constitutional? "Use In Commerce" After*

Lopez 44 2 327 2016

The last three decades have seen a significant expansion in the scope of federal trademark law under the Lanham Act, from broader protections for trade dress to anti-dilution statutes and intent-to-use applications. But because Congress's authority to regulate trademarks derives from the Commerce Clause, the Lanham Act requires that a mark be used in interstate commerce in order to receive federal protection. This note begins by explaining how the historical timing of the Lanham Act's passage in 1946—a period in which Congress's Commerce Clause powers were dramatically expanding—established a low threshold for "use in commerce" that would have been highly suspect a decade earlier, when the Supreme Court routinely struck down attempts by Congress to expand the class of activities falling under its Commerce Clause jurisdiction. In this way, the Lanham Act is both a creature of, and highly dependent upon, a particular post-New Deal understanding of Congress's Commerce Clause powers as plenary.

The core of this note explores how the Supreme Court's

apparent return to a more formalist interpretation of the Commerce Clause, beginning with *United States v. Lopez*, threatens this historical congruence. In particular, as the Supreme Court has shown a renewed willingness to reign in more than half a century of nearly unchecked expansion of Congress's Commerce Clause power, the statutory scope of federal trademark protection continues to expand, at the same time that courts have reduced the "use in commerce" requirement to a nullity. This note concludes by arguing that the Commerce Clause should impose meaningful limits on Congress's ability to expand federal protection for trademarks, and suggests that the lower courts should begin enforcing the "use in commerce" requirement more strictly. Congress, for its part, could aid this endeavor by clarifying the definition and scope of "use in commerce."

Ronald Mann *Contributor*

Posted Tue, March 21st, 2017 1:17 pm

[Email Ronald](#)
[Bio & Post Archive »](#)

Opinion analysis: Justices reject application of laches in patent cases

The refrain is in some ways familiar. The Federal Circuit early on adopts a patent-specific rule grounded in the particularities of patent procedure and practice. Decades pass, in which the rule is applied without serious challenge to dozens (hundreds?) of cases. When the issue finally reaches the Supreme Court, the justices reject the Federal Circuit's decision out of hand, typically paying little or no attention to the patent-specific factors that seemed so important to the Federal Circuit.

This week's chapter in that story is *SCA Hygiene Products v. First Quality Baby Products*. The specific question is whether the equitable doctrine of "laches" permits a court to reject a suit to enforce a patent based on the plaintiff's unreasonable and prejudicial delay in bringing suit, even if the suit is brought within the Patent Act's statute of limitations. At the Federal Circuit, the primary consideration was (to steal a well-turned phrase from Justice Stephen Breyer) a "century and a half of history" of routine lower-court application of laches in patent cases. At the Supreme Court level, however, the most obvious authority is the court's decision three terms ago in *Petrella v. Metro-Goldwyn-Mayer*, which considered a nearly identical question under the Copyright Act. In *Petrella*, Justice Ruth Bader Ginsburg wrote for a majority of the court, holding that because Congress adopted a specific statute of limitations for copyright cases, courts should not use vague equitable doctrines like laches to bar suits as untimely when they are brought before the deadline set in the statute. With five members of the *Petrella* majority still on the bench (all but the late Justice Antonin Scalia), the oral argument suggested that the weight of that precedent would be dispositive.

Against that backdrop, not a word of the opinion of Justice Samuel Alito surprises. He lays out the issue in the case as "the application of the defense [of laches] to a claim for damages," remarking that "[w]e discussed this subject at length in *Petrella*." He then proceeds to summarize *Petrella* in broad and unqualified terms. First, as to its general principle, he explains: "When Congress enacts a statute of limitations, it speaks directly to the issue of timeliness and provides a rule for determining whether a claim is timely enough to permit relief. ... Therefore applying laches within a limitations period specified by Congress would give judges a 'legislation-overriding' role that is beyond the Judiciary's power" (quoting *Petrella*). Summarizing, he concludes even more firmly: "Laches is a gap-filling doctrine, and where there is a statute of limitations, there is no gap to fill."

After such a categorical summary, it is no surprise when the opinion begins its analysis of the issue at hand with the statement that "*Petrella's* reasoning easily fits the provision at issue here." The court notes a Patent Act provision (Section 286) that bars relief "for any infringement committed more than six years prior to the filing of the complaint." Because that provision bars suits more than six years after the fact, it is all that the justices need to resolve the dispute: "By the logic of *Petrella*, we infer that this provision represents a judgment by Congress that a patentee may recover damages for any infringement committed within six years of the filing of the claim."

All that is left is for the court to address the long line of lower-court cases that motivated the Federal Circuit to adhere to a contrary rule. The court's basic answer is that it is unimpressed by the long line of lower-court patent cases on which the Federal Circuit relied. For the justices at the Supreme Court, what is important is the long line of their own cases on which they based *Petrella* – none of them involving patents – holding that laches generally should not apply when Congress has adopted a statute of limitations. Having generously described the court's own cases, Alito easily dismisses the authorities on which the court of appeals relied: "In light of the general rule regarding the relationship between laches and statutes of limitations [in our cases], nothing less than a broad and unambiguous consensus of lower court decisions could support the inference that [the Patent Act] codified a very different patent-law-specific rule. No such consensus is to be found."

Few will find this decision remarkable. It would have been surprising for the justices who joined in *Petrella* to resolve the case differently. But this case is a little different from most of the cases in which the court has rejected the Federal Circuit's patent-specific proclivities. As a rule, most of those Federal Circuit decisions broadened the rights of patentholders in one way or another, by expanding the remedies available to them or adopting a more capacious understanding of patentability. Here is a case, though, in which the Federal Circuit toed a strong historical line to rein in litigation conduct by patentholders that is aggressive at best. And the Supreme Court steps in, dismissing that history as irrelevant and brushing aside the specific risks of abuse in patent litigation (chronicled in Justice Breyer's dissent), all in the service of the extension to patent law of a rule that was in truth not all that clear until the decision in *Petrella* just three years ago. It goes without saying that the vigor of the decision sends a message to the Federal Circuit about how it should balance history against general interpretive doctrines, but it also has some more immediate relevance. Specifically, my main thought when I reread this opinion is what I would be saying if I were one of the advocates trying to frame the "special rule for patent venue" question the justices will hear next week in *TC Heartland v. Kraft Foods Group Brands*.



[Click for vote alignment by ideology.](#)

Posted in [SCA Hygiene Products Aktiebolag v. First Quality Baby Products, LLC](#), [Analysis](#), [Featured](#), [Merits Cases](#)

Recommended Citation: Ronald Mann, *Opinion analysis: Justices reject application of laches in patent cases*, SCOTUSBLOG (Mar. 21, 2017, 1:17 PM), <http://www.scotusblog.com/2017/03/opinion-analysis-sca-hygiene/>

© 2017 SCOTUSblog (click for license)
[Switch to mobile site](#)

University of Miami Law School
University of Miami School of Law Institutional Repository

University of Miami Business Law Review

4-10-2017

Patent Venue Exceptionalism after *TC Heartland v. Kraft*

Ana Santos Rutschman

Follow this and additional works at: <http://repository.law.miami.edu/umblr>

 Part of the [Intellectual Property Law Commons](#), and the [Law and Economics Commons](#)

Recommended Citation

Ana Santos Rutschman, *Patent Venue Exceptionalism after TC Heartland v. Kraft*, 25 U. Miami Bus. L. Rev. 29 ()
Available at: <http://repository.law.miami.edu/umblr/vol25/iss2/4>

This Article is brought to you for free and open access by University of Miami School of Law Institutional Repository. It has been accepted for inclusion in University of Miami Business Law Review by an authorized editor of University of Miami School of Law Institutional Repository. For more information, please contact library@law.miami.edu.

Patent Venue Exceptionalism after *TC Heartland v. Kraft*

Ana Santos Rutschman*

I.	INTRODUCTION	29
II.	EVOLUTION OF PATENT VENUE	31
	A. <i>Legislative History and Statutory Interpretation of Patent Venue</i>	31
	B. <i>Effects of Permissive Patent Venue</i>	34
III.	OUTCOME OF <i>TC HEARTLAND V. KRAFT</i> AND FORESEEABLE CONSEQUENCES	38
	A. <i>Potential Impact of TC Heartland v. Kraft</i>	38
	B. <i>Patent Venue Exceptionalism in the Aftermath of TC Heartland v. Kraft</i>	40
IV.	CONCLUSION.....	43

I. INTRODUCTION

In late 2016, the Supreme Court granted certiorari in *TC Heartland, LLC v. Kraft Foods Group Brands LLC*,¹ a case addressing the interpretation of the special patent venue and the general venue statutes. The case was brought by Heartland, a sweetener manufacturer organized as a limited liability company under Indiana law and headquartered in Indiana.² In 2014, Kraft sued Heartland for infringement of three patents on liquid water enhancers. Although Kraft is headquartered in Illinois, the lawsuit was brought in the District of Delaware, where Heartland is not registered to do business and does not have a regular or established place

* Jaharis Faculty Fellow in Health Law and Intellectual Property, DePaul University College of Law. For helpful comments, I would like to thank Mark Moller and Josh Sarnoff. All errors remain my own.

¹ *TC Heartland LLC v. Kraft Food Brands Grp.*, 821 F.3d 1338 (Fed. Cir. 2016), *cert. granted*, 137 S.Ct. 614 (U.S. Dec. 14, 2016) (No. 16-341).

² Brief for Petitioner at 16-17, *TC Heartland, LLC v. Kraft Foods Grp. Brands LLC*, No. 16-341 (Jan. 30, 2017) [hereinafter *Petitioner Brief*].

of business.³ However, in 2013, some of Heartland's accused products (representing approximately 2% of Heartland's annual sales) were drop-shipped to locations in Delaware at the request of an Arkansas-based customer.⁴ The court deemed this link sufficient to trigger personal jurisdiction in the patent lawsuit brought by Kraft.

A thinly construed nexus—chiefly through the sale of goods—is not uncommon in establishing personal jurisdiction for corporations in general,⁵ and in patent infringement cases in particular. For the past quarter of a century, the Federal Circuit has interpreted the patent venue statute⁶ permissively, enabling patentees to bring a lawsuit against a corporation in any district where personal jurisdiction arises.⁷ In the case of national companies like Heartland, this permissive approach allows patent infringement lawsuits to be brought anywhere in the United States where a modicum of sales may occur.⁸

From a venue perspective, what sets patent infringement cases apart are the idiosyncrasies of forum shopping and forum selling created by permissive constructions of the patent venue statute. Among these idiosyncrasies, most notably, is the overwhelming volume of patent infringement cases being filed in the anomalous rural Eastern District of Texas.⁹ *TC Heartland*, now before the Supreme Court, provides an opportunity to alter this scenario.¹⁰

In 2015, Heartland petitioned the Federal Circuit for a writ of mandamus directing the Delaware trial court to dismiss the Kraft lawsuit for lack of personal jurisdiction, or transfer the case to the Southern District of Indiana due to improper venue.¹¹ After the Federal Circuit denied the mandamus petition, Heartland filed a petition for a writ of certiorari in September 2016, which the Supreme Court granted in December.¹² If the Supreme Court rules in favor of Heartland, patent venue will be interpreted independently from the general venue statute,

³ *Petitioner Brief*, at 16-17.

⁴ *Petitioner Brief*, at 18.

⁵ *See* *International Shoe Co. v. Washington*, 326 U.S. 310 (1945) (articulating the requirement of minimum contacts for a state to exercise personal jurisdiction over a corporation); *see also* *Burger King Corp. v. Rudzewicz*, 471 U.S. 462, 474 (1985).

⁶ 28 U.S.C. § 1400(b) (2012).

⁷ *See infra*, note 35-41 and accompanying text.

⁸ *See infra*, section I.B Effects of Permissive Patent Venue.

⁹ *See infra*, note 42-47 and accompanying text.

¹⁰ *TC Heartland LLC v. Kraft Food Brands Grp.*, 821 F.3d 1338 (Fed. Cir. 2016), *cert. granted*, 137 S.Ct. 614 (U.S. Dec. 14, 2016) (No. 16-341).

¹¹ *Petition for Writ of Mandamus, In re TC Heartland, LLC*, No. 16-105 (Fed. Cir. Oct. 23, 2015), ECF No. 2; *see also* 28 U.S.C. § 1406(a) (2012) (authorizing transfer of a case when venue is improper).

¹² *TC Heartland*, 821 F.3d at 1338.

which will result in a narrower construction of venue in patent infringement cases.¹³ This, in turn, will likely lead to less patentee forum-shopping as well as a redistribution of patent litigation across the country.¹⁴

This Article explores the implications of the upcoming Supreme Court decision in *TC Heartland v. Kraft*. In Part II, this Article addresses the legislative history and interpretation of the patent venue statute by the Supreme Court and the Federal Circuit, as well as the effects that the Federal Circuit's permissive constructions of venue have had on patent litigation over the past 27 years. Part III looks at possible outcomes after the Supreme Court's decision in *TC Heartland v. Kraft*: it starts by discussing patterns of patent litigation redistribution in the event of a decision for Heartland, and then turns to alternative channels for achieving patent venue reform, should the Court side with Kraft. Finally, this Article concludes by positioning the outcome of the case into the larger ongoing debate surrounding patent exceptionalism.

II. EVOLUTION OF PATENT VENUE

A. Legislative History and Statutory Interpretation of Patent Venue

Federal courts have exclusive subject matter jurisdiction over patent infringement cases.¹⁵ For a plaintiff to successfully initiate a lawsuit, the court must have personal jurisdiction over the defendant,¹⁶ and venue must be proper. In patent cases, the latter is governed by a special venue statute,¹⁷ first enacted in 1897.¹⁸ From 1789 to 1897, patent venue was governed by the general venue statute.¹⁹ Under the general statute and successive amendments,²⁰ plaintiffs started bringing patent infringement lawsuits in almost anywhere in the Union.²¹ Congress intervened in 1897,

¹³ See *infra*, note 78-82 and accompanying text.

¹⁴ See *infra*, note 78-89 and accompanying text.

¹⁵ 28 U.S.C. § 1338(a) (2012).

¹⁶ See *International Shoe Co. v. Washington*, 326 U.S. 310 (1945).

¹⁷ 28 U.S.C. § 1400(b) (2012).

¹⁸ Act of Mar. 3, 1897, ch. 395, 29 Stat. 695.

¹⁹ Judiciary Act of 1789, ch. 20, § 11, 1 Stat. 73 (1897) (limiting lawsuits to places where the defendant "is an inhabitant, or in which he shall be found").

²⁰ See Act of Mar. 3, 1887, ch. 373, § 1, 24 Stat. 552.

²¹ Plaintiffs in patent infringement cases took advantage of the fact that diversity lawsuits could now be brought in the place of residence of either the plaintiff or defendant. See Act of Mar. 3, 1887, ch. 373, § 1, 24 Stat. 552, at 552-53; see also Richard C. Wydick, *Venue in Actions for Patent Infringement*, 25 STAN. L. REV. 551, 553 (1973) (describing how the broad general venue statute led to situations of abuse beyond the sphere of patent lawsuits).

enacting a separate patent venue statute that limited venue²² to two situations: 1) the place where the defendant inhabited; or 2) the place where the defendant committed infringing acts and had a place of business.²³

Until the mid-twentieth century, the special statute applicable to patent venue remained fairly isolated from the legislative and interpretive changes affecting the general venue statute. In the 1942 *Stonite Products* case, the Supreme Court confirmed that the 1897 patent statute alone governed venue in patent infringement cases.²⁴ Six years later, however, as the Judicial Code was revised, Congress made textual changes that would affect venue.²⁵ Instead of limiting patent venue to the place where the defendant “inhabits”—per the 1897 text—the 1948 revisions introduced the word “resides.”²⁶ In its entirety, the newly codified section 28 U.S.C. § 1400(b) states “[a]ny civil action for patent infringement may be brought in the judicial district where the defendant resides, or where the defendant has committed acts of infringement and has a regular and established place of business.”²⁷ The text remains unchanged to this day.

The general venue statute also underwent changes 1948 when it was revised and codified as 28 U.S.C. § 1391.²⁸ In setting forth the residence criteria for purposes of general venue, Congress established in § 1391(c) that a corporate defendant could be sued in its place of incorporation or place of business, and that either locus would constitute corporate residence for venue purposes.²⁹ The general standard was thus broader than the patent venue standard, a phenomenon that once again prompted questions about the relationship between special and general venue.

The Supreme Court addressed these questions in 1957 in the *Fourco Glass* case, reaffirming the idea that there was no interplay between the two statutes.³⁰ Section 1400(b) remained a special statute governing

²² See Wydick, *supra* note 21, at 554-56.

²³ Act of Mar. 3, 1897, ch. 395, 29 Stat. 695

²⁴ *Stonite Prods. Co. v. Melvin Lloyd Co.*, 315 U.S. 561, 565, n.5, 566 (1942) (“Congress did not intend the Act of 1897 to dovetail with the general provisions relating to the venue of civil suits, but rather that it alone should control venue in patent infringement proceedings.”)

²⁵ See generally Herbert Wechsler, *Federal Jurisdiction and the Revision of the Judicial Code*, 13 LAW & CONTEMP. PROBS. 216, 234-40 (1948).

²⁶ 28 U.S.C. § 1400(b) (2012) (“Words in subsection (b) ‘where the defendant resides’ were substituted for ‘of which the defendant is an inhabitant.’”).

²⁷ *Id.*

²⁸ 28 U.S.C. § 1391(c) (1948).

²⁹ 28 U.S.C. § 1391(c) (2012) (“A corporation may be sued in any judicial district in which it is incorporated or licensed to do business or is doing business, and such judicial district shall be regarded as the residence of such corporation for venue purposes.”).

³⁰ *Fourco Glass Co. v. Transmirra Prods. Corp.*, 353 U.S. 222 (1957).

patents and, therefore, its scope had not been broadened by changes to general venue.³¹ Under *Fourco Glass*, substituting “inhabits” with “resides” had no meaningful effect.

In 1988, Congress amended general venue again.³² For corporate defendants, § 1391(c) now equated venue with personal jurisdiction:³³

For purposes of venue under this chapter, a defendant that is a corporation shall be deemed to reside in any judicial district in which it is subject to personal jurisdiction at the time the action is commenced.³⁴

For parties in patent infringement lawsuits, the most relevant change introduced by the 1988 amendment to the general venue statute was, however, the inclusion of the words “under this chapter.” Because § 1400(b) falls under the same chapter as § 1391(c), in 1990, the Federal Circuit held in *VE Holding Corp. v. Johnson Gas Appliance Co.* that the amended § 1391(c) governed patent venue as well.³⁵ This meant that corporate residence attached to any place where there was personal jurisdiction, instead of only to the place of incorporation.³⁶ *VE Holding* thus ushered in an era of permissible patent venue and opened the door for extensive forum shopping in patent infringement cases, as described in the following section.³⁷

³¹ *Id.* at 228 (“We think it is clear that § 1391(c) is a general corporation venue statute, whereas § 1400(b) is a special venue statute applicable, specifically, to *all* defendants in a particular type of actions, i.e., patent infringement actions.”).

³² *See generally* Thomas W. Adams, *The 1988 Revision of 28 U.S.C. § 1391(C): Corporate Venue Is Now Equivalent to In Personam Jurisdiction Effects on Civil Actions for Patent Infringement*, 39 CLEV. ST. L. REV. 357 (1991).

³³ *Id.* at 363-65.

³⁴ Pub. L. No. 100-702, § 1013(a)-(b), 102 Stat. 4642 (1988) (codified as amended at 28 U.S.C. § 1391(c)).

³⁵ *VE Holding Corp. v. Johnson Gas Appliance Co.*, 917 F.2d 1574, 1583 (Fed. Cir. 1990).

³⁶ *Id.* (“[V]enue in a patent infringement case includes any district where there would be personal jurisdiction over the corporate defendant at the time the action is commenced. While this test is narrower than allowing venue wherever a corporate defendant could be served, it is somewhat broader than that encompassed by the previous standard of ‘place of incorporation.’”)

³⁷ *See infra*, note 47-55 and accompanying text. *See also* Kimberly A. Moore, *Forum Shopping in Patent Cases: Does Geographic Choice Affect Innovation*, 79 N.C. L. REV. 889, 897 (2001) (discussing how *VE Holding* “rendered superfluous the patent venue statute for corporate defendants” and enabled widespread forum-shopping among patentees).

General venue was last amended in 2011. Among other changes,³⁸ Congress replaced “under this chapter” with “for all venue purposes.”³⁹ This change did not substantially affect the *VE Holding*-enabled permissive approach to patent venue.

B. Effects of Permissive Patent Venue

Permissive venue allows plaintiffs in patent infringement cases to engage in a particularly lenient form of forum shopping, as patentees have been able to sue in practically any federal court of their choosing for nearly three decades.⁴⁰ Forum shopping in patent litigation predated the 1988-1990 changes that broadened patent venue.⁴¹ In fact, forum shopping was one of the concerns that led to the creation of the Federal Circuit in 1982.⁴² Having jurisdiction that extends beyond patent appeals,⁴³ the Federal Circuit contributed to what is often called “patent exceptionalism”⁴⁴ at both substantive and (especially) procedural levels. But creation of a specialized appellate circuit for patent cases did not minimize the forum shopping problem,⁴⁵ which assumed new contours after the Supreme Court ruling in *VE Holding*.

³⁸ See Pub. L. No. 112-63, § 202, 125 Stat. 758 (2011) (codified as amended at 28 U.S.C. § 1391(a)) (establishing that general venue now governs “all civil actions brought in district courts of the United States”); *id.* at § 202 (codified as amended at 28 U.S.C. § 1391(c)(2)) (establishing that the merging of venue and personal jurisdiction is no longer limited to corporations).

³⁹ *Id.* at § 202 (codified as amended at 28 U.S.C. § 1391(c)).

⁴⁰ See Jeanne C. Fromer, *Patentography*, 85 N.Y.U. L. REV. 1444, 1451 (2010).

⁴¹ See *supra*, note 32-35 and accompanying text; see also *VE Holding Corp. v. Johnson Gas Appliance Co.*, 917 F.2d 1574 (Fed. Cir. 1990).

⁴² See Federal Courts Improvement Act of 1982, Pub. L. No. 97-164, 96 Stat. 25 (codified as amended in scattered sections of 28 U.S.C.); Comm’n on Revision of the Fed. Court Appellate Sys., *Structure and Internal Procedures: Recommendations for Change* (1975), reprinted in 67 F.R.D. 195; see also J. Jonas Anderson, *Court Competition for Patent Cases*, 163 U. PA. L. REV. 631, 633, n.6 (2015); see generally Rochelle Cooper Dreyfuss, *The Federal Circuit: A Case Study in Specialized Courts*, 64 N.Y.U. L. REV. 1 (1989).

⁴³ 28 U.S.C. § 1295 (2012); see LAWRENCE BAUM, *SPECIALIZING THE COURTS* (2011); Eric Biber, *Too Many Things to Do: How to Deal with the Dysfunctions of Multiple-Goal Agencies*, 33 HARV. ENVTL. L. REV. 1, 12 (2009) (describing how multiple-goal institutions tend to underperform in “goals that are hard to measure”); see also R. Polk Wagner & Lee Petherbridge, *Is the Federal Circuit Succeeding? An Empirical Assessment of Judicial Performance*, 152 U. PA. L. REV. 1105 (2004) (discussing overall performance of the Federal Circuit in patent and non-patent cases).

⁴⁴ See *infra*, note 100 and accompanying text.

⁴⁵ See Kimberly A. Moore, *Forum Shopping in Patent Cases: Does Geographic Choice Affect Innovation*, 79 N.C. L. REV. 889, 892 (2001) (providing data that shows that this occurs before and after the creation of the Federal Circuit).

Empirical research has shown that the distribution of patent cases among the ninety-four judicial districts is so uneven that it cannot possibly be attributable to the relative size of civil dockets.⁴⁶ In 2015, 44% of all 5,830 patent cases filed in the United States were brought in the Eastern District of Texas, with the District of Delaware a distant second (9%), followed by the Central and North Districts of California (with 5% and 4%, respectively).⁴⁷

The popularity of Texas—and of the predominantly rural Eastern District in particular—cannot be explained by geographical clustering of patent-intensive industries, as major technology hubs are located elsewhere as well.⁴⁸ What, in fact, explains the anomalous rates of patent cases filed in the Eastern District of Texas is the patentee-friendly reputation of the district, attracting litigation through favorable procedural and administrative practices in patent cases.⁴⁹ As corporate venue was interpreted to expand nationally, Texas became the preferred target for patent forum shopping.⁵⁰ With forum shopping in patent cases on the rise since the early 1990s,⁵¹ the Eastern District of Texas went from a total of 14 patent cases in 1999 to nearly 200 patent cases a year by the mid-2000s;⁵² in 2012 that number skyrocketed to 1,247, while in 2015 it more than doubled to a grand total of 2,540.⁵³ Between 2007 and the first half of 2016, the Eastern District of Texas attracted 20% of national patent litigation, followed by Delaware (12%) and the Central District of California (8%).⁵⁴

Among the practices that propelled the Eastern District of Texas to forum shopping prominence, scholars identified several factors that set the

⁴⁶ *Id.*

⁴⁷ See Colleen V. Chien & Michael Risch, *Recalibrating Patent Venue*, 77 MD. L. REV. (forthcoming 2018) (manuscript at 13) (Santa Clara Univ., Legal Studies Research Paper No. 10-1). Early data for 2017 show the rate for the Eastern District of Texas at 35%. See *Brief of 22 Law, Economics and Business Professors as Amici Curiae in support of Respondent* (Mar. 8, 2017), at 3 (quoting from Docket Navigator Analytics, *New Patent Cases*, <https://www.docketnavigator.com/stats>).

⁴⁸ See J. Jonas Anderson, *Court Competition for Patent Cases*, 163 U. PA. L. REV. 631, 632-33 (2015) (noting that neither Texas nor Delaware are “home to a major technology industry”).

⁴⁹ *Id.* at 634.

⁵⁰ See generally Yan Leychkis, *Of Fire Ants and Claim Construction: An Empirical Study of the Meteoric Rise of the Eastern District of Texas As a Preeminent Forum for Patent Litigation*, 9 YALE J. L. & TECH. 193 (2007).

⁵¹ Kimberly A. Moore, *Forum Shopping in Patent Cases: Does Geographic Choice Affect Innovation*, 79 N.C. L. REV. 889, 901 (2001).

⁵² See Chien & Risch, *supra* note 47, at 12.

⁵³ *Id.*

⁵⁴ *Id.*

district apart.⁵⁵ One of the most relevant is the Eastern District of Texas's hostility to summary judgment,⁵⁶ which traditionally favors defendants in patent lawsuits.⁵⁷ As patent cases go to trial more often in Eastern Texas than elsewhere in the country, patentees also encounter more sympathetic juries; plaintiffs win 72% of jury trials in this district, as opposed to the national average of 61%.⁵⁸ The district has also historically resisted the transfer of patent cases.⁵⁹ Between 1991 and 2010, transfer motions had a 34.5% success rate in the Eastern District of Texas, well below the 50% average in districts with long-established patent litigation.⁶⁰

In addition to a generally more favorable litigation atmosphere, in the Eastern District of Texas there is the possibility for plaintiffs to learn in advance the identity of the judge assigned to their case—a feature that has been described as “judge-shopping.”⁶¹ This happened in the wake of the implementation of the Patent Pilot Program in 2011.⁶² The Program was designed to increase patent expertise among federal judges⁶³ by allowing reassignment of patent cases to “designated judges”—judges who volunteered to receive patent cases from non-program judges in the same district, or to receive randomly assigned patent cases.⁶⁴ For participating districts, the probability of a specific judge being assigned to a patent case is less than one-third.⁶⁵ The Eastern District of Texas, however, implemented the program in the way that greatly increases these odds:

In contrast to the random assignment norm, the Eastern District of Texas assigns cases based on the division in which they were filed and, more importantly, specifies ex

⁵⁵ In addition to hostility to summary judgment and transfer, “judge-shopping” and quick scheduling, described in this section, Klerman & Reilly have identified additional areas setting the Eastern District of Texas apart as pro-plaintiff: loose interpretation of joinder rules; pro-plaintiff management of multi-Defendant cases; refusal to stay pending reexaminations; adoption of procedural rules that speed up discovery. Daniel Klerman & Greg Reilly, *Forum Selling*, 99 S. CAL. L. REV. 241, 257-70 (2016).

⁵⁶ *See id.* at 251-52 (noting that going to trial usually bolsters the plaintiff's chances of winning a case).

⁵⁷ *See id.* at 251 (quoting John Allison et al., *Understanding the Realities of Modern Patent Litigation*, 92 TEX. L. REV. 1769, 1787-90 (2014)).

⁵⁸ *See id.* at 254 (quoting Allison et al., *supra* note 57, at 1793-94).

⁵⁹ *Id.* at 260-63.

⁶⁰ *See* Andrei Iancu & Jay Chung, *Real Reasons the Eastern District of Texas Draws Patent Cases—Beyond Lore and Anecdote*, 14 SMU SCI. & TECH. L. REV. 299, 315 (2011).

⁶¹ Klerman & Reilly, *supra* note 55, at 251.

⁶² Patent Cases Pilot Program, Pub. L. No. 111-349, 124 Stat. 3674 (2011) (codified as amended at 28 U.S.C. § 137).

⁶³ *See generally* MARGARET S. WILLIAMS ET AL., FED. JUDICIAL CTR., PATENT PILOT PROGRAM: FIVE-YEAR REPORT (Apr. 2016).

⁶⁴ *Id.* at 2.

⁶⁵ Klerman & Reilly, *supra* note 55, at 254-57.

ante via a public order the allocation of cases filed in each division. For example, in 2006 at the outset of the Eastern District's popularity, patentees filing in the Marshall division were told they had a 70% chance of being assigned to Judge Ward, those filing in Tyler a 60% chance of Judge Davis, those filing in Sherman a 65% chance of Judge Schell, and those filing in Texarkana a 90% chance of Judge Folsom.⁶⁶

In addition to the aforementioned factors, the Eastern District of Texas also boasts a reputation for swiftness, having one of the fastest patent dockets in the country.⁶⁷ Median time to trial was 1.8 years during the early to mid-2000s, an average that increased to 2.3 years between 2008 and 2015 as the patent caseload ballooned.⁶⁸

The convergence of these pro-plaintiff factors has thereby made the Eastern District of Texas the preferred forum for patentees. To be sure, forum shopping is not specific to patent litigation and the case of the Eastern District presents extreme characteristics. But it is a case where the outcomes disproportionately impact patent law, both procedurally and substantively. Jeanne Fromer, building on then professor and now Federal Circuit judge Kimberly Moore's empirical work, summarized the detrimental effects of forum shopping associated with patent litigation:⁶⁹ 1) patentees are more likely to win a case for procedural reasons (e.g. transfer of a motion) than through application of substantive patent law, a phenomenon that impacts both the "normative force" of patent law and patent policy as a whole;⁷⁰ 2) the legal system is manipulated by plaintiffs, bringing into question fundamental notions of justice;⁷¹ and 3) significant resources are consumed by litigation on forum choice instead of (or before getting to) substantive issues, impacting economic efficiency.⁷²

Patent forum shopping, while unavoidable to some extent, is ultimately undesirable at the scale reached in the Eastern District of Texas. As permissive patent venue greatly enabled forum shopping among patentees, the impending Supreme Court decision in *TC Heartland v. Kraft* has the potential to change the landscape in patent infringement litigation. This is not to say that, if the Court sides with Heartland, patent forum

⁶⁶ *Id.*

⁶⁷ *Id.* at 21-22.

⁶⁸ *Id.*

⁶⁹ See Fromer, *supra* note 40, 1464-65; but see Kevin M. Clermont & Theodore Eisenberg, *Exorcising the Evil of Forum-Shopping*, 80 CORNELL L. REV. 1507 (1995) (weighing the potential benefits and costs of forum-shopping).

⁷⁰ Fromer, *supra* note 40, at 1464-65.

⁷¹ *Id.* at 1465; see also Anderson, *supra* note 48, at 637.

⁷² Fromer, *supra* note 40, at 1464-65.

shopping would end.⁷³ But litigation would drift away from fora like Eastern Texas and, in this sense, would align patent venue patterns with those observed under general venue rules.

III. OUTCOME OF *TC HEARTLAND V. KRAFT* AND FORESEEABLE CONSEQUENCES

A. *Potential Impact of TC Heartland v. Kraft*

The question presented in *TC Heartland v. Kraft* is “[w]hether 28 U.S.C. § 1400(b) is the sole and exclusive provision governing venue in patent infringement actions and is not to be supplemented by 28 U.S.C. § 1391(c).”⁷⁴ Contrary to the position embraced by the Federal Circuit in *VE Holding*,⁷⁵ *Heartland* argues that the two provisions should not be read together.⁷⁶ Should this view prevail, the Supreme Court would essentially exhume its own 1957 *Fourco Glass* decision and overturn the Federal Circuit; § 1400(b) would once again govern patent venue alone, without § 1391(c) broadening the definition of residence.⁷⁷ Consequently, a Supreme Court reversal of the Federal Circuit means that § 1391(c) (general venue) would no longer expand § 1400(b) (patent venue) to include any district where a corporation might have minimum contacts. Instead, patent venue for corporations would only be proper in one of two scenarios: 1) place of residence (i.e. incorporation) of the defendant; or (2) place where the defendant committed infringing acts and maintains a regular place of business.⁷⁸

Under the scenario in which plaintiffs have a more limited choice of fora in which to sue for patent infringement, there would be significant redistribution of patent cases across districts. Even before *TC Heartland v. Kraft* made its way to the Supreme Court, there was a consensus that a more restrictive approach to patent venue would lead to geographical clustering of patent litigation based on types of technology.⁷⁹ Already in 2010, Jeanne Fromer predicted that, if patent venue were restricted to the principal place of business of a corporation, “pharmaceutical suits w[ould] likely cluster in the District of New Jersey, and software patent suits

⁷³ See *infra*, note 90-92 and accompanying text.

⁷⁴ *Petitioner Brief*, *supra* note 2, at i.

⁷⁵ See *supra* note 35-41 and accompanying text.

⁷⁶ *Petitioner Brief*, *supra* note 2, at 20.

⁷⁷ *Fourco Glass Co. v. Transmirra Prods. Corp.*, 353 U.S. 222, 223-224 (1957).

⁷⁸ Act of Mar. 3, 1897, ch. 395, 29 Stat. 695.

⁷⁹ See Fromer, *supra* note 40, at 1447.

w[ould] likely group themselves in the Northern District of California, the District of Massachusetts, and the Western District of Washington.”⁸⁰

This approach would still translate into a limited number of courts deciding a high number of technology-specific patent cases.⁸¹ It would, however, exclude clustering in districts with no sizeable patent-driven industries and eliminate incentives for courts to compete for patent cases in these geographical areas.

Recent empirical research maps out further implications of a potential win by *Heartland*.⁸² Looking at data from 2015 as a comparison point, if the Supreme Court’s decision were to lead to a restriction of patent venue, 52% of corporations would be forced to choose a different district in which to sue for patent infringement.⁸³ Overall, smaller defendants would benefit the most from a restrictive approach to venue, as the combination of regular place of business and districts where infringing acts occur—the only venue-triggering mechanism in addition to place of incorporation—would likely span across more limited geographical areas.⁸⁴ In fact, predictions show that nearly half of defendants (46%) would be sued in their principal place of business.⁸⁵

Empirical models also show that the type of technology around which companies cluster would play a role in the aftermath of a reversal of the Federal Circuit in *TC Heartland v. Kraft*. “*TC Heartland* would provide venue relief to over 50% of the defendants in all major sectors except finance and biopharma. The defendant industries that would experience the greatest relief, as measured by the proportion of migrating cases, under *TC Heartland* would be services, finance and tech.”⁸⁶

Predictably, the face of this patent litigation redistribution would be the Eastern District of Texas. Patent caseload in the District would drop from the 2015 high of 44% to 14.7%.⁸⁷ Still, with reference to 2015 numbers, the District of Delaware would climb from 9% to 23.8%.⁸⁸ The Northern District of California would also see a significant increase, from 4% to 13%, while the Central District of California (5% to 6.1%) and the

⁸⁰ *Id.*

⁸¹ *Id.* at 1147-148 (stating that proponents of generalist courts (as opposed to specialized patent courts) argue that industry concentration would eventually lead to a natural specialization of judges and juries in these areas); *see generally* DAN L. BURK & MARK A. LEMLEY, *THE PATENT CRISIS AND HOW THE COURTS CAN SOLVE IT* (2009).

⁸² *See* Chien & Risch, *supra* note 47.

⁸³ *Id.* at 34.

⁸⁴ Chien & Risch, *supra* note 47, at 41 (noting that smaller defendants would benefit the most from venue relief because they have “relatively smaller footprints”).

⁸⁵ *Id.* at 35.

⁸⁶ *Id.* at 43.

⁸⁷ *Id.* at 37.

⁸⁸ *Id.*

District of New Jersey (5% to 5.3%) would experience less perceptible changes in patent litigation volume.⁸⁹

The following section situates these potential shifts in the context of the broader discussion of patent cases as outliers in the judicial system. It should be noted, however, that giving special treatment to patent venue—as opposed to broadening it through general venue—has the effect of bringing patent litigation into consonance with patterns observed in non-patent litigation in general, where courts in the District of Delaware play a preponderant role.⁹⁰ Although paradoxical, this is not necessarily an undesirable effect; for example, as seen above, restrictive patent venue would be protective of smaller defendants. Nevertheless, the possibility of a reconfiguration of patent litigation across the United States raises several policy questions that might have motivated the Supreme Court to grant certiorari to *TC Heartland v. Kraft*.

B. Patent Venue Exceptionalism in the Aftermath of TC Heartland v. Kraft

Patent venue reform does not depend exclusively on the Supreme Court ruling in favor of Heartland in the upcoming decision of *TC Heartland v. Kraft*. In fact, there have been multiple proposals to address this issue through legislative approaches.⁹¹ The most recent attempt at reforming patent venue dates to March 2016, when the Venue Equity and Non-Uniformity Elimination Act (“VENUE Act”) was introduced in Congress.⁹² The proposed bill would require that:

Any civil action for patent infringement or any action for a declaratory judgment that a patent is invalid or not infringed (. . .) be brought only in a judicial district

- (1) where the defendant has its principal place of business or is incorporated;
- (2) where the defendant has committed an act of infringement of a patent in suit and has a regular and

⁸⁹ *Id.*

⁹⁰ See Klerman & Reilly, *supra* note 55 (describing Delaware as a “magnet jurisdiction” for bankruptcy cases.).

⁹¹ See generally Xuan-Thao Nguyen, *Justice Scalia’s “Renegade District”: Lessons for Patent Law Reform*, 83 TUL. L. REV. 111, 141, 145-151 (2008) (providing an account of attempts to reform patent venue through legislative action up to 2008).

⁹² Venue Equity and Non-Uniformity Elimination Act of 2016, S.2733, 114th Cong. (2016) [hereinafter *VENUE Act*].

established physical facility that gives rise to the act of infringement;

(3) where the defendant has agreed or consented to be sued in the instant action;

(4) where an inventor named on the patent in suit conducted research or development that led to the application for the patent in suit;

(5) where a party has a regular and established physical facility that such party controls and operates, not primarily for the purpose of creating venue, and has—

(A) engaged in management of significant research and development of an invention claimed in a patent in suit prior to the effective filing date of the patent;

(B) manufactured a tangible product that is alleged to embody an invention claimed in a patent in suit; or

(C) implemented a manufacturing process for a tangible good in which the process is alleged to embody an invention claimed in a patent in suit; or

(6) in the case of a foreign defendant that does not meet the requirements of paragraph (1) or (2), in accordance with section 1391(c)(3).⁹³

For the past year, the VENUE Act has lingered in the Senate Judiciary Committee,⁹⁴ from which it may not emerge,⁹⁵ especially if the holding in

⁹³ VENUE Act, Sec. 2(b).

⁹⁴ *Actions Overview: S.2733—114th Congress (2015-2016)*, LIBRARY OF CONGRESS, <https://www.congress.gov/bill/114th-congress/senate-bill/2733/actions> (last visited Mar. 3, 2017).

⁹⁵ It has been reported that the chairman of the Senate Judiciary Committee has chosen not to support the VENUE Act in favor of pursuing legislative options offering larger scale changes to patent law and policy. See Michael Rosen, *Another Patent Reform Bill Just Died in Congress*, TECHPOLICYDAILY.COM (May 19, 2016, 6:00 A.M.), <http://www.techpolicydaily.com/technology/another-patent-reform-bill-just-died-congress/> (last visited Mar. 3, 2017) (quoting Kate Tummarello & Alex Byers, *Zuckerberg: Facebook Wants to Meet With Conservatives*, POLITICO (May 13, 2016, 10:09 AM), <http://www.politico.com/tipshe>

TC Heartland v. Kraft results in a narrowing of patent venue that would significantly overlap with the scope of the bill.

In any event, even if the Supreme Court chooses not to overturn the Federal Circuit on this issue, there appears to be sufficient momentum behind patent venue reform to trigger a landscape change in the near future. The fact that the Eastern District of Texas is now the poster child for venue abuse beyond the legal and scholarly milieu, capturing popular and political discourse has greatly advanced this cause.⁹⁶ Whether venue reform will come in the form of a Supreme Court decision that is favorable to Heartland, through ad hoc legislative action, or bundled with broader reforms of patent law, however, still remains to be seen.

Regardless of how it occurs, an upcoming reform is poised to break the 27-year link between patent and general venue.⁹⁷ As explained above, shrinking patent venue would produce several desirable effects, curbing forum shopping by patentees to a certain extent and shielding smaller defendants from litigation in remote districts.⁹⁸ Paradoxically, however, allowing patent venue to once again be solely governed by a special venue provision will reinscribe patent litigation into generic corporate litigation trends—patentees will flock primarily to the reemerging District of Delaware, and secondarily to jurisdictions with technology-intensive industries.⁹⁹

Patent law has a storied and controversial reputation for being exceptional,¹⁰⁰ a byproduct of its underlying technical complexity. Yet a reform of patent venue along the lines discussed above, and irrespective

ets/morning-tech/2016/05/zuckerberg-facebook-wants-to-meet-with-conservatives-grassley-open-to-house-ecpa-reform-bill-comment-backlog-at-the-fcc-214288)(last visited Mar. 3, 2017).

⁹⁶ See e.g., Julie Creswell, *So Small a Town, So Many Patent Suits*, N.Y. TIMES (Sept. 24, 2006); Daniel Nazer & Vera Ranieri, *Why Do Patent Trolls Go to Texas? It's Not for the BBQ*, ELECTRONIC FRONTIER FOUNDATION (Jul. 9, 2014), <https://www.eff.org/deeplinks/2014/07/why-do-patent-trolls-go-texas-its-not-bbq>; *Last Week Tonight with John Oliver: Patents* (HBO television broadcast Apr. 19, 2015), https://www.youtube.com/watch?v=3bxcc3SM_KA.

⁹⁷ *VE Holding Corp. v. Johnson Gas Appliance Co.*, 917 F.2d 1574, 1583 (Fed. Cir. 1990).

⁹⁸ See *supra*, note 78-89 and accompanying text.

⁹⁹ See *supra*, note 83-89 and accompanying text.

¹⁰⁰ See Peter Lee, *The Supreme Assimilation of Patent Law*, 114 MICH. L. REV. 1413, 1415 (2016) (noting that “[a]lthough tensions between universality and exceptionalism apply throughout law, they are particularly relevant to patent law”); see also James Donald Smith, *Patent Exceptionalism with Presidential Advice and Consent*, 65 DUKE L.J. 1551 (2016) (stating that the Federal Circuit—in itself an example of an exceptional entity in the configuration of the United States judicial system—is often singled out as the ultimate embodiment of patent exceptionalism, not only because of its stand-alone institutional design, but also (and primarily so) because of its procedural decisions on patent appeals).

of its agent, would result in de facto unexceptional behavior through restrictive application of a special patent procedural provision. Aberrant forum shopping, as embodied by the current patent litigation cluster in the Eastern District of Texas, would greatly diminish. Patent forum shopping would fall to levels that match forum shopping in other areas of the law, with the unsurprising resurgence of the District of Delaware—a district that has historically been a stalwart of different types of corporate litigation. In sum, treating patent venue *specialy* would potentially contribute to *normalize* patentee forum shopping, eradicating some of the most outrageous side effects of the permissive approach to venue that has marked the past 27 years.¹⁰¹

Patent law as a whole—or even the subset of procedural patent law—will not become more or less exceptional because of the Supreme Court decision in *TC Heartland v. Kraft*. But whether reform comes via the Supreme Court or a different channel, patent venue per se is likely to become less aberrant and, in this sense, will produce considerably fewer extreme and exceptional results.

IV. CONCLUSION

For nearly three decades, patent venue was interpreted through a connected reading of the special patent venue statute and the general venue statute. This led to a permissive delineation of venue in patent infringement lawsuits, which in turn generated extreme forms of patentee forum shopping, as well as detrimental court competition for patent litigation.

In *TC Heartland v. Kraft*, the Supreme Court has a chance, and is expected, to overturn the Federal Circuit's approach to venue. If the Court sides with Heartland, plaintiffs will have a more limited choice of fora in patent infringement lawsuits and patent litigation will see a redistribution across districts. The Eastern District of Texas will lose much of its patent caseload, which will migrate to the District of Delaware as well as districts in areas with significant technology hubs.

Even if the Supreme Court upholds the Federal Circuit's position, there is still room for (and some momentum behind) patent reform through legislative action. When reform does occur, venue in patent lawsuits will begin to realign with trends in other fields. Reform will not eradicate

¹⁰¹ The most well-known of these being perhaps the construction of an ice rink by Samsung in front of the Marshall, Texas courthouse, where Samsung has repeatedly been sued for patent infringement, in attempt to maintain a positive image of the company among potential jurors. See *Last Week Tonight with John Oliver: Patents* (HBO television broadcast Apr. 19, 2015), https://www.youtube.com/watch?v=3bxcc3SM_KA at 8:08.

forum shopping, however, but it will prevent exceptional forms of forum shopping like the ones that led to the rise of the Eastern District of Texas as the premier patent district in the country.



School of Law
University of Missouri

**Legal Studies Research Paper Series
Research Paper No. 2017-02**

Wrongly Affirmed Without Opinion

Dennis Crouch

This paper can be downloaded without charge from the Social Sciences Research
Network Electronic Paper Collection at:

<http://ssrn.com/abstract=2909007>

Wrongly Affirmed Without Opinion

DENNIS CROUCH*

Abstract: Many see the Court of Appeals for the Federal Circuit as *the patent court* because of its national jurisdiction over patent cases and its congressional mandate to strengthen and bring uniformity to the patent system, presumably through precedential decision-making. Oddly, for the past few years most of the court's merits decisions in Patent and Trademark Office appeals have not been released with precedential opinions – or even non-precedential opinions for that matter. Rather, most are filed as judgments without any opinion at all. The court's is surprising considering the current high levels of uncertainty the very areas of patent law doctrine and procedure that are being decided without opinion.

This short article raises a surprisingly simple but novel argument: the Federal Circuit is required by statute to issue an opinion in these PTO appeals. As I explain, the statute is plain and clear and is supported by strong policy goals. The court's recent spate of hidden decisions is threatening its public legitimacy. I respect the members of this court so much, and I hope they will use this opportunity to take the next step in the right direction.

DRAFT ARTICLE

* Associate Professor of Law at the University of Missouri School of Law and Co-Director of the Center for Intellectual Property and Entrepreneurship. Professor Crouch is the primary author of Patently-O, the nation's leading patent law blog.

TABLE OF CONTENTS

I. INTRODUCTION 1

II. BACKGROUND AND HISTORY OF THE APPELLATE PROCESS FOR CASES STEMMING FROM THE PATENT & TRADEMARK OFFICE..... 3

 A. *History of the Statutory Provisions Requiring a Written Opinion* 4

 B. *History of the Federal Circuit’s Local Rule Allowing Judgment Without Opinion*..... 6

 C. *Recent Rise in No Opinion Judgments of Patent and Trademark Office Appeals to the Federal Circuit..* 10

III. THE MOST DEFENSIBLE CONSTRUCTION OF THE STATUTES IS THAT THE FEDERAL CIRCUIT IS REQUIRED TO ISSUE AN OPINION WHEN DETERMINING THE OUTCOME OF APPEALS FROM THE PATENT & TRADEMARK OFFICE..... 13

 A. *An Opinion is an Explanation, not Simply the Judgment “AFFIRMED”* 15

 B. *The Statute Requires a Written Opinion*..... 19

 C. *The Purposes of the Provision Support a conclusion that the Provision Requires a Written Opinion* 22

 D. *Congress has power to require the writing of an Opinion.* 25

IV. NEXT STEPS 26

I. INTRODUCTION

In his 1909 treatise on appellate jurisdiction, the future Justice Cardozo explained the role of appellate courts – not simply “declaring justice between man and man, but of settling the law.”¹ In Cardozo’s view, the appellate courts exist “not for the individual litigant, but for the indefinite body of litigants, whose causes are potentially involved in the specific cause at issue.”² Cardozo’s vision more than a century past ago still resonates, and the creation of precedential opinions form a mainstay of appellate court activity nationwide.

However, there is one court of appeals quite different from the rest. The Court of Appeals for the Federal Circuit issues a substantial number of “Rule 36” affirmances without any opinion at all.³ In fact, *most* of the court’s Patent Office merits decisions are being released as so called judicial orders as permitted the court’s local rule for “judgment of affirmance without opinion.”⁴ Although frustrating for parties and court watchers, the approach likely provides substantial short term efficiency gains for the court that has seen a sharp rise in the number of appeals following a set of dramatic statutory revisions and Supreme Court holdings.⁵

The Federal Circuit has repeatedly made clear that its Rule 36 judgments are not opinions, that they offer no reasons for judgment, and that the judgments should not be read as accepting any of the reasoning or findings of the lower court.⁶ Although many have complained about the no-opinion

¹ Benjamin N. Cardozo, *Jurisdiction of the Court of Appeals* (2d ed. 1909) § 6; quoted in Philip Marcus, *Affirmance Without Opinion*, 6 *Fordham L. Rev.* 212, 213 (1937).

² *Id.*

³ Fed. Cir. R. 36.

⁴ *Id.*, See, for example, *International Controls and Measurement Corp. v. Honeywell Intern. Inc.*, 2016 WL 945294 (Fed. Cir. March 14, 2016) (R.36 judgment without opinion).

⁵ See Philip Marcus, *Affirmance Without Opinion*, 6 *Fordham L. Rev.* 212 (1937) (Describing “affirmance without opinion” as “a phenomenon which at one time or another is an unwelcome visitor in almost every law office.”).

⁶ See *Rates Technology, Inc. v. Mediatrix Telecom, Inc.*, 688 F.3d 742, 750 (Fed. Cir. 2012) (“Since there is no opinion, a Rule 36 judgment simply confirms that the trial court entered the correct judgment. It does not endorse or reject any specific part of the trial court’s reasoning. In addition, a judgment entered under Rule 36 has no precedential value and cannot establish ‘applicable Federal Circuit law.’”); *TecSec, Inc. v. International Business Machines Corp.*, 731 F.3d 1336, 1341-44 (Fed. Cir. 2013) (neither issue preclusion, the mandate rule or law of the case applied to an R.36 judgment because

judgments, no one has yet suggested that the practice violates federal statutory law.

In this article, I make the novel argument that the appellate court's steady practice of no-opinion judgments is contrary to law. Both the Patent Act and the Lanham Act require the Federal Circuit to provide an opinion when issuing a judgment on an appeal from the Patent & Trademark Office (PTO).⁷ In particular, both statutes indicate that, upon determination of the case, the Federal Circuit "shall issue ... its mandate and opinion."⁸ Quite simply, Rule 36 Judgments are not opinions and thus do not satisfy the opinion requirement.

As Justice Cardozo explained, long appellate tradition favors explanatory opinions. In addition, the well-known public-notice concerns associated with patent and trademark rights help justify the statutory requirement that opinions be written and included within the publicly available patent or trademark application file history.⁹ This approach is also consistent with the agency law mandate that requires full explanatory written judgments both by examiners and the administrative trial boards (PTAB and TTAB).¹⁰

The gap in appellate practice has become critical with the advent and popularity of post-issuance patent review proceedings (termed 'AIA trials').¹¹ In addition to their large numbers and higher probability of appeal when compared to traditional *ex parte* proceedings, USPTO decisions regarding AIA trials are more likely to be nuanced and directly tied to

the lower court decision had been granted on two independent alternate bases.); Fed. Cir. R. 36 itself that identifies the process as offering a judgment without opinion.

⁷ See 35 U.S.C. § 144 (patent cases) and 15 U.S.C. § 1071(a)(4) (trademark cases).

⁸ *Ibid.*

⁹ See, e.g., *Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co.*, 535 U.S. 722, 732 (2002) (explaining, *inter alia*, the prosecution history documents as important public notice elements); Karen Millane Whitney, *Sources of Patent Prosecution History Must Not Violate Public Notice Requirement*, 32 Seton Hall L. Rev. 266 (2001) ("Public notice is of paramount importance for providing certainty and predictability as to the scope of patent protection."); Jacob S. Sherkow, *Administrating Patent Litigation*, 90 Wash. L. Rev. 205 (2015) (discussing the "public nature of most patent disputes").

¹⁰ See *In re Nuvasive, Inc.*, 842 F.3d 1376, 1380 (Fed. Cir. 2016) (PTAB must fully explain its judgment).

¹¹ See, Ryan J. Gatzemeyer, *Are Patent Owners Given A Fair Fight? Investigating the AIA Trial Practices*, 30 Berkeley Tech. L.J. 531 (2015) (explaining the newly created proceedings and their surprising popularity).

pending infringement litigation. However, in 2015 and 2016, the Federal Circuit released hundreds of no-opinion judgments in these very cases.

After an introductory historical section, The article inches through the construction of the statutory provision—asking whether the statutes actually require that the court issue opinions and whether the Federal Circuit’s Rule 36 judgment orders should be deemed ‘opinions’ under the statute. In addition to the plain language analysis, I look to the legislative history; policy goals; and comparative provisions in the U.S. Code and Rules of Appellate Procedure. Finally, the article offers a ‘what next’ scenario for the court and parties.

II. BACKGROUND AND HISTORY OF THE APPELLATE PROCESS FOR CASES STEMMING FROM THE PATENT & TRADEMARK OFFICE

In general, decisions by the Patent Trial & Appeal Board (PTAB)¹² and Trademark Trial & Appeal Board (TTAB) are appealable to the Court of Appeals for the Federal Circuit.¹³ These administrative judgments stem from both *ex parte* and contested cases.¹⁴

The statutes provide that on appeal the Federal Circuit “shall review the decision from which the appeal is taken on the record before the United States Patent and Trademark Office.”¹⁵ The statutes then require that, “[u]pon its determination the court shall issue to the Director [of the Patent and Trademark Office] its mandate and opinion, which shall be entered of record in the Patent and Trademark Office and shall govern the further proceedings in the case.”¹⁶ It is this statutory requirement—“shall issue . . .

¹² The Patent Trial & Appeal Board was formerly known as the Board of Patent Appeals & Interferences. Its name was changed as part of the Leahy-Smith America Invents Act of 2011, H.R. 1249, 112th Cong. (1st Sess.2011) (AIA) that introduced AIA Trials and eliminated prospective interference proceedings.

¹³ Patent appeals may be taken in cases involving *ex parte* examination, reexaminations, AIA trials, derivation proceedings, and interferences. 35 U.S.C. § 141. Trademark appeals may stem from a registration, interference, opposition, or cancellation proceeding. 15 U.S.C. § 1071(a)(1). In certain cases, a party may choose instead to challenge PTO decisions by filing a civil action in federal district court. See 35 U.S.C. § 145 and 15 U.S.C. § 1071(b).

¹⁴ *Ibid.*

¹⁵ 35 U.S.C. § 144; 15 U.S.C. § 1071(a)(4).

¹⁶ *Ibid.*

its . . . opinion”—that I suggest requires the court to provide an opinion explaining the bases for determination.

A. History of the Statutory Provisions Requiring a Written Opinion

The statutory provisions at issue reach back to at least the year 1893 and the creation of the Circuit Court of Appeals for the District of Columbia. In its enacting statute, the DC Circuit Court of Appeals was authorized to pass judgment on appeals from the Commissioner of Patents.¹⁷ The provision required “[t]hat the opinion of the said court of appeals in every case shall be rendered in writing, and shall be filed in such case as a part of the record thereof.”¹⁸ In 1929, jurisdiction over these appeals shifted to the Court of Customs & Patent Appeals (CCPA).¹⁹ The CCPA authorizing statute required that “the opinion of the Court . . . in every case on appeal from decision of the Patent Office shall be rendered in writing, and shall be filed in such case as part of the record thereof, and a certified copy of said opinion shall be sent to the Commissioner of Patents and shall be entered of record in the Patent Office.”²⁰ The statute was again rewritten with the Patent Act of 1952. At that time Congress added the language that the CCPA’s decisions “shall be confined to the points set forth in the reasons for appeal.”²¹ The revised 1952 statute no longer expressly required a written opinion, but did require that “upon its determination the court shall return to the Commissioner a certificate of its proceedings and decision, which shall be entered of record in the Patent Office and govern further proceedings in the case.”²² In 1962, the Lanham Act was also amended to require that the CCPA’s decisions in trademark appeals “be confined to the points set forth in the reasons of appeal” and that a certification of decision

¹⁷ An Act To establish a court of appeals for the District of Columbia, and for other purposes, 52 Cong. Ch. 74, February 9, 1893, 27 Stat. 434 at Section 9. The Patent Act of 1836 provided for a “board of examiners” appointed by the Secretary of State that has power to overturn decisions of the Patent Commissioner. Patent Act of 1836, Ch. 357, 5 Stat. 117 (July 4, 1836). Nothing in that statute expressly required a written opinion from the selected board, but only that each board member should receive a sum not exceeding ten dollars. *Id.*

¹⁸ *Id.* at Section 10.

¹⁹ An Act to Change the Title of the United States Court of Customs Appeals, and for Other Purposes, 70 Cong. Ch. 488, March 2, 1929, 45 Stat. 1475.

²⁰ *Id.*

²¹ 35 U.S.C. § 144 (1952).

²² *Id.*

be provided to the Patent Office Commissioner that then be entered of record.²³ The Court of Appeals for the Federal Circuit was created in 1982 as the successor court and replacement of CCPA and authority was shifted to the new appellate court. In 1984 the statutes were amended again – this time re-introducing the aforementioned opinion requirement that continues to be in effect.²⁴

Unfortunately, legislative history does not explain the reasons for addition of the opinion requirement in 1984 or its elimination in 1952. According to the accompanying House Judiciary Committee report, the amendments were associated with a streamlining of procedures—a “cost-saving provision.”²⁵ However, those cost savings were expected to be generated by elimination of the statutory requirement for certified copies of papers and evidence being used in the appeal.²⁶ The legislative history made no mention of the new opinion requirement or why it was included in the revision.

The lack of legislative history for the 1984 opinion requirement is at least partially explained by context. At the time of the bill’s passage, the Federal Circuit’s standard operating procedure was to write opinions in *all* cases – a practice that it had adopted from its predecessor court the CCPA who appears to have maintained that practice for the entirety of its existence. Thus, the longstanding *status quo* in 1984 was that all appeals from the Patent and Trademark Office received a written opinion explaining the judgment. As such, I interpret see the legislative requirement more as a codification of practice and returning to statutory roots rather than a ‘fix’ or change of expectations.²⁷

Although seemingly unique at the federal appellate level, the requirement is not unique to American law. The Federal Rules of Civil Procedure, for instance, require district judges to “find the facts specially and state its

²³ Pub. L. No. 87-772, § 12, 76 Stat. 769, 771-72 (1962).

²⁴ PL 98–620 (HR 6163), PL 98–620, November 8, 1984, 98 Stat 3335. (amending both the patent and trademark statutes in parallel).

²⁵ House Report (Judiciary Committee), H.R. REP. 98-619, 5, 1984 U.S.C.C.A.N. 5794, 5796-97.

²⁶ *Id.*

²⁷ Ted Sichelman, *Patent Law Revisionism at the Supreme Court?*, 45 Loy. U. Chi. L.J. 307, 308 (2013) (“When Congress passes a statute codifying judicial doctrine, the judiciary is expected to read that doctrine with fidelity.”).

conclusions of law separately.”²⁸ Similarly, district court judges must “state in open court the reasons” for imposing a particular criminal sentence.²⁹ A number of states have also imposed requirements upon their appellate courts expressly justify their judgments.³⁰ In addition, a general principal of federal administrative law requires written explanations of adverse judgment.³¹ And, the Federal Circuit itself has repeatedly rejected decisions from below for failing to fully explain their decisions.³²

B. History of the Federal Circuit’s Local Rule Allowing Judgment Without Opinion

Written opinions were uncommon in *early* English common law.³³ Although American appellate courts have always kept to the tradition of writing opinions explaining their judgment, no-opinion judgments have also remained popular throughout the nation’s history. For instance, in his 1937

²⁸ Fed. R. Civ. Pro. R. 52(a).

²⁹ 18 U.S.C §35.53(c) (2012).

³⁰ Arizona Constitution Art VI, Section 2 (“The decisions of the court shall be in writing and the grounds stated.”) California Constitution, Art VI, Section 6 (Supreme Court and Appellate Court must make determinations “in writing with reasons stated.”); Maryland CONST. art. IV, §15 (Supreme Court determinations must be in “an opinion, in writing”); MICH. CONST. art. VI, §6 (“Decisions of the supreme court...shall be in writing and shall contain a concise statement of the facts and reasons for each decision and reasons for each denial of leave to appeal.”); OHIO CONST. art. IV, §2(C) (“The decisions in all cases in the Supreme Court shall be reported, together with the reasons therefor.”); WASH. CONST. art. IV, §2 (“In the determination of causes all decisions of the [supreme] court shall be given in writing and the grounds of the decision shall be stated.”); W. VA. CONST. art. VIII, §4 (supreme court shall file the reasons for decision in writing). See also Rene Lettow Lerner, *International Pressure to Harmonize: The U.S. Civil Justice System in an Era of Global Trade*, 2001 B.Y.U. L. Rev. 229, 287 (2001) (“Each of the arbitration regimes specified under NAFTA requires that the award be in writing and the reasons stated.”); and Tex. R. App. P. 47.1 (requires brief but complete decisions from the court of appeals).

³¹ Martin Shapiro, *The Giving Reasons Requirement*, 1992 U. CHI. LEGAL F. 179; See *In re Nuvasive, Inc.*, 842 F.3d 1376, 1380 (Fed. Cir. 2016) (PTAB must fully explain its judgment).

³² *Cutsforth v. MotivePower*, 2016 WL 279984 (Fed. Cir. Jan 22, 2016) (“Because the Board did not adequately describe its reasoning for finding the claims obvious, we vacate and remand for further proceedings.”); *In re Sang-Su Lee*, 277 F.3d 1338 (Fed. Cir. 2002) (“The agency tribunal must make findings of relevant facts, and present its reasoning in sufficient detail that the court may conduct meaningful review of the agency action.”). See Dennis Crouch, *Board Must Explain its Decisions*, Patently-O (January 22, 2016) at <http://patentlyo.com/patent/2016/01/federal-circuit-decisions.html>.

³³ Philip Marcus, *Affirmance Without Opinion*, 6 Fordham L. Rev. 212, 213 (1937).

article *Affirmance Without Opinion*, Philip Marcus found that *most* of the judgments issued by the New York Court of Appeals (the highest New York state court) 1934-1935 were decided without opinion.³⁴ The US Supreme Court has also relied upon the practice through summary affirmances³⁵ and GVR mandates.³⁶

In 1982, in its very first issued decision, the Federal Circuit adopted as binding precedent all decisions of its predecessor courts, including the United States Court of Customs and Patent Appeals.³⁷ That decision, was facilitated by the fact that the CCPA only issued precedential opinions when deciding merits cases. As it began its process, the Federal Circuit also followed this tradition by writing opinions in all cases.

The Federal Circuit's predecessor court, the CCPA, perhaps came closest to reckoning with the requirement of a written opinion in its 1944 *Hamer v. White* decision.³⁸ In *Hamer*, the court affirmed the patent board's decision in an interference proceeding between two sets of competing patent applicants. Rather than writing a complete opinion explaining the issues and its judgment, the court decided to accept the Board's findings. In doing so, however, the 1946 panel's output differed greatly from contemporary Rule 36 affirmances without opinion – notably, the court wrote several pages of text that identified and challenged particular aspects of the Board's opinion as well as the parties' arguments.³⁹ *Hamer* did include an interesting statement regarding the court's duty of a written opinion when reversing.

The decisions of the board, of course, will be available to all who may care to read it after our decision shall have been

³⁴ *Id.* See also, Lee Van der Voo, *Unwritten Opinions Hard to Erase at the Oregon Court of Appeals* (2015) (“more than half the cases reviewed by the state's second-to-highest court end up unchanged, with no written explanation for why the court didn't tinker with them.”) at <http://invw.org/2015/09/16/unwritten-opinions-hard-to-erase-at-the-oregon-court-of-appeals/>.

³⁵ See, *Akron v. Akron Ctr. for Reproductive Health, Inc.*, 462 U.S. 416, 433 n.18 (1983) (explaining the result of a summary affirmance).

³⁶ See Aaron-Andrew P. Bruhl, *The Supreme Court's Controversial Gvrs-and an Alternative*, 107 Mich. L. Rev. 711 (2009).

³⁷ *South Corp. v. United States*, 690 F.2d 1368, 1369 (Fed. Cir. 1982). Martha Dragich, *Citation of Unpublished Opinions As Precedent*, 55 Hastings L.J. 1235, 1307 (2004).

³⁸ *Hamer v. White*, 31 C.C.P.A. 1186, 1189, 1944 CCPA LEXIS 81, 143 F.2d 987, 62 U.S.P.Q. (BNA) 285 (C.C.P.A. 1944).

³⁹ *Id.*

published. Any written review of the evidence made by us could be little more than a paraphrase of what the board said. Were we reversing the decision of the board it would be incumbent upon us to give a written review and point out the reasons for disagreement. Since we are affirming, no such review is necessary.⁴⁰

The opinion did not provide any citation for the source of this full review requirement. The statutory law would have been an obvious source since, at the time, the statute required “the opinion of the Court . . . in every case on appeal from decision of the Patent Office shall be rendered in writing.”⁴¹ That same year, the court in *Kenyon v. Platt* came to a parallel conclusion – writing that “it would serve no useful purpose to here restate in detail the attempts shown in appellees' voluminous record to prove reduction to practice.”⁴² However, as in *Hamer*, the *Kenyon* court provided a substantive opinion on the merits even if it did not completely restate the evidentiary conclusions of the Board.⁴³

By 1989, however, members of the court recognized the increasing potential of a docket backlog and implemented local Rule 36 to allow for affirmances without opinion.⁴⁴ In discussing the rule change then Chief Judge Markey offered this new “third form of disposition where it's not necessary to explain, even to the loser, why he lost.”⁴⁵ The Internal Operating Procedures (IOP) of the Federal Circuit explain that “[t]he workload of the appellate courts precludes preparation of precedential opinions in all cases” and that “unnecessary . . . full opinions . . . impede the rendering of decisions

⁴⁰ *Id.*

⁴¹ An Act to Change the Title of the United States Court of Customs Appeals, and for Other Purposes, 70 Cong. Ch. 488, March 2, 1929, 45 Stat. 1475.

⁴² *Kenyon v. Platt*, 33 C.C.P.A. 748 (C.C.P.A. 1946).

⁴³ *Id.*

⁴⁴ Fed. Cir. R. 36. See *Transcript of the Seventh Annual Judicial Conference of the United States Court of Appeals for the Federal Circuit*, 128 F.R.D. 409, 420 (1989). The local rules had been originally adopted the prior year, but the new Rule 36 was added by amendment the following year.

⁴⁵ *Id.*

and the preparation of precedential opinions in cases which merit that effort.”⁴⁶

Thus, the new rule allowing affirmances without opinion was implemented by unilateral court action five years after Congress amended the statute to require the same court to provide an opinion in PTO cases. And, although any local rule “must be consistent with . . . Acts of Congress,”⁴⁷ the Federal Circuit appears to have – up to now – given no consideration to whether its rule violates the statute. Likewise, as noted by Federal Circuit Judge Evan Wallach in a recent article, Rule 36 decisions have only rarely been the subject of academic literature.⁴⁸

The court’s rules limit Rule 36 judgments to cases where “an opinion would have no precedential value” and at least one of the following is true:

- (a) the judgment, decision, or order of the trial court appealed from is based on findings that are not clearly erroneous; (b) the evidence supporting the jury’s verdict is sufficient; (c) the record supports summary judgment, directed verdict, or judgment on the pleadings; (d) the decision of an administrative agency warrants affirmance under the standard of review in the statute authorizing the petition for review; or (e) a judgment or decision has been entered without an error of law.⁴⁹

Of course, when issuing such a judgment, the court does not identify source of qualification. A number of other circuit courts of appeals have local rules that expressly allow for judgment without opinion.⁵⁰

⁴⁶ Internal Operating Procedures of the Court of Appeals for the Federal Circuit (November 2008) available at <http://www.cafc.uscourts.gov/sites/default/files/IOPs122006.pdf>. The IOP explanation is written as a justification for non-precedential opinions. The IOP does not directly justify the need for the release of judgments without opinions as opposed to non-precedential opinions.

⁴⁷ Fed. R. Appellate Procedure R. 47(a)(1).

⁴⁸ Wallach & Darrow, *Federal Circuit Review of USPTO Inter Partes Review Decisions, By the Numbers: How the AIA Has Impacted the Caseload of the Federal Circuit*, 98 J. Pat. & Trademark Off. Soc’y 105, 113 (2016).

⁴⁹ Fed. Cir. R. 36.

⁵⁰ See 1ST CIR. R. 36(a); 4TH CIR. IOP 36.3; 6TH CIR. R. 36; 10TH CIR. R. 36.1.

The Federal Circuit is not solely a patent court. Rather, the court handles a wide variety of appeals in addition to those arising from the Patent and Trademark Office. These include appeals arising from the Court of Federal Claims; Court of Appeals for Veterans Claims; various boards of contract appeals; United States Merit Systems Protection Board; United States International Trade Commission; and the United States Court of International Trade.⁵¹ In addition, the Federal Circuit hears patent infringement cases stemming from the various United States district courts.⁵² The statutes requiring opinion do not appear to apply to cases arising from these non-PTO fora.

C. Recent Rise in No Opinion Judgments of Patent and Trademark Office Appeals to the Federal Circuit

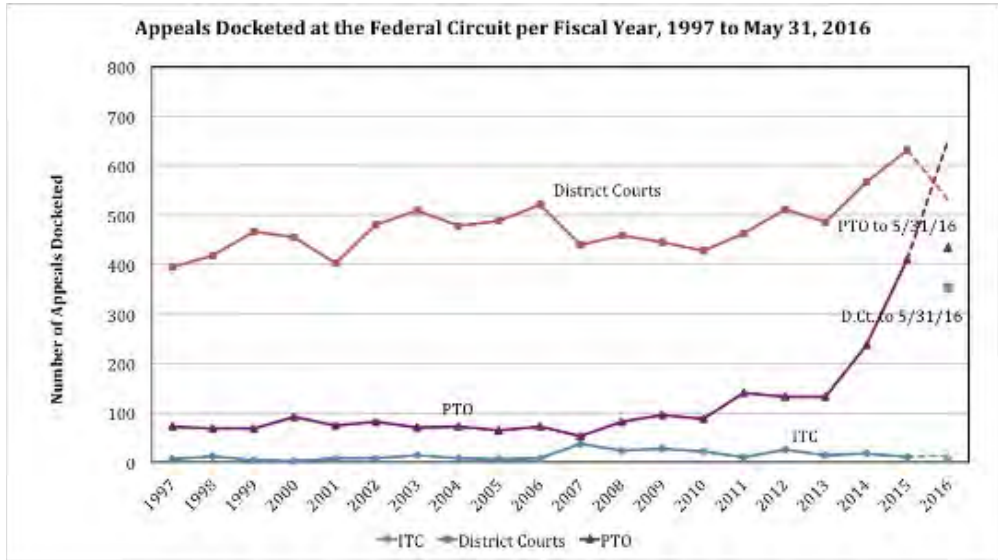
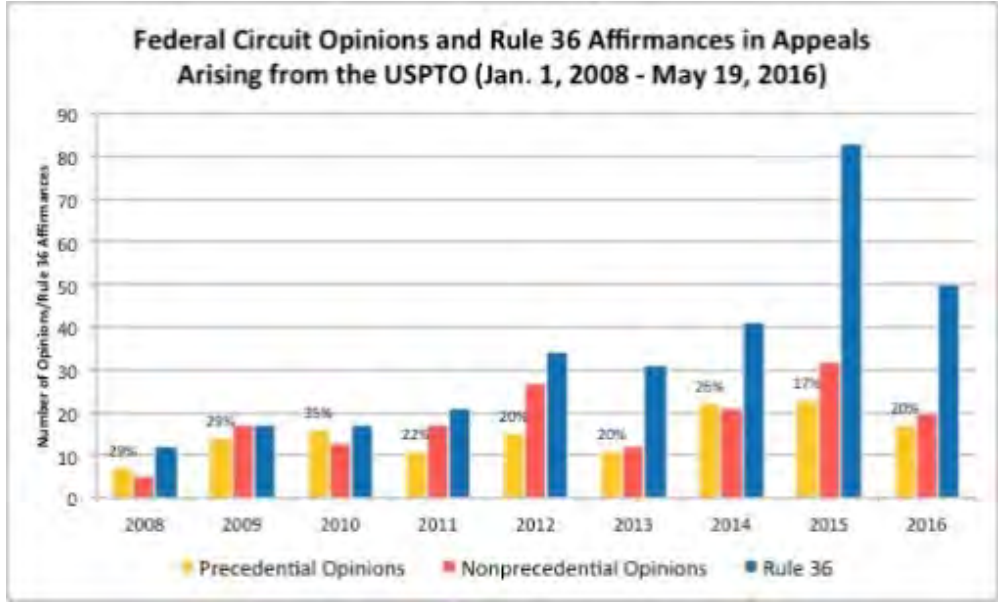
Over the past few years, the number of PTO appeals to the Federal Circuit has risen dramatically and, as you might expect, so has the percentage of R.36 Judgments.⁵³ In 2015 and 2016, for instance, the Federal Circuit decided most PTO appeals via R.36 Judgment. Professor Jason Rantanen originally published a version of the tables below and I have recreated them from updated data.⁵⁴

⁵¹ 28 U.S. Code § 1295.

⁵² *Id.*

⁵³ See Jason Rantanen, *Data on Federal Circuit Appeals and Decisions*, Patently-O (June 2, 2016) at <http://patentlyo.com/patent/2016/06/circuit-appeals-decisions.html>. Jason Rantanen, *Federal Circuit Now Receiving More Appeals Arising from PTO than the District Courts*, Patently-O (2016). See also, *Chief Judge Markey's Eighth Year Report* (1990); and Jennifer A. Tegfeldt, *A Few Practical Considerations in Appeals Before the Federal Circuit*, 3 Fed. Circuit B.J. 237, 248 (1993); Federal Circuit Amicus Brief in *Cpc International, Inc., v. Archer Daniels Midland Company Appeal* Nos. 94-1045, -1060, 4 Fed. Circuit B.J. 269 (1994) (including statistics on the early years of R.36 practice); Marynelle Wilson & Antigone Peyton, *2011 Trademark Law Decisions of the Federal Circuit*, 61 Am. U. L. Rev. 1151 (2012) (“In 2010, the Federal Circuit affirmed 33% of appeals of substantive trademark issues without opinion; in 2011, the court affirmed 40% without opinion.”).

⁵⁴ [NOTE – the tables below are Prof. Rantanen’s. As part of publication, I will include updated tables and will to make this data available to other researchers. Citation to data here.]

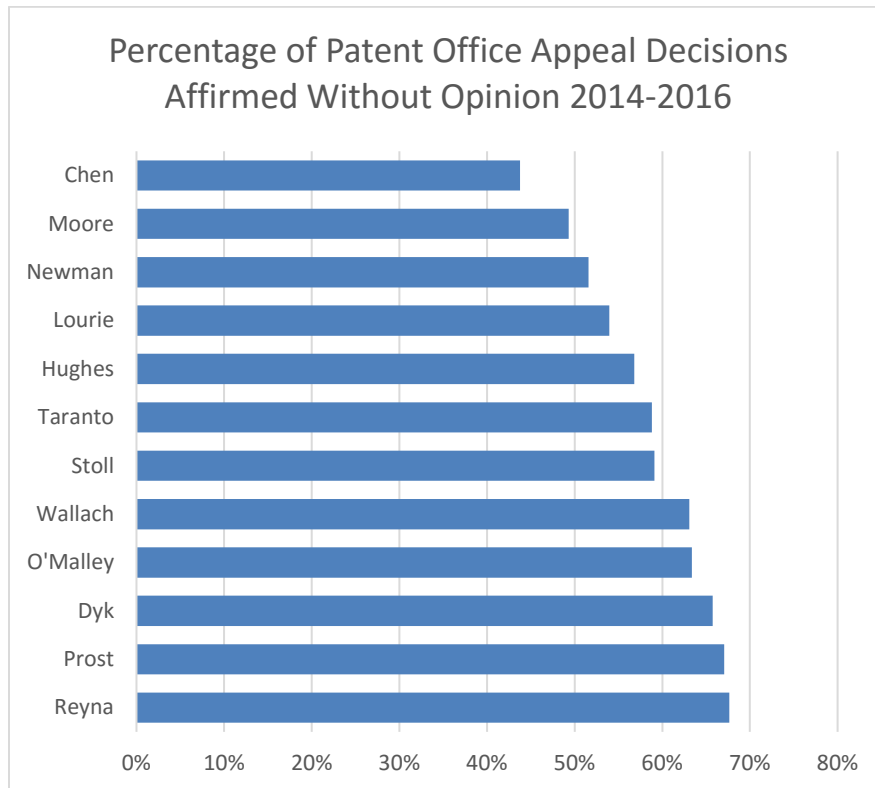


Professor Rantanen writes:

[T]he use of Rule 36 summary affirmances is indeed rising, both in absolute numbers and as a percentage of dispositions. During 2015 and so far in 2016, the Federal Circuit has resolved more appeals arising from the PTO through Rule 36 summary affirmances than with an opinion.⁵⁵

⁵⁵ Jason Rantanen, Data on Federal Circuit Appeals and Decisions, Patently-O (June 2, 2016) at <http://patentlyo.com/patent/2016/06/circuit-appeals-decisions.html>.

The rise in the absolute number of PTO appeals heard by the Federal Circuit is largely driven by implementation of *Inter Partes* Review procedure authorized by the America Invents Act of 2011. Prior to that, both PTO appeals to the Federal Circuit and the percentage of R.36 judgments had been relatively stable for many years.⁵⁶ The Federal Circuit Judges themselves are not uniform in their use of Rule 36 judgments. The chart below shows, for each of the twelve regular judges on the court, the percentage of patent office appeal cases decided during the years 2014 - 2016 that were affirmed without decision.⁵⁷ Judges Chen and Moore are the only judges that are more likely than not to participate in an opinion. Although I included Judge Stoll in the chart, she joined the court in 2015 well after the study-start-date.



⁵⁶ Chief Judge Markey's Eighth Year Report (1990); Jennifer A. Tegfeldt, A Few Practical Considerations in Appeals Before the Federal Circuit, 3 Fed. Circuit B.J. 237, 248 (1993).

⁵⁷ Data was collected using a series of Westlaw searches of Federal Circuit decisions database. [Again, Data will be linked-to as part of publication].

One might expect that R.36 Judgments would be used in only non-controversial open-and-shut cases applying long-decided law.⁵⁸ However, Peter Harter and Gene Quinn have identified many recent R.36 Judgments that focus on substantial and novel of patent law.⁵⁹ In an admittedly one-sided article, the pair writes “the Federal Circuit is simply abnegating its duty [to provide uniform patent doctrine] by refusing to speak on critical issues of patent eligibility under when it has a duty to do so.”⁶⁰

Although Harter & Quinn call for Congressional action to fix the problem, the pair did not consider the opinion requirement already found in the statute.⁶¹ I argue here that Congress has already acted and already requires an opinion in these cases.

III. THE MOST DEFENSIBLE CONSTRUCTION OF THE STATUTES IS THAT THE FEDERAL CIRCUIT IS REQUIRED TO ISSUE AN OPINION WHEN DETERMINING THE OUTCOME OF APPEALS FROM THE PATENT & TRADEMARK OFFICE.

The statutes require that the Federal Circuit “shall issue ... its mandate and opinion” when deciding appeals from the Patent & Trademark Office.⁶² The statutes are so straightforward that it appears almost laughable to argue that no opinion is required. However, as noted above, the court’s standard operating procedures have been seemingly in violation of the statutes for more than a quarter century. That longstanding practice thus requires a more complete interpretation of the statute and consideration of whether the court is in violation. In doing this analysis, however, there is little precedential backdrop because it appears that the court has entirely ignored the statutes. Rather than addressing the potential conflict between the law and its procedures, the court has instead taken no steps to expressly consider whether its no-opinion judgments violate the law.⁶³ This section briefly

⁵⁸ *Joshua v. U.S.*, 17 F.3d 378, 380 (Fed. Cir. 1994) (summary affirmance “is appropriate, inter alia, when the position of one party is so clearly correct as a matter of law that no substantial question regarding the outcome of the appeal exists.”).

⁵⁹ Peter Harter and Gene Quinn, Rule 36: Unprecedented Abuse at the Federal Circuit, IPWatchdog (January 12, 2017) at <http://www.ipwatchdog.com/2017/01/12/rule-36-abuse-federal-circuit/id=76971/> (citing a dozen such cases).

⁶⁰ *Id.* In this context Harter and Quinn argue that the court is violating its own rule that limits R.36 judgments to cases where the resulting “opinion would have no precedential value.”

⁶¹ *Id.*

⁶² 35 U.S.C. § 144 (patent cases) and 15 U.S.C. § 1071(a)(4) (trademark cases).

⁶³ David F. Johnson, *You Can't Handle the Truth!-Appellate Courts' Authority to Dispose of Cases Without Written Opinions*, 22 App. Advoc. 419 (2010) (article does not

steps through statutory construction of the brief statute and its key word “its ... opinion.”

Statutory construction begins with the words of the statute and their plain meaning.⁶⁴ Says the Federal Circuit, “[w]hen a statute is at issue, we begin with the statutory language.”⁶⁵ When clear, courts presumptively follow a statute’s semantic meaning.⁶⁶ “If the statutory language is clear and unambiguous, the inquiry ends with the plain meaning.”⁶⁷ That plain semantic meaning is derived from text as well as the statutory structure.⁶⁸

In our situation, the primary statutory statement at issue is found in 35 U.S.C. § 144. That section is titled “Decision on Appeal” and is housed within Chapter 13 of the Title 35, U.S. Code. The entire chapter focuses on court challenges of Patent Office decisions. Section 144 is the only provision that discusses the decision on appeal. The provision states in full:

The United States Court of Appeals for the Federal Circuit shall review the decision from which an appeal is taken on the record before the Patent and Trademark Office. Upon its

recognize the existence of the particular statute for patent and trademark cases). At least one petitioner challenged the Federal Circuit’s Rule 36 practice as “contrary to appropriate appellate judicial procedure.” See *petition for writ of certiorari* to the U.S. Supreme Court in *Schoonover v. Wild Injun Prod.*, 1995 WL 17035344 (U.S.), *cert denied*, *Schoonover v. Wild Injun Prod.*, 516 U.S. 960 (1995). See also *Petition for rehearing, BIOPOLYMER ENGINEERING, INC. (doing business as Biothera), Plaintiff-Appellant, Massachusetts Institute of Technology, Plaintiff, v. IMMUNOCORP and Biotec Pharmacon ASA, Defendants.*, 2011 WL 1426772 (C.A.Fed.) (challenging R. 36 Judgment for failing to fit within the bounds of the rule itself).

⁶⁴ See, William N. Eskridge, Jr., *The New Textualism*, 37 UCLA L. Rev. 621 (1990) (discussing the debate over what level preference should be given to a text’s plain meaning).

⁶⁵ *McGee v. Peake*, 511 F.3d 1352, 1356 (Fed. Cir. 2008). See also *Williams v. Taylor*, 529 U.S. 420, 431 (2000) (“Statutory interpretation begins with the language of the statute.”).

⁶⁶ See *Ardestani v. INS*, 502 U.S. 129, 135 (1991) (“‘strong presumption’ that the plain language of the statute expresses congressional intent”); *Unexcelled Chem. Corp. v. United States*, 345 U.S. 59, 64 (1953) (“It is not for us then to try to avoid the conclusion that Congress did not mean what it said.”); *Bate Refrigerating Co. v. Sulzberger*, 157 U.S. 1, 33 (1895) (“It is not only the safer course to adhere to the words of a statute, construed in their ordinary import, instead of entering into any inquiry as to the supposed intention of Congress, but it is the imperative duty of the court to do so.”).

⁶⁷ *McGee v. Peake*, 511 F.3d 1352, 1356 (Fed. Cir. 2008).

⁶⁸ *Alexander v. Sandoval*, 532 U.S. 275, 288, 121 S.Ct. 1511, 149 L.Ed.2d 517 (2001); *Norfolk Dredging Co. v. United States*, 375 F.3d 1106, 1110 (Fed.Cir.2004).

determination the court shall issue to the Director its mandate and opinion, which shall be entered of record in the Patent and Trademark Office and shall govern the further proceedings in the case.⁶⁹

The trademark statute is closely parallel. The provision in question is codified at 15 U.S.C. § 1071(a)(4). Section 1701 is generally titled “APPEAL TO COURTS” and subpart (a)(4) is the only portion that directly relates to the court’s decision on appeal. The subpart states in full:

(4) The United States Court of Appeals for the Federal Circuit shall review the decision from which the appeal is taken on the record before the United States Patent and Trademark Office. Upon its determination the court shall issue its mandate and opinion to the Director, which shall be entered of record in the United States Patent and Trademark Office and shall govern the further proceedings in the case. However, no final judgment shall be entered in favor of an applicant under section 1051(b) of this title before the mark is registered, if such applicant cannot prevail without establishing constructive use pursuant to section 1057(c) of this title.⁷⁰

The textual focus for this essay is the requirement in both statutes that “the court shall issue ... its ... opinion.” I deconstruct the analysis here to primarily focus on two questions: (1) does a Rule 36 affirmance without opinion qualify as an “opinion” under the statute and (2) does the statute actually require an opinion.

A. An Opinion is an Explanation, not Simply the Judgment “AFFIRMED”

Black’s Law Dictionary defines an opinion as you might expect, simply: “A court’s written statement explaining its decision in a given case, usu. including the statement of facts, points of law, rationale, and dicta. Also termed judicial opinion.”⁷¹ An opinion is distinct from a judgment (or decision) in that the former requires explanation while the latter does not.⁷²

⁶⁹ 35 U.S.C. § 144.

⁷⁰ 15 U.S.C. § 1071(a)(4).

⁷¹ OPINION, Black’s Law Dictionary (10th ed. 2014).

⁷² Black’s asks readers to compare (cf) an opinion with a judgment, and broadly defines Judgment as “[a] court’s final determination of the rights and obligations of the parties in a case.” JUDGMENT, Black’s Law Dictionary (10th ed. 2014).

The Federal Rules of Appellate Procedure complement this distinction – noting the clerk must enter a judgment both in cases with an opinion as well as in cases where “judgment is rendered without an opinion, as the court instructs.”⁷³

In his useful article titled *What’s An Opinion For?* Professor James B. White explains that the opinion provides much more than simply the case outcome:

For in every case the court is saying not only, “This is the right outcome for this case,” but also, “This is the right way to think and talk about this case, and others like it.” The opinion in this way gives authority to its own modes of thought and expression, to its own intellectual and literary forms.⁷⁴

Although perhaps lofty in its writing, Professor White’s point parallels that of the dictionary – that a judicial opinion must be more than simply the one word “AFFIRMED.”

Some of the readers convinced of my argument that the statute requires an opinion may attempt to foxtrot around any dramatic impact of that conclusion by arguing that the court’s Rule 36 Judgments *are actually offering an opinion*. To be fair, the judgments do offer a one word statement – “AFFIRMED.” And, although miniscule and *de minimus* in its explanatory value, its explanatory value is probably greater than nothing. But “more than nothing” does not equate to an opinion, and offering a one-word judgment – what the court is doing here – is separate and distinct from offering an opinion. Furthermore, this argument appears foreclosed by multiple prior statements in the Federal Rules of Appellate Procedure, local rules, opinions, and prior statements by the court that all directly and unequivocally distinguish between a judgments accompanied by an opinion and those without opinion.⁷⁵

In describing its own procedures, the Federal Circuit writes:

⁷³ Fed. R. App. Proc. R. 36.

⁷⁴ James Boyd White, *What’s an Opinion for?*, 62 U. Chi. L. Rev. 1363 (1995).

⁷⁵ Wallach & Darrow, *Federal Circuit Review of USPTO Inter Partes Review Decisions, By the Numbers: How the AIA Has Impacted the Caseload of the Federal Circuit*, 98 J. Pat. & Trademark Off. Soc’y 105, 113 (2016) (referring to R.36 opinions as “affirmances without opinion.”).

The court's decisions on the merits of all cases submitted after oral argument or on the briefs, other than those disposed of under Rule 36, shall be explained in an accompanying precedential or nonprecedential opinion.⁷⁶

In other words, the court states that opinions explain decisions, and its Rule 36 judgments are not opinions. The perhaps the clearest precedential statements come from the court's 2012 and 2013 decisions of *Rates Technology, Inc. v. Mediatix Telecom, Inc.*⁷⁷ and *TecSec, Inc. v. International Business Machines Corp.*⁷⁸ In both cases, the court held that no information can be gleaned from a R.36 decision other than the lower court's judgment was affirmed. In particular, the court made clear that a R.36 judgment should not be seen as affirming the reasoning of the lower court.

In *Rates Technology*, the plaintiff's attorney James Hicks appealed the trial court's discovery sanctions. In the briefing, Hicks cited to a prior *Rates Technology* case where his conduct had been unsuccessfully challenged. In the prior case, the district court had sided with Hicks (refusing to award sanctions) and the decision was then affirmed by the Federal Circuit on appeal in a R.36 judgment without opinion.⁷⁹ Rebuking Hicks, the Federal Circuit wrote:

Rule 36 allows us to “enter a judgment of affirmance without opinion” under certain circumstances. Since there is no opinion, a Rule 36 judgment simply confirms that the trial court entered the correct judgment. It does not endorse or reject any specific part of the trial court's reasoning. In addition, a judgment entered under Rule 36 has no precedential value and cannot establish “applicable Federal Circuit law.”⁸⁰

⁷⁶ Internal Operating Procedures of the Court of Appeals for the Federal Circuit, 1 (November 2008) available at <http://www.cafc.uscourts.gov/sites/default/files/IOPs122006.pdf>.

⁷⁷ *Rates Technology, Inc. v. Mediatix Telecom, Inc.*, 688 F.3d 742, 750 (Fed. Cir. 2012).

⁷⁸ *TecSec, Inc. v. International Business Machines Corp.*, 731 F.3d 1336, 1341-44 (Fed. Cir. 2013).

⁷⁹ *Rates Technology Inc. v. Tele-Flex Systems, Inc.*, No. 00-1184, 2000 WL 1807411 (Fed.Cir. Dec. 8, 2000) (R.36 Judgment).

⁸⁰ *Rates Technology, Inc. v. Mediatix Telecom, Inc.*, 688 F.3d 742, 750 (Fed. Cir. 2012). See also *U.S. Surgical Corp. v. Ethicon, Inc.*, 103 F.3d 1554, 1556 (Fed.Cir.1997) and

The next year *TecSec*, the court faced a situation where it had previously affirmed a district court judgment of non-infringement via a R.36 judgment without opinion.⁸¹ Later *TecSec* appealed the same claim construction that had been previously appealed, but now involving a different party accused infringer. In the second appeal, the Federal Circuit found no preclusion – either from doctrines of issue preclusion, the mandate rule, or law of the case because the lower court decision had been granted on two independent alternate bases and therefore “it is impossible to glean which issues this court decided when we issued the Rule 36 judgment.”⁸² In other words, the *TecSec* court found that Rule 36 judgment does not bar relitigating the identical issues appealed unless the issues were necessary for the affirmance.⁸³ Since a Rule 36 affirmance could be based upon a purely procedural matter raised *sua sponte* and *sub silentio* by the appellate court, it is not clear the unstated reasons for such a judgment could ever truly be isolated to the this degree. The Supreme Court has similarly explained that its summary dispositions 'affirm[] only the judgment of the court below, and no more may be read into [its] action than was essential to sustain that judgment.’⁸⁴ The analysis of these cases may as a detour, but I suggest that it offers substantial contour and backing to the simple claim that a Rule 36 Judgment is not an opinion.

A substantial amount of academic literature focuses on the distinction between published and unpublished opinions, including some question of whether unpublished opinions should even count as opinions.⁸⁵ The literature does not include a discussion of no-opinion judgments, but those judgments go well beyond the prior perceived line of non-publication.

Looking at its structure, the statute also calls-for issuance of a mandate that appears to be separate and distinct from the opinions. The mandate is the

Chicago & N. W. Ry. v. Board of Supervisors, 182 Iowa 60, 165 N. W. 390 (1917) (no inference of approval for purpose of stare decisis from affirmance without opinion).

⁸¹ *TecSec, Inc. v. Int'l Bus. Machs. Corp.*, 466 Fed.Appx. 882 (Fed.Cir.2012) (R.36 Judgment).

⁸² *TecSec, Inc. v. International Business Machines Corp.*, 731 F.3d 1336, 1341-44 (Fed. Cir. 2013).

⁸³ *Id.*

⁸⁴ *Ill. State Bd. of Elections v. Socialist Workers Party*, 440 U.S. 173, 182-83 (1979).

⁸⁵ Gilbert S. Merritt, *The Decision Making Process in Federal Courts of Appeals*, 51 Ohio St. L.J. 1385 (1990) (raising “the definitional problem of what is an opinion.”);

actual order from the appellate court to the lower body.⁸⁶ A mandate in the Federal Courts is a term of art defined largely by the Federal Rules of Appellate Procedure.⁸⁷ The rules spell out that a “formal” mandate may be issued but otherwise include “a certified copy of the judgment, a copy of the court’s opinion, if any, and any direction about costs.”⁸⁸ Note here that the rules again make a distinction between the judgment and the opinion and recognize that an appellate court may issue a judgment without opinion.⁸⁹ That distinction matches with FRAP Rule 36 that recognizes that judgments may be “rendered without an opinion, as the court instructs.”⁹⁰

B. The Statute Requires a Written Opinion.

I suggest that the best interpretation of the statutory phrase that “the court shall issue ... its ... opinion” requires issuance of an opinion.

However, a *conceivable* interpretation of the statute would require issuance of the opinion only if such an opinion exists – rendering the requirement merely an illusory request. If the Federal Circuit’s opinion does not exist, then “its opinion” is simply a nullity. This end run interpretation somewhat parallels the Federal Circuit’s interpretation of the “best mode” requirement of 35 U.S.C. § 112(a). Section 112(a) states that the inventor “shall set forth the best mode contemplated by the inventor.” In interpreting the statute, the court has repeatedly held that the best mode need only be submitted when the inventor actually “had a best mode of practicing the claimed invention.”⁹¹ As interpreted, section 112(a) does not require that the inventor actually take any steps to identify a best mode and the provision simply does not impact inventors who never identify the best mode of their invention.

Although linguistically cute, the best mode analogy fails for several reasons, beginning with the comparative language of the statutes. Section 112(a) includes the express caveat of best mode “contemplated by the inventor,”

⁸⁶ MANDATE, Black’s Law Dictionary (10th ed. 2014) (1. An order from an appellate court directing a lower court to take a specified action.).

⁸⁷ Fed. R. App. Proc. 41.

⁸⁸ Id.

⁸⁹ [quote FRAP 41 in force in 1984 when Congress enacted the law.]

⁹⁰ Fed. R. App. Proc. R. 36.

⁹¹ Chemcast Corp. v. Arco Indus. Corp., 913 F.2d 923, 927–28, 16 USPQ2d 1033, 1036 (Fed.Cir.1990).

and it is that caveat that forms the linguistic hook for limiting the doctrine. The distinction is revealed by comparing the best mode statutory language with another requirement of Section 112(a) – that “the specification shall contain a written description of the invention.”⁹² The written description provision lacks the “contemplated by the inventor” caveat and consequently is interpreted as a requirement that must be met – not one excused by a plea that the inventor did not have a written description on hand. Section 112(b) of the Patent Act includes a similar requirement that the patent application include claims that cover “the subject matter which the inventor ... regards as the invention.”⁹³ As with the written description requirement, this requirement will not be excused by the inventor’s lack of understanding of what he or she “regards as the invention.” For a patentee, providing the written description is part of the *quid pro quo* exchange for receiving patent rights. In the same way, forming a reasoned decision is the role of every appellate court, and the statute simply requires that those reasons be written and released.

Reaching a judgment in each merits case is both an inherent duty of the appellate court and a statutory requirement, and that judgment requires the court to at least form a reasoned opinion that justifies the outcome. In other words, the court must make its judgment based upon the law at hand applied to the facts presented.⁹⁴ Even when issuing a judgment without releasing an opinion, the court will have formed reasons for its judgment that are at least self-satisfyingly sufficient. Anything less would be a reversible arbitrary judgment and likely a violation of the due process rights of the parties.⁹⁵

The statutory requirement of issuing “its ... opinion” is not an illusory request that can be avoided by simply not writing an opinion. Rather, the statute requires a transformation of the court’s internal decision justifications into a document that becomes part of the record of the case as it returns to the PTO.

⁹² 35 U.S.C. § 112(a).

⁹³ 35 U.S.C. § 112(b).

⁹⁴ Amicus Brief, *Cpc International, Inc., v. Archer Daniels Midland Company Appeal Nos. 94-1045, -1060*, 4 Fed. Circuit B.J. 269, 273 (1994) (“A panel that affirms a district court decision under Rule 36 certainly has some reasons for doing so. Those reasons should ordinarily be available to the parties and to the public to demonstrate that issues have been considered and that there is a sound basis for the court's decision.”).

⁹⁵ A party has no constitutional right to appeal from a lower court opinion *See Furman v. United States*, 720 F.2d 263, 264 (2d Cir. 1983). However, such a right likely does exist for an agency action denying or canceling patent rights.

Although the actual inner-workings of the appellate courts are often shrouded, it appears that the appellate panels do create and exchange informal opinions – either oral or written - of the cases that eventually lead to the R.36 judgments.⁹⁶ The Court’s Internal Operating Procedures require that the panel “hold at least one conference” to discuss and decide the outcome.⁹⁷ And, a panel’s “election to utilize a Rule 36 judgment shall be unanimous among the judges of a panel.”⁹⁸ To wit, in a recent discussion of Rule 36 opinions, Federal Circuit Judge Reyna reportedly indicated that “when a Rule 36 affirmance is delivered the court has done 90% of the work” needed for a written opinion.⁹⁹ The court wrote as much in its 1997 *U.S. Surgical* decision:

Appeals whose judgments are entered under Rule 36 receive the full consideration of the court, and are no less carefully decided than the cases in which we issue full opinions.¹⁰⁰

There may be occasions where an appellate panel can reach judgment without agreement upon the reasons for judgment. The Supreme Court has recognized in the non-patent context that “sometimes the members of the court issuing an unexplained order will not themselves have agreed upon its rationale, so that the basis of the decision is not merely undiscoverable but nonexistent.”¹⁰¹ Of course, this unique situation will not explain the hundreds of no-opinion judgments issued of late nor does it face the particular statutory requirement at issue here.

Finally, it makes sense to note that the full text of the statutes requires the court to issue both “its mandate and opinion.” It would be absurd to interpret

⁹⁶ The IOP

⁹⁷ Internal Operating Procedures of the Court of Appeals for the Federal Circuit, 1 (November 2008) available at <http://www.cafc.uscourts.gov/sites/default/files/IOPs122006.pdf>.

⁹⁸ *Id.* At IOP at 9.5.

⁹⁹ Peter Harter and Gene Quinn, Rule 36: Unprecedented Abuse at the Federal Circuit, IPWatchdog (January 12, 2017) at <http://www.ipwatchdog.com/2017/01/12/rule-36-abuse-federal-circuit/id=76971/>.

¹⁰⁰ *U.S. Surgical Corp. v. Ethicon, Inc.*, 103 F.3d 1554, 1556 (Fed. Cir. 1997).

¹⁰¹ *Ylst v. Nunnemaker*, 501 U.S. 797, 803 (1991).

this provision as requiring neither a mandate nor an opinion because without either, the case is never decided.¹⁰²

C. The Purposes of the Provision Support a conclusion that the Provision Requires a Written Opinion

In addition to requiring the court to issue an opinion, the statutes-at-issue here also require that the opinion “shall be entered of record in the Patent and Trademark Office and shall govern the further proceedings in the case.”¹⁰³ This additional requirement reflects the longstanding recognition of the public nature of patent rights. Even more than other property rights, information regarding a patent’s scope and ownership have long been available to the public. Patent rights are effectively use- and alienation-limits on items otherwise under the absolute control of members of the public. Although a company may own its own copper and steel, patent rights held by others will limit what machines can be built from those raw materials. In his 2007 public notice article, Professor Michael Risch explains:

One of the primary functions of a patent is to provide public notice about the claimed invention. This goal has been a primary rationale underlying patent jurisprudence for at least 150 years. . . . The public should not be deprived of rights supposed to belong to it, without being clearly told what it is that limits these rights.”¹⁰⁴

In *Lear v. Adkins*, the Supreme Court explained “the strong federal policy favoring the full and free use of ideas in the public domain.”¹⁰⁵ The scope of those rights is found in the patent documents, including patent application file histories.¹⁰⁶ Of course, patent documents are now more complex than

¹⁰² John F. Manning, *The Absurdity Doctrine*, 116 Harv. L. Rev. 2387, 2388 (2003) (statutes interpreted to avoid absurd results).

¹⁰³ 35 U.S.C. § 144.

¹⁰⁴ Michael Risch, *The Failure of Public Notice in Patent Prosecution*, 21 Harv. J.L. & Tech. 179 (2007) (quoting *Merrill v. Yeomans*, 94 U.S. 568, 573 (1877)).

¹⁰⁵ *Lear, Inc. v. Adkins*, 395 U.S. 653, 674, 89 S. Ct. 1902, 1913, 23 L. Ed. 2d 610 (1969).

¹⁰⁶ See, e.g., *Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co.*, 535 U.S. 722, 732 (2002) (explaining, *inter alia*, the prosecution history documents as important public notice elements); *Phillips v. AWH Corp.*, 415 F.3d 1303, 1318–19 (Fed. Cir. 2005) (en banc) (Consideration of “the indisputable public records consisting of the claims, the specification and the prosecution history” best serves “the public notice function of patents.”); Timothy R. Holbrook, *Patents, Presumptions, and Public Notice*, 86 Ind. L.J.

ever. A single invention is ordinarily reflected in a set of differentiated claims, regularly broken divided into multiple patent applications filed in the same or different global patent offices, forming a patent family. Further, multiple families of patents may be owned by the same company and, although not formally related, may substantially overlap in coverage.¹⁰⁷ And, although the Federal Circuit sets precedential authority over all federal district courts (in patent matters), the USPTO does not have that authority. The collective result of this is that the Federal Circuit’s judicial reasoning – even when affirming a PTO determination cancelling one or more patent claims – will likely be highly relevant to later cases involving the same or closely related inventions either in the US or abroad. The statute recognizes this by requiring the opinion be issued and placed in the publicly available patent file.

The record appears unquestionable now that “Congress gave the Federal Circuit a clear mandate to bring uniformity” and expertise to patent law.¹⁰⁸ The problem, of course, is that the substantial number of no-opinion judgments leaves the community and decision-makers without substantial guidance. A recent example involves the law of patent eligibility that has been upended in recent years by a series of Supreme Court decisions.¹⁰⁹

779, 789 (2011) (prosecution history is “in the public domain”); Karen Millane Whitney, *Sources of Patent Prosecution History Must Not Violate Public Notice Requirement*, 32 Seton Hall L. Rev. 266 (2001) (“Public notice is of paramount importance for providing certainty and predictability as to the scope of patent protection.”); Jacob S. Sherkow, *Administrating Patent Litigation*, 90 Wash. L. Rev. 205 (2015) (discussing the “public nature of most patent disputes”).

¹⁰⁷ See for example, Jonathan H. Ashtor, *Opening Pandora's Box: Analyzing the Complexity of U.S. Patent Litigation*, 18 Yale J. L. & Tech. 217, 219 (2016)(complexity of patent litigation, including impact of USPTO AIA Trials).

¹⁰⁸ Quoting Paul R. Gugliuzza, *The Federal Circuit As A Federal Court*, 54 Wm. & Mary L. Rev. 1791, 1798 (2013); See H.R. Rep. No. 97-312, at 20-23 (1981); S. Rep. No. 97-275, at 5-6 (1981); *Holmes Group, Inc. v. Vornado Air Circulation Sys., Inc.*, 535 U.S. 826, 838 (2002) (Stevens, J., concurring in part and concurring in the judgment) (describing the Federal Circuit as a “specialized court that was created, in part, to promote uniformity”); *Immunocept, LLC v. Fulbright & Jaworski, LLP*, 504 F.3d 1281, 1285-86 (Fed. Cir. 2007) (emphasizing “Congress' intent to remove non-uniformity in the patent law”); *Cybor Corp. v. FAS Techs., Inc.*, 138 F.3d 1448, 1455 (Fed. Cir. 1998) (en banc) (citing the court’s “role in providing national uniformity”); Christopher A. Cotropia, “*Arising Under*” *Jurisdiction and Uniformity in Patent Law*, 9 Mich. Telecomm. Tech. L. Rev. 253 (2003) (“The very uniformity Congress attempted to introduce through its creation of the Federal Circuit may become undone by the Supreme Court’s interpretation of § 1295(a)(1) and § 1338(a).”)

¹⁰⁹ See *Alice Corp. Pty. v. CLS Bank Int’l*, 134 S. Ct. 2347 (2014); *Mayo Collaborative Servs. v. Prometheus Labs., Inc.*, 132 S. Ct. 1289, 1293 (2012); Rochelle Cooper Dreyfuss, *Giving the Federal Circuit a Run for Its Money: Challenging Patents in the*

However, jurisprudence in this area is entirely following an example-based approach – meaning that each incremental decision offers important insight into the scope of patent rights available. The benefit of expertise and uniformity here is not simply to provide insight to other judicial bodies. Rather, the vast majority of patents are never litigated, but are used as part of a rights-transfer, either in a license, sold outright, or used as collateral. Another important example involves the America Invents Act of 2011 that has been seen as the most substantial modification of U.S. patent law since 1952. Although the new law raises a large number of both substantive and procedural issues, most of the appeals to the Federal Circuit have been decided without opinion.¹¹⁰ The Court’s failure to provide guidance in these areas of the law creates direct uncertainty in these areas.¹¹¹

PTAB, 91 Notre Dame L. Rev. 235 (2015); Taylor, David O., *Confusing Patent Eligibility* (March 1, 2016). Tennessee Law Review, Forthcoming; SMU Dedman School of Law Legal Studies Research Paper No. 265. Available at SSRN: <https://ssrn.com/abstract=2754323> (no administrable framework);

¹¹⁰ Rochelle Cooper Dreyfuss, *Giving the Federal Circuit A Run for Its Money: Challenging Patents in the PTAB*, 91 Notre Dame L. Rev. 235, 241 (2015) (“Most of the cases have been decided without written opinion”). See *Infra*.

¹¹¹ See, *Federal Circuit Amicus Brief in Cpc International, Inc., v. Archer Daniels Midland Company*, Appeal Nos. 94-1045, -1060, 4 Fed. Circuit B.J. 269 (1994) (“A Rule 36 affirmance of a decision involving a controversial legal issue provides little guidance to patent owners, or to the business community, and leaves the parties with little basis to challenge the correctness of any decision either factually or legally.”); Peter Harter and Gene Quinn, *Rule 36: Unprecedented Abuse at the Federal Circuit*, IPWatchdog (January 12, 2017) at <http://www.ipwatchdog.com/2017/01/12/rule-36-abuse-federal-circuit/id=76971/>. See also Erin F. Delaney, *Analyzing Avoidance: Judicial Strategy in Comparative Perspective*, 66 Duke L.J. 1, 2 (2016) (judicial avoidance). Some commentators have drawn a link between administrative agency action and that of the Federal Circuit jurisprudence – especially in its review of PTO action. See Paul R. Gugliuzza, *The Federal Circuit As A Federal Court*, 54 Wm. & Mary L. Rev. 1791, 1823 (2013) (“The court [at times] acts not as an appellate court, reviewing the decision of an inferior tribunal, but as an agency administrator, dictating the issues the PTO must consider.”); Ryan Vacca, *Acting like an Administrative Agency: The Federal Circuit En Banc*, 76 Mo. L. Rev. 733, 744-49 (2011) (analogizing the Federal Circuit’s en banc process to administrative rule making.); Sapna Kumar, *The Accidental Agency?*, 65 Fla. L. Rev. 229, 269-74 (2013). This analogy only works, however, to the extent that the court issues instructive opinions. “Indeed, the U.S. Supreme Court has repeatedly held that the duty to give reasons is a function of due process in the administrative context.” Mathilde Cohen, *When Judges Have Reasons Not to Give Reasons: A Comparative Law Approach*, 72 Wash. & Lee L. Rev. 483, 529 (2015). Finally, a number of researchers have found that judges fail to follow the requisite guidelines for when to publish opinions. Stephen J. Choi, Mitu Gulati & Eric A. Posner, *What Do Federal District Judges Want? An Analysis of Publications, Citations, and Reversals*, 27 J.L. & ECON. ORG. 1, 7 (2011) (pointing out that despite the existence of guidelines directing judges when to publish opinions, research shows that judges fail to follow them); see also Donald R. Songer, Danna Smith & Reginald S. Sheehan, *Nonpublication in the United*

D. Congress has power to require the writing of an Opinion.

A hallmark of the American constitutional structure is the separation of powers between the three primary branches of government. This system of checks and balances is not, however, structured so that each branch operates independently - without being controlled by the other. Rather, the structure is that each branch has substantial control over the other.

Although major separation of powers issues continues to be debated, those generally occur at the level of the highest court. It appears certain that at least that Congress holds the original power granted by the Constitution to set the federal rules of civil and appellate procedure for “Tribunals inferior to the Supreme Court.”¹¹²

It is now generally agreed that the power to make rules for lower federal courts has been delegated to the Supreme Court by Congress, and that Congress may withdraw or modify that power.¹¹³

Professor Robert J. Pushaw explains that an understanding of this framework goes at least to Chief Justice Marshall’s decision in *Wayman v. Southard*.¹¹⁴

Chief Justice Marshall expressed “no doubt whatever” about Congress’s Article I power to make procedural rules that it deemed “necessary and proper” to enable federal courts to fulfill their Article III functions, such as rendering judgments. Indeed, Congress had a “duty” to “expressly and directly provide” either a complete procedural code or the “great outlines” of one, as it had done in the Process Act by

States District Courts: Official Criteri Versus Inferences from Appellate Review, 50 J. POL. 206, 207 (1988).

¹¹² U.S. CONST. art. 1 § 8, cls. 9. Though much of the congressional authority was delegated to the courts through the Rules Enabling Act of 1934. See Stephen B. Burbank, *The Rules Enabling Act of 1934*, 130 U. PA. L. REV. 1015, 1097-98 (1982); *Hanna v. Plumer*, 380 U.S. 460, 472 (1964) (recognizing congressional authority).

¹¹³ W. Brown, *Federal Rulemaking: Problems and Possibilities*, FJC-R-81-5 (1981); Adam Behar, *The Misuse of Inherent Powers When Imposing Sanctions for Discovery Abuse: The Exclusivity of Rule 37*, 9 Cardozo L. Rev. 1779, 1799–800 (1988) (“the Federal Rules are an exercise of Congress’ legislative power.”)

¹¹⁴ 23 U.S. (10 Wheat.) 1 (1825).

instructing federal judges to follow state practice circa 1789.¹¹⁵

The bottom line here is that Congress certainly has power to enact rules of civil procedure including its requirement here that an opinion explaining judgment be written for a particular class of appellate cases.

IV. NEXT STEPS

Immediate Action: The first and most obvious next step is that the Court of Appeals for the Federal Circuit should immediately stop issuing R.36 judgments without opinion in appeals stemming from Patent & Trademark Office actions. Although substantial harm has already occurred through what appears to be unrecognized error, the gap can be immediately filled by an internal unilateral action of the court. Barring action by the court as a whole to modify its internal operating procedure, each appellate judge is empowered to at least block the use of R.36 judgments in their cases since the Court's rules require unanimous agreement of the panel judges.¹¹⁶

Although a full analysis of standing is outside of the scope of this article, it appears clear that a party who has lost on R.36 certainly would have a right to request a panel rehearing, rehearing *en banc*, or to petition the Supreme Court for *writ of certiorari* so long as the timeline has not expired. In the same way that the appellate court rejects lower court decisions that fail to comply with the explanatory requirements of Rule 52(a), the Supreme Court (or *en banc* Federal Circuit) could rebuke a panel that failed to comply with the opinion requirement of the Patent and Trademark Acts. The court, however, may well force a petitioner to also show that the non-opinion error is not simply harmless error.

Although all of the members of the court have been on R.36 panels, the court has never considered the extent that the Patent and Trademark statutes contravene those judgments without opinion. Thus, an ordinary panel of three judges will be fully authorized to rule on the question without

¹¹⁵ Robert J. Pushaw, Jr., *The Inherent Powers of Federal Courts and the Structural Constitution*, 86 Iowa L. Rev. 735, 752 (2001). Henry P. Chandler, *Some Major Advances in the Federal Judicial System*, 31 F.R.D. 307, 505 (1962-63) ("Among some judges and legal scholars the opinion was held that determining the rules of courts was solely a judicial function and that the legislative branch had no right to touch it But the entire course of legislation concerning the federal courts from the beginning of the federal government was against the theory.").

¹¹⁶ Internal Operating Procedures of the Court of Appeals for the Federal Circuit, 9.5 (November 2008) available at <http://www.cafc.uscourts.gov/sites/default/files/IOPs122006.pdf>.

upsetting prior precedent. Of course, there are several hundred Rule 36 decisions from recent years that are now likely too ancient to revive.

Although I do not prefer this approach, we might recognize here that the opinion requirement does not call for a substantial or lengthy opinion. It would likely be sufficient for the court to include a less-than comprehensive opinions such as: “Affirmed based upon the doctrine of *res ipse loquitur*”; “affirmed upon authority of [prior precedential case]”; or “affirmed based upon the opinion below.”¹¹⁷

Should Congress Step-In to Change the Law: An important question in the background is whether Congress should step-in to change the law – relieving the court of its burden of writing opinions in all PTO appeals. In my view, the answer to that question is clearly no. There is no general problem with issuing opinions on the merits. The primary concern will be docketing and potential backlog, and I am confident that the court will take measures to ensure efficient adjudication while conforming to the law.¹¹⁸ Rule 36 dispositions also offer the potential of providing quick justice – “an immediate answer to the parties on appeal” in a way that may be advantageous.¹¹⁹ However, court has historically been willing to hear emergency motions for expedited hearing when such a case arise. In this situation, Congress should not step-in to rescue the court from writing opinions unless the need is actually shown. A third justification for the no-opinion approach is that it allows for slower-development of the precedential edifice. Many decision makers gather significant input from a variety of sources prior to finally deciding upon a course of action. A difficulty of the appellate court precedential system is that a decision must be made in the first case addressing an issue – perhaps before considering important ramifications. If that decision is precedential then it builds an edifice difficult to later tear down. Although this tale has some interesting features – perhaps for a separate article – it does not fit the storyline for no-

¹¹⁷ Philip Marcus, *Affirmance Without Opinion*, 6 Fordham L. Rev. 212, 213 (1937).

¹¹⁸ The Federal Circuit’s docket is greatly simplified as compared to other appellate courts because of the lack of a criminal law docket. But see *Taylor v. McKeithen*, 407 U.S. 191, 194 n.4 (1972) (expressing concern over lower court dockets).

¹¹⁹ Jennifer A. Tegfeldt, A Few Practical Considerations in Appeals Before the Federal Circuit, 3 Fed. Circuit B.J. 237, 248 (1993) (“Unlike published and non-precedential opinions, a Rule 36 case is not circulated to the full court before issuance. This permits parties to receive a decision, in some cases, in very short order after the oral hearing. For example, in the case of *Upjohn Co. v. Medtron Laboratories, Inc.*, No. 93-1137 (Fed.Cir. Aug. 9, 1993), the court heard argument on August 5 and issued its order two working days later.”).

opinion judgments because those decisions are supposed to be limited to only opinions that “would have no precedential value.”

In many ways, the Federal Circuit is facing a crisis of public confidence based largely upon external changes to the legal landscape but compounded by the court’s masked jurisprudence – hidden in the large number of summary affirmances. “Justice must not only be done, it must appear to be done.”¹²⁰ Opinions provide a major source of legitimacy for the court.¹²¹ And hidden decisions create the risk of either sloppy or intentionally misguided actions as well as later inconsistent rulings on the same set of facts.¹²² Furthermore, in the patent context, the public demands and is entitled to a decision that both settles the law at hand and that also declares the facts in a way that becomes part of the case file and that will guide later courts in interpreting the patent family. I have so much respect the members of this court. I hope they will use this opportunity to take the next step in the right direction.

¹²⁰ W.L. Reynolds & W. M. Richman, “An Evaluation of Limited Publication in the United States Court of Appeals: The Price of Reform”, 48 U.Chi.L.Rev. 573, 603-04 (1981).

¹²¹ Chad M. Oldfather, Writing, Cognition, and the Nature of the Judicial Function, 96 Geo. L.J. 1283 (2008).

¹²² Dodell, N., On Wanting to Know Why, 2 Fed. Cir. Bar J. 465, 466 (1992).



Portfolio Media, Inc. | 111 West 19th Street, 5th floor | New York, NY 10011 | www.law360.com
Phone: +1 646 783 7100 | Fax: +1 646 783 7161 | customerservice@law360.com

Kappos Calls For Abolition Of Section 101 Of Patent Act

By Ryan Davis

Law360, Washington (April 12, 2016, 4:32 PM EDT) -- The former director of the U.S. Patent and Trademark Office on Monday called for the abolition of Section 101 of the Patent Act, which sets limits on patent-eligible subject matter, saying decisions like Alice on the issue are a "real mess" and threaten patent protection for key U.S. industries.

David Kappos, now a partner at [Cravath Swaine & Moore LLP](#), said at the Federal Circuit Judicial Conference in Washington that the U.S. Supreme Court's high-profile Section 101 decisions in Mayo, Myriad and Alice, and the way lower courts have interpreted them, have made it too difficult to secure patents on biotechnology and software inventions.

The high court's decisions were aimed at barring patents on abstract ideas, natural phenomena and laws of nature, but they have been interpreted so broadly that important inventions may no longer be patent-eligible, Kappos said. Parts of patent law besides Section 101 can be used to limit what is patent-eligible without hindering patents on legitimate innovations, he said.

"It's time to abolish Section 101, and the reason I say that is that Europe doesn't have 101 and Asia doesn't have 101 and they seem to be doing just fine in constraining patent-eligible subject matter," he said.

Kappos, who led the patent office from 2009 to 2013, said he has begun telling clients that patent protection for biotechnology and software inventions is more robust in other countries like China and Europe and they are better off seeking patents in those places, because of the way U.S. courts have interpreted Section 101.

"It's a disturbing trend for the U.S. to take those two areas, which are the crown jewel of the innovation economy, and provide less protection for them than other countries," he said.

Kappos said that patent officials in other nations have reacted with "bemusement" as the U.S. invalidates patents on Section 101 grounds, while foreign companies that compete with American businesses see a golden opportunity in the reduced patent protection for software and biotechnology.

"Imagine the glee of international competitors who no longer have to steal U.S. technology in those critical areas, since they can now take it for free," he said.

Section 101 states only that "whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title."

The statute does not identify special areas that are not patent-eligible, but the courts have developed case law that abstract ideas and laws of nature can't be patented. Those exceptions to patent-eligibility have gained new force after the high court invoked them to invalidate patents on human genes in Myriad and a computerized method of hedging risk in Alice.

Since those decisions, courts have cited them to invalidate numerous software and biotech patents

that they have said claim simply abstract ideas or natural phenomena, although some judges have said they find it difficult to apply the high court's reasoning to other patents.

The recent decisions mean that the law on patent-eligibility is now "a real mess, and you could actually use much stronger language than that," Kappos said.

"We're dealing with a litmus test, an 'I know it when it see it' test," he said. Thousands of USPTO examiners and hundreds of judges have to make that call, and "we're now seeing real chaos," Kappos said.

Courts can ensure that patents are not allowed on basic concepts while protecting true innovations by faithfully applying other areas of patent law to ensure that patents are not obvious or anticipated or lacking in written description, he said.

At the time Section 101 was written, those areas of the law were less well-developed, and the patent-eligibility requirement was designed to serve as a "backstop" to prevent patents on basic concepts, Kappos said. Now that those areas are far better developed, Section 101 is no longer needed, he said.

At the same time U.S. courts have been frequently invalidating patents under Section 101, courts in other countries like Germany have been moving in the opposite direction, issuing decisions that favor patent owners and "putting their foot down in favor of innovation," Kappos said.

The argument that Section 101 is no longer needed was recently made to the Supreme Court by Eli Lilly & Co. and other companies in an amicus brief urging the justices to review a Federal Circuit decision that invalidated Sequenom Inc.'s genetic testing patent for claiming only a natural phenomenon.

--Editing by Brian Baresch.

All Content © 2003-2017, Portfolio Media, Inc.



Suffolk University
Law School

Legal Studies Research Paper Series
Research Paper 13-18
June 4, 2013

**What Should Be Patentable?—A Proposal for Determining the
Existence of Statutory Subject Matter Under 35 U.S.C. Section
101**

Andrew Beckerman-Rodau
Professor of Law & Co-Director, Intellectual Property Law
Concentration, Suffolk University Law School

This paper can be downloaded without charge from the Social Science
Research Network: <http://ssrn.com/abstract=2203564>

120 Tremont Street
Boston, MA 02108

www.law.suffolk.edu

WAKE FOREST JOURNAL OF BUSINESS
AND INTELLECTUAL PROPERTY LAW

VOLUME 13

SPRING 2013

NUMBER 2

**WHAT SHOULD BE PATENTABLE?—A PROPOSAL FOR
DETERMINING THE EXISTENCE OF STATUTORY
SUBJECT MATTER UNDER 35 U.S.C. SECTION 101**

Andrew Beckerman-Rodau[†]

I. INTRODUCTION	147
II. THE CONTROLLING STATUTE—SECTION 101	151
III. PATENT LAW: UNDERLYING GOALS AND JUSTIFICATIONS	155
IV. THE IMPORTANCE OF PREDICTABILITY.....	162
V. PREDICTABILITY AND STATUTORY SUBJECT MATTER.....	172
VI. PROPOSED TESTS IN ADDITION TO THE MACHINE- OR-TRANSFORMATION TEST.....	178
A. STATEMENT OF THE MACHINE-OR- TRANSFORMATION TEST	179
B. PROPOSED TESTS	180
1. <i>Preemption Test and Insignificant Limitation Test</i>	181
2. <i>Equation Test</i>	181
3. <i>Human Intervention Test</i>	182
4. <i>Data Comparison Test</i>	183
C. APPLICATION OF THE PROPOSED TESTS TO PROCESS CLAIMS	183
1. <i>The Prometheus Laboratories Decision</i>	183
2. <i>The Diehr Decision</i>	185
3. <i>The Flook Decision</i>	187

[†] Professor of Law & Co-Director, Intellectual Property Law Concentration; Suffolk University Law School, Boston, Massachusetts. B.S. (Engineering), 1976, Hofstra University; J.D., 1981, Western New England University School of Law; L.L.M., 1986, Temple University School of Law. Email: arodau@suffolk.edu; website: <http://lawprofessor.org>. Copyright © 2012, Andrew Beckerman-Rodau. Special thanks to Kip Bodi (Suffolk University Law School class of 2013) for research assistance.

4. <i>The Metabolite Decision</i>	188
5. <i>The Biogen Idec Decision</i>	190
6. <i>The PerkinElmer Decision</i>	192
7. <i>The Association for Molecular Pathology Decision</i>	193
8. <i>The Bilski Decision</i>	195
9. <i>The In re Comiskey Decision</i>	197
10. <i>The CLS Bank International Decision</i>	198
D. APPLICATION OF THE PROPOSED TESTS TO PRODUCT CLAIMS	200
1. <i>The Association for Molecular Pathology Decision</i>	200
2. <i>The State Street Bank Decision</i>	201
VII. CONCLUSION	203

ABSTRACT

The question of what type of inventions should be protectable under patent law is a controversial issue that has received significant attention. Recent Supreme Court decisions reject a bright-line test in favor of a more open-ended approach to determining patent eligibility. Unfortunately, this provides limited guidance to lower courts and consequently the issue remains unsettled. This article will examine the scope of patent-eligible subject matter defined by Patent Law section 101. It will look at judicial interpretation of the statute including exceptions judicially engrafted into the statute by the Supreme Court. Additionally, the competing policy concerns underlying the statute will be examined. It will be argued that this statute should be analyzed, interpreted, and applied consistently with the usual rules generally applied by courts. This requires understanding that underlying policies are often inconsistent or competing. Such policies must therefore be balanced in crafting an applicable rule. Any resulting rule will be imperfect because it will potentially be over- or under-inclusive. Additionally, it will have disproportionate effects on different industries. Nevertheless, the importance of a uniform and predictable rule outweighs these deficiencies. Rather than propose a single rule, several rules gleaned from Supreme Court decisions will be proposed in light of the fact that patents cover many different technologies and patent claims can be drafted in a multitude of ways. Violation of any of the proposed rules means the patent claim at issue is not patent-eligible subject matter.

I. INTRODUCTION

The question of what type of inventions should be protectable under patent law is a controversial issue that has received significant media attention.¹ It has also been addressed in scholarly commentary.² Moreover, it has been addressed by the U.S. Supreme Court³ and the Federal Circuit⁴ in numerous decisions. Despite this attention, the issue is still unsettled.⁵ Recent Supreme Court decisions suggest a desire by the Court to restrict the expansion of patentable subject

¹ See, e.g., Adam Liptak, *Supreme Court Hears Case on Patents for Individualized Medicine*, N.Y. TIMES, Dec. 8, 2011, at B3; Jackie Crosby, *Patent Case has High Stakes for Medical Tests*, MINN. STAR TRIBUNE, July 3, 2011, at 1D.

² See, e.g., Dolly Y. Wu & Steven M. Geiszler, *Patentable Subject Matter: What is the Matter with Matter?*, 15 VA. J.L. & TECH. 101, 101 (2010) (arguing that the Federal Circuit was incorrect when it held electromagnetic signals were not patentable subject matter). *But see* David Olson, *Taking the Utilitarian Basis for Patent Law Seriously: The Case for Restricting Patentable Subject Matter*, 82 TEMP. L. REV. 181, 181 (2009) (arguing too many things are patentable today). See generally Can Cui, *Patent Eligibility of Molecules: "Product of Nature" Doctrine After Myriad*, 2 N.Y.U. INTELL. PROP. & ENT. L. LEDGER 73, 73 (2011); Daniel F. Spulber, *Should Business Method Inventions be Patentable?*, 3 J. OF LEGAL ANALYSIS 265, 265 (2011).

³ See, e.g., *Mayo Collaborative Servs. v. Prometheus Labs., Inc.*, 132 S. Ct. 1289, 1294 (2012) (concluding that a method for determining the proper dosage to treat a disease was not patent-eligible subject matter); *Bilski v. Kappos*, 130 S. Ct. 3218, 3229-30 (2010) (finding that the method of hedging commodities in the energy market not patent-eligible subject matter); *Diamond v. Chakrabarty*, 447 U.S. 303, 305-06, 318 (1980) (holding that manmade living microorganism was patent-eligible subject matter); *Gottschalk v. Benson*, 409 U.S. 63, 64, 73 (1972) (holding that a method of programming computer to convert binary-coded decimal numerals into pure binary numbers not patent-eligible subject matter). See also *Ass'n for Molecular Pathology v. USPTO*, 689 F.3d 1303 (Fed. Cir. 2012), *cert. granted*, 81 U.S.L.W. 3305 (U.S. Nov. 30, 2012) (No. 12-398).

⁴ See, e.g., *In re Comiskey*, 554 F.3d 967, 969-70 (Fed. Cir. 2009) (holding that a method for resolving a dispute via arbitration standing alone was not patentable subject matter); *In re Nuijten*, 500 F.3d 1346, 1357 (Fed. Cir. 2007) (holding that electromagnetic signals are not patentable subject matter).

⁵ See, e.g., Olson, *supra* note 2, at 181 (stating that significant disagreement exists among courts, the Patent & Trademark Office, and commentators about what should and should not be patentable subject matter); see also *MySpace, Inc. v. Graphon Corp.*, 672 F.3d 1250, 1259-60 (Fed. Cir. 2012) (noting the lack of agreement on the question of patentable subject matter under the relevant statute, 35 U.S.C. § 101 (2006), referring to case law dealing with this issue as a "swamp of verbiage"); Dennis Crouch, *Federal Circuit Continues Split on Patentable Subject Matter*, PATENTLY-O BLOG (Mar. 6, 2012, 12:49 PM), <http://www.patentlyo.com/patent/2012/03/federal-circuits-continues-split-on-patentable-subject-matter.html> (noting that Federal Circuit judges disagree on the scope of patentable subject matter).

matter.⁶ However, those decisions appear to reject a bright-line test in favor of a more open-ended philosophical approach.⁷ Unfortunately, this provides limited guidance to lower courts and consequently the issue continues to be unsettled.⁸ Moreover, it is unclear if all the judges on the U.S. Court of Appeals for the Federal Circuit, which hears virtually all appeals in patent disputes,⁹ fully agree with this restrictive trend.

Most inventions fit within the statutory requirements defining patent-eligible inventions.¹⁰ Often, assertions that an invention falls outside this requirement arise when new technology gains economic importance.¹¹ The advent of software as an important freestanding industry generated significant litigation with regard to whether software should be eligible for patent protection.¹² Research and development work in the biotech industry raised the question of whether patents should be granted for isolated genetic material¹³ and

⁶ See generally *Mayo Collaborative Servs.*, 132 S. Ct. at 1301 (“The Court has repeatedly emphasized . . . a concern that patent law not inhibit further discovery by improperly tying up the future use of laws of nature.”).

⁷ In *Bilski v. Kappos*, 130 S. Ct. 3218, 3227 (2010), the Supreme Court rejected the Federal Circuit’s reliance on the machine or transformation test as the sole test to determine whether a process is patent eligible. The Court held that the test is merely a clue or investigative tool for determining patent eligibility of a process. *Id.* The Court then rejected the adoption of categorical rules for determining patent eligibility. *Id.* at 3229-30.

⁸ See generally Asher Hodes, *Diagnosing Patentable Subject Matter*, 26 BERKELEY TECH. L.J. 225, 228-29 (2011) (finding that many commentators have noted the limited guidance given to lower courts by the Supreme Court decision in *Bilski v. Kappos*).

⁹ ROGER SCHECHTER & JOHN THOMAS, INTELLECTUAL PROPERTY: THE LAW OF COPYRIGHTS, PATENTS AND TRADEMARKS 286 (2003).

¹⁰ See 35 U.S.C. § 101 (2006).

¹¹ See generally AMY LANDERS, UNDERSTANDING PATENT LAW § 23.01, at 298 (2d ed. 2012) (writing that what is patent-eligible subject matter tends to be an issue when new areas of technology produce patent claims that differ from precedent).

¹² See *Gottschalk v. Benson*, 409 U.S. 63, 71-73 (1972) (noting uncertainty with regard to whether computer programs are patent-eligible subject matter); see also Brianna Dolmage, *The Evolution of Patentable Subject Matter in the United States*, 27 WHITTIER L. REV. 1023, 1026-35 (2006) (discussing how courts initially viewed software as unpatentable subject matter but later decided it was patentable subject matter); Andrew Rodau, *Protecting Computer Software: After Apple Computer, Inc. v. Franklin Computer Corp.*, 714 F.2d 1240 (3d Cir. 1983), *Does Copyright Provide the Best Protection?*, 57 TEMP. L. Q. 527, 529-32 (1984) (providing an overview of the evolution of judicial decisions with regard whether software was patent-eligible subject matter).

¹³ See *Ass’n for Molecular Pathology v. USPTO*, 689 F.3d 1303 (Fed. Cir. 2012) (citing *Mayo Collaborative Servs. v. Prometheus Labs., Inc.* 132 S.Ct. 1289 (2012)), *cert. granted sub nom.* *Ass’n for Molecular Pathology v. Myriad Genetics*, 132 S.Ct. 1794 (2012).

for living microorganisms created in a laboratory.¹⁴ The patentability of software-based business methods utilized in the financial services industry¹⁵ and in Internet commerce created controversy.¹⁶

Patents have taken on increased economic importance today.¹⁷ Enterprises use patents defensively by amassing patent portfolios to protect a technology space for future technology development.¹⁸ Likewise, they are used offensively to protect existing market share.¹⁹

¹⁴ See *Diamond v. Chakrabarty*, 447 U.S. 303 (1980) (holding in a 5-4 decision that a living, manmade microorganism is patentable subject matter).

¹⁵ See *State St. Bank & Trust Co. v. Signature Fin. Group*, 149 F.3d 1368, 1370 (Fed. Cir. 1998) (reversing the trial court and upholding the patent eligibility of a computerized system for a mutual fund investment system and noting that business method patents are patent-eligible subject matter). *But see eBay Inc. v. MercExchange, L.L.C.*, 547 U.S. 388 (2006) (Kennedy, J., concurring) (referring negatively to the “potential vagueness and suspect validity of some [business method] patents”); *Bilski v. Kappos*, 130 S.Ct. 3218, 3229 (2010) (citing 35 U.S.C. § 273(b)(1) (2006) for the recognition of business method patents, but noting “some business method patents raise special problems in terms of vagueness and suspect validity”); *cf. Leahy-Smith America Invents Act*, Pub. L. 112-29 § 14(a), 125 Stat. 284 (2012) (specifically barring patents on methods or other inventions that are deemed a “strategy for reducing, avoiding, or deferring tax liability”).

¹⁶ See, e.g., Ryan Paul, *Controversial Amazon 1-Click Patent Survives Review*, ARSTECHNICA, <http://arstechnica.com/tech-policy/2010/03/controversial-amazon-1-click-patent-survives-review/> (last visited Nov. 14, 2012) (discussing U.S. Patent No. 5,960,411 (Issued Sept. 28, 1999), which covers a method of enabling consumers to purchase things on-line with a single click in lieu of having to enter credit card and shipping data repeatedly). *But see Tim Worstall, Amazon Loses 1-Click Patent*, FORBES, July 7, 2011, available at <http://www.forbes.com/sites/timworstall/2011/07/07/amazon-loses-1-click-patent/> (last visited Dec. 28, 2012).

¹⁷ See generally Andrew J. Sherman, *Fueling Rapid Growth Enterprises*, TECHAMERICA FOUNDATION, at 4 (July 2012), available at http://www.techamericafoundation.org/content/wp-content/uploads/2012/07/Sherman-Fueling_Rapid_Growth_Enterprises.pdf (“It is now estimated that 80 percent of the market value of the S&P 500 companies is due to intangible assets, compared to just 20 percent for physical and financial assets.”); Nick Timiraos, *Business Battle Over Patent Laws*, WALL ST. J., June 9, 2007, at A7 (stating that about one third of the value of all U.S. stocks is currently comprised of intangible assets which includes intellectual property).

¹⁸ See generally Stuart Graham & Ted Sichelman, *Why Do Start-Ups Patent?*, 23 BERKELEY TECH. L.J. 1063, 1065-66 (2008) (patents can be used defensively to limit being subjected to infringement suits; they can also be used to create leverage in cross licensing negotiations with competitors).

¹⁹ See, e.g., Owen Thomas, *As It Gears Up For War With Samsung, Apple Adds To Its Patent Pile*, BUSINESS INSIDER (Nov. 15, 2012), <http://www.businessinsider.com/apple-rockstar-bidco-nortel-patents-2012-11> (last visited Nov. 16, 2012) (Apple buys 1,024 patents and patent applications to bolster its position against competitors in the mobile device market). Although many patents have little or no commercial value and hence create minimal market power

continued . . .

Non-practicing entities utilize patents to wring licensing revenue from technology producers.²⁰ All of these activities are facilitated by broad patent claims that maximize the scope of patent protection. Hence, patents often include at least some claims that attempt to push the limits of what is protectable subject matter in order to maximize the potential economic value of the patent.²¹ It is these claims that tend to raise patent-eligible subject matter issues.²²

This article will examine the scope of patent-eligible subject matter defined by Patent Law section 101.²³ It will look at both the legislative history and judicial interpretation of the statute, including exceptions or limitations judicially engrafted into the statute by the Supreme Court. Additionally, the competing policy concerns underlying the statute, which have been enunciated by the Court, will be examined. It will be argued that this statute should be analyzed, interpreted, and applied consistently with the usual rules generally applied by courts. This requires understanding that underlying policies are often inconsistent or competing. Such policies must therefore be balanced in crafting an applicable rule. Any resulting rule will be imperfect because it will potentially be over or under inclusive. Additionally, it will have disproportionate effects on different industries. Nevertheless, the importance of a uniform and predictable

(*Ill. Tool Works Inc. v. Indep. Ink, Inc.*, 547 U.S. 28, 43 n. 4 (2006)), amassing a large portfolio of interrelated patents covering a particular field or product line can be a significant economic barrier to competitors entering the field. *See generally* John Barton, *Antitrust Treatment of Oligopolies with Mutually Blocking Patent Portfolios*, 69 ANTITRUST L.J. 851 (2002) (large patent portfolios can support oligopolies); R. Polk Wagner & Gideon Parchomovsky, *Patent Portfolios*, (U of Penn. Law Sch., Public Law Working Paper 56; U of Penn, Inst. for Law & Econ Research Paper No. 04-16, 2005), *available at* <http://ssrn.com/abstract=582201> (discussing how the value of the patent portfolio may be greater than value of individual patents in the portfolio).

²⁰ *See* Graham & Sichelman, *supra* note 18, at 1064-65. *See generally* LANDERS, *supra* note 11, at §1.06, 15-17 (overview of how patents are utilized by business enterprises).

²¹ Patents generally contain multiple claims that vary from being very broad to being very narrow. Each claim stands on its own, so narrow and intermediate claims may be valid even if a broad claim is found invalid. This provides an incentive to include at least some very broad claims to maximize patent coverage. *See* MARTIN ADELMAN, RANDALL RADER, JOHN THOMAS & HAROLD WEGNER, *CASES AND MATERIALS ON PATENT LAW* 533 (2d ed. 2003).

²² *See, e.g.*, Andrew Beckerman-Rodau, *The Problem with Intellectual Property Rights: Subject Matter Expansion*, 13 YALE J.L. & TECH. 35, 59-60 (2010) (discussion of U.S. Patent No. 4,940,658, which contains thirty-four claims covering a medical diagnostic test; noting that one claim with an extremely broad scope was the subject of litigation which ended up in the Supreme Court).

²³ 35 U.S.C. § 101 (2006).

rule outweighs these deficiencies. The article will conclude with a set of suggested rules gleaned from Supreme Court decisions that can be used to provide more predictable results with regard to determining if a patent claim covers patent-eligible subject matter.

II. THE CONTROLLING STATUTE—SECTION 101

Patent Law section 101 states that “[w]hoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.”²⁴ This statute can be dissected into several requirements. The first portion of the statute, which states, “[w]hoever invents or discovers,” arguably indicates that only an actual inventor can obtain a patent.²⁵ The reference to “new” is a basic requirement of patent law typically referred to as the novelty requirement,²⁶ which is dealt with in more detail by another section of the patent law.²⁷ The word “useful” has been held to be the basis for the utility requirement, which mandates that an invention must have some use or utility to be eligible for patent protection.²⁸ Finally, the statute lists several categories—“process, machine, manufacture, or composition of matter”—that an invention must fall within to be patent-eligible subject matter.²⁹ Whether an invention falls within one of these statutory categories has been subject to substantial judicial review.³⁰

²⁴ *Id.*

²⁵ This is traditionally referred to as the derivation requirement. See J. THOMAS MCCARTHY, ROGER SCHECHTER & DAVID FRANKLYN, MCCARTHY’S DESK ENCYCLOPEDIA OF INTELLECTUAL PROPERTY 151 (3d ed. 2004).

²⁶ See *id.* at 406; BLACK’S LAW DICTIONARY 1092 (7th ed. 1999).

²⁷ 35 U.S.C. § 102 (2006).

²⁸ See MCCARTHY, *supra* note 25, at 650-53 (“To be patentable, an invention must have ‘utility’ in the sense that it can operate to perform some ‘useful’ function for society.”); see also JANICE MUELLER, PATENT LAW 235 (3d ed. 2009) (“[A] useful invention is one that possesses utility.”).

²⁹ These categories are interchangeably referred to as defining “patentable subject matter,” “patent eligible subject matter” or “statutory subject matter.” See generally William T. Goglia, Annotation, *Supreme Court’s Views as to What is Patentable Subject Matter Under Federal Law as “Process,” “Machine,” “Manufacture,” or “Composition of Matter”*, 65 L. Ed. 2d 1197 (2012).

³⁰ More specifically, very little controversy has existed over whether an invention is a machine, manufacture, or composition of matter. See ROBERT HARMON, PATENTS AND THE FEDERAL CIRCUIT § 2.2(a)(i), at 55 (7th ed. 2005). Most of the controversy has addressed the meaning of process. See *id.* See generally Goglia, *supra* note 29, at 1201 (“Of the terms process, machine, manufacture, and composition of matter, the term “process” has been defined by the court more often than the others.”).

Interpreting the meaning of these statutory categories requires a multi-step process.³¹ First, the language of the statute must be examined to determine its plain meaning.³² This includes ascertaining if the statute provides specific definitions of relevant terms.³³ Second, in the absence of any definition, or if the meaning of the statute is unclear or ambiguous, the underlying purpose of the statute must be ascertained and utilized to understand the legislative intent of the statute.³⁴

Patent Law section 101 provides a definition of the term “process” which states that “[t]he term ‘process’ means process, art or method, and includes a new use of a known process, machine, manufacture, composition of matter, or material.”³⁵ This definition can be broken down into two parts. The first part tells us that the terms process, art and method are essentially interchangeable. The second part of the statute, which follows the word “includes,” merely lists several examples of acceptable processes. Arguably, this second part is merely illustrative and not limiting in light of the ordinary meaning of the term “includes” in a statute.³⁶ Therefore, a process can be viewed

³¹ See *Conn. Nat’l Bank v. Germain*, 503 U.S. 249, 253 (1992) (“[The] canons of construction are no more than rules of thumb that help courts determine the meaning of legislation, and in interpreting a statute a court should always turn first to one . . .”).

³² See *id.* at 253-54 (“We have stated time and again that courts must presume that a legislature says in a statute what it means and means in a statute what it says there.”). In *Bilski v. Kappos*, 130 S. Ct. 3218, 3226 (2010), the Supreme Court stated that a statute should be given its ordinary meaning in a case involving whether an invention was within the statutory categories under Patent Law section 101. Therefore, the wording of section 101 should be given its ordinary and common meaning, unless otherwise defined, and this may be based on a dictionary definition. *Id.*

³³ See *Bilski*, 130 S. Ct. at 3226. (In a decision involving the meaning of “process” in section 101 the Court states, “[w]hen a statute includes an explicit definition, we must follow that definition” (quoting *Burgess v. United States*, 553 U.S. 124, 130, (2008))). See generally *Perrin v. U.S.*, 444 U.S. 37, 42 (1979) (“A fundamental canon of statutory construction is that, unless otherwise defined, words will be interpreted as taking their ordinary, contemporary, common meaning.”).

³⁴ See *United States v. Dickerson*, 310 U.S. 554, 562 (1940) (“The meaning to be ascribed to an Act of Congress can only be derived from a considered weighing of every relevant aid to construction.”).

³⁵ 35 U.S.C. § 100(b) (2006). See *Bilski*, 130 S. Ct. at 3237 (Stevens, J., concurring) (“[T]he Patent Act does not on its face give much guidance about what constitutes a patentable process . . . [The] definition is not especially helpful, given that it also uses the term “process” and is therefore somewhat circular.”).

³⁶ See, e.g., 17 U.S.C. § 101 (2006) (definitional section of copyright law states that “[t]he terms ‘including’ and ‘such as’ are illustrative and not limitative”); see also BLACK’S LAW DICTIONARY 766 (7th ed. 1999) (definition of “include”).

as a method of accomplishing some result via a series of steps.³⁷ Typically, a process claim in a patent recites a list of related actions in gerund form.³⁸

The patent law fails to contain any definitions of the other categories of patent-eligible subject matter. Therefore, these categories should be interpreted by using the ordinary or commonly understood meaning of the statutory language at issue.³⁹ Absent a

³⁷ See *In re Durden*, 763 F.2d 1406, 1410-11 (Fed. Cir. 1985) (“A process . . . is a manipulation according to an algorithm . . . [or] doing something to or with something according to a schema.”); see also *In re Kollar*, 286 F.3d 1326, 1332 (Fed. Cir. 2002) (“a process consists of a series of acts or steps . . . [that must] be carried out or performed”). Some early Supreme Court decisions indicated limits on what is a process. For example, in *Cochrane v. Deener*, 94 U.S. 780, 788 (1876), the court stated:

A process is a mode of treatment of certain materials to produce a given result. It is an act, or a series of acts, performed upon the subject-matter to be transformed and reduced to a different state or thing. . . . The process requires that certain things should be done with certain substances, and in a certain order; but the tools to be used in doing this may be of secondary consequence.

Later Supreme Court decisions rejected limitations on what could be considered a patent-eligible process. See, e.g., *Expanded Metal Co. v. Bradford*, 214 U.S. 366, 381-84 (1909) (processes not limited to chemical actions but can include purely mechanical processes). Finally, in *Bilski v. Kappos*, 130 S. Ct. 3218, 3225-27 (2010), the Supreme Court rejected the conclusion of the Federal Circuit that a patent-eligible process must satisfy the so-called machine-or-transformation test which states that a claimed process is patent eligible “only if: (1) it is tied to a particular machine or apparatus, or (2) it transforms a particular article into a different state or thing.” Additionally, the Court specifically held that its prior decision in *Cochrane* did not limit the meaning of process, *id.* at 3226.

³⁸ For example, the following process claim is claim 5 in U.S. Patent No. 8,301,514 (issued Oct. 30, 2012):

A method of generating item recommendations, the method comprising: by a computer system comprising computer hardware: *accessing* a transaction phrase index comprising a plurality of transaction phrases mapped to items purchased using the transaction phrases; *identifying* a transaction phrase created by a target user; *identifying* candidate recommendations from the transaction phrase index based at least partly on the identified target user transaction phrase, the candidate recommendations comprising one or more of the purchased items contained in the transaction phrase index; and *selecting* one or more of the candidate recommendations to present to the target user as item recommendations.

³⁹ See *Bilski*, 130 S. Ct. at 3226 (“In patent law, as in all statutory construction, ‘[u]nless otherwise defined, ‘words will be interpreted as taking their ordinary, contemporary, common meaning.’” (quoting *Diamond v. Diehr*, 450 U.S. 175, 182 (1981))).

definition, a “machine” can be considered a tangible device or apparatus⁴⁰ that uses mechanical or electrical energy to accomplish something.⁴¹

A “manufacture” is typically a product that has been changed or transformed by a process.⁴² The Supreme Court, relying on the dictionary definition, has defined the term as “the production of articles for use from raw or prepared materials by giving to these materials new forms, qualities, properties, or combinations, whether by hand-labor or by machinery.”⁴³ Some commentators have noted that a rough way to distinguish a machine from a manufacture is that a machine has moving parts, unlike a manufacture.⁴⁴

A “composition of matter” has also been defined by the Supreme Court consistent with its common meaning to apply to “all compositions of two or more substances and . . . all composite articles, whether they be the results of chemical union, or of mechanical mixture, or whether they be gases, fluids, powders or solids.”⁴⁵ Although compositions of matter are typically chemical compounds, an overlap may exist with manufactures.⁴⁶

⁴⁰ See *Tilghman v. Proctor*, 102 U.S. 707, 728 (1880) (“A machine is a thing. A process is an act, or a mode of acting. The one is visible to the eye, an object of perpetual observation.”); see also *Burr v. Duryee*, 68 U.S. 531, 570 (1863) (“A machine is a concrete thing, consisting of parts, or of certain devices and combination of devices.”). See generally *Honolulu Oil Corp. v. Halliburton*, 306 U.S. 550, 560 (1939) (“Machine includes apparatus”).

⁴¹ See *Machine* in MERRIAM-WEBSTER DICTIONARY (2012), available at <http://www.merriam-webster.com/dictionary/machine> (last visited Nov. 6, 2012); see also *Machine* in OXFORD DICTIONARIES (2012), available at http://oxforddictionaries.com/definition/american_english/machine (last visited Nov. 6, 2012) (“any device that transmits a force or directs its application.”). An early Supreme Court decision, *Corning v. Burden*, 56 U.S. 252, 267 (1853), defined a machine as including:

every mechanical device or combination of mechanical powers and devices to perform some function and produce a certain effect or result. But where the result or effect is produced by chemical action, by the operation or application of some element or power of nature, or of one substance to another, such modes, methods, or operations, are called processes.

⁴² Goglia, *supra* note 29, at § 6(a).

⁴³ *Diamond v. Chakrabarty*, 447 U.S. 303, 308 (1980) (quoting *Am. Fruit Growers, Inc. v. Brogdex Co.*, 283 U.S. 1, 11 (1931)).

⁴⁴ PAUL GOLDSTEIN & R. ANTHONY REESE, COPYRIGHT, PATENT, TRADEMARK AND RELATED STATE DOCTRINES 400 (6th ed. 2008); see also JANICE MUELLER, PATENT LAW 280 (3d ed. 2009).

⁴⁵ *Chakrabarty*, 447 U.S. at 308 (1980) (quoting *Shell Dev. Co. v. Watson*, 149 F. Supp. 279, 280 (D.D.C. 1957)).

⁴⁶ *Chakrabarty*, 447 U.S. at 309 (1980) (determining that a genetically engineered microorganism was either a composition of matter or a manufacture
continued . . .

The above definitions are quite broad, which is consistent with the legislative intent of the patent law.⁴⁷ In accordance with this intent, the Supreme Court has recognized that Congress intended a liberal view of patentable subject matter, and it has admonished courts to avoid reading limitations into the patent law.⁴⁸ Despite this warning, the Supreme Court has consistently read several exceptions into Patent Law section 101.⁴⁹ Statutory subject matter that is otherwise a process, machine, manufacture, or composition of matter is deemed non-patentable subject matter if it is a law of nature, physical phenomena, or abstract idea.⁵⁰ Sometimes the Court has referred to mental processes,⁵¹ abstract principles,⁵² and fundamental truths⁵³ as being exceptions to patentable subject matter. An analysis of the legitimacy of these exceptions requires an identification of the underlying goals and justifications for patent law.

III. PATENT LAW: UNDERLYING GOALS AND JUSTIFICATIONS

The basic goal of patent law is contained in the following section of the Constitution: “The Congress shall have power to . . . promote the progress of science and useful arts, by securing for limited times to . . . inventors the exclusive right to their . . . discoveries.”⁵⁴ The plain meaning of this clause indicates that the purpose of enacting a law to protect inventor discoveries is to “promote the progress of science and useful arts.”⁵⁵ Courts have interpreted this to mean that the main

without deciding which category it was in).

⁴⁷ *Id.* (“The Committee Reports accompanying the [Patent] Act inform us that Congress intended statutory subject matter to ‘include anything under the sun that is made by man.’”).

⁴⁸ *Id.* at 308.

⁴⁹ *Id.* at 309. See *Parker v. Flook*, 437 U.S. 584 (1978); see also *Gottschalk v. Benson*, 409 U.S. 63, 67 (1972); *Funk Bros. Seed Co. v. Kalo Inoculant Co.*, 333 U.S. 127, 130 (1948); *O’Reilly v. Morse*, 15 How. 62, 112-121 (1854); *Le Roy v. Tatham*, 14 How. 156, 175 (1853).

⁵⁰ *Chakrabarty*, 447 U.S. at 309. The Supreme Court acknowledged that the exclusion of laws of nature, natural phenomena and abstract ideas was not contained in the statutory language of section 101. *Bilski v. Kappos*, 130 S. Ct. 3218, 3225 (2010). Nevertheless, it has long been viewed that these exceptions are implicitly contained in section 101. *Mayo Collaborative Servs. v. Prometheus Labs., Inc.*, 132 S. Ct. 1289, 1293 (2012).

⁵¹ *Gottschalk*, 409 U.S. at 67.

⁵² *Parker*, 437 U.S. at 589 (quoting *Gottschalk*, 409 U.S. at 67).

⁵³ *Id.*

⁵⁴ U.S. CONST. art. I, § 8, cl. 8.

⁵⁵ See *Lab. Corp. of Am. Holdings v. Metabolite Labs., Inc.*, 548 U.S. 124, 126-27 (2006) (Breyer, J., dissenting) (noting that the phrase “promote the progress of science and useful arts” states the constitutional objective of patent law).

underlying goal of patent law is to benefit the public rather than rewarding the inventor for his or her efforts.⁵⁶ Granting exclusive rights to inventors in the form of patents is the method of incentivizing creative and innovative conduct, which ultimately benefits everyone by increasing the public storehouse of knowledge.⁵⁷

These exclusive rights, which are essentially property rights,⁵⁸ may allow an inventor to operate in the marketplace in a privileged position.⁵⁹ The inventor may be able to avoid direct competition with

⁵⁶ In *Quanta Computer, Inc. v. LG Elecs., Inc.*, 553 U.S. 617, 626 (2008), the court stated that the “primary purpose of our patent laws is not the creation of private fortunes for the owners of patents but is ‘to promote the progress of science and useful arts.’” This quoted language was reiterated approvingly in *Bilski v. Kappos*, 130 S. Ct. 3218, 3252 n. 44 (2010) (Stevens, J., concurring). See also Edward Rothstein, *Connections; Swashbuckling Anarchists Try to Take the \$; Out of Cyberspace*, N.Y. TIMES, June 10, 2000, at B1 (noting that courts have generally interpreted this constitutional clause to mean that the goal of patent law is to benefit the public rather than the inventor).

⁵⁷ See generally *Bonito Boats v. Thunder Craft Boats*, 489 U.S. 141, 151 (1989) (“ultimate goal of the patent system is to bring new designs and technologies into the public domain through disclosure.”); see also *Seymour v. Osborne*, 78 U.S. 516, 533-34 (1871) (patents are granted to inventors to compensate them for their “labor, toil, and expense” which results in an invention beneficial to the public). In *Kewanee v. Bicron*, 416 U.S. 470, 480 (1974), the Supreme Court said that,

[t]he stated objective of the Constitution in granting the power to Congress to legislate in the area of intellectual property is to “promote the Progress of Science and useful Arts.” The patent laws promote this progress by offering a right of exclusion for a limited period as an incentive to inventors to risk the often enormous costs in terms of time, research, and development. The productive effort thereby fostered will have a positive effect on society through the introduction of new products and processes of manufacture into the economy, and the emanations by way of increased employment and better lives for our citizens.

See also *Sears, Roebuck & Co. v. Stiffel Co.*, 376 U.S. 225, 229 (1964) (noting that patents are granted to encourage inventive activities). Arguably, if the patent law failed to produce a benefit for the public it could be determined to be unconstitutional and void. Nevertheless, the Supreme Court has indicated its willingness, at least in the context of copyright law, to defer to Congress with regard to whether copyright law benefits the public. See generally *Eldred v. Ashcroft*, 537 U.S. 186, 204-06 (2003). It is likely it would take a similar stance with regard to patent law because both patent and copyright laws are authorized by the same Constitutional provision. See U.S. CONST. art. I, § 8, cl. 8.

⁵⁸ 35 U.S.C. § 154(a)(1) (2006) (stating a patent grants “the right to exclude others from making, using, offering for sale, or selling the invention throughout the United States or importing the invention into the United States, and, if the invention is a process, of the right to exclude others from using, offering for sale or selling throughout the United States, or importing into the United States, products made by that process. . .”).

⁵⁹ *Id.*

regard to the patented invention by being the exclusive producer of the invention.⁶⁰ Alternatively, the inventor may allow others to make and use the invention in return for negotiated royalty payments.⁶¹ Although this insulation from normal marketplace pressure is a necessary market interference, it is important that it does not unduly reduce investment in innovative and creative activities.⁶² Therefore, the degree of interference must be adequate to incentivize the desired conduct without inhibiting others from engaging in innovative activities. Achieving this result is the balance that courts must accomplish in deciding which inventions are patent-eligible subject matter and which should be deemed ineligible.⁶³

Although no reference to such a balance is expressly contained in the broad language of section 101, it is necessary for a court to interpret this section so that the statutory subject matter limitations are meaningful. Moreover, it can be argued that such a balance is mandated by the Constitution in order to achieve the goal of benefiting the public.⁶⁴ If the statutory categories are too broadly construed the potential exists for patent owners to have property rights in fundamental concepts that are too expansive to be the subject of property rights.⁶⁵ Such concepts are too valuable for anyone to own⁶⁶ because such ownership could create economic barriers that would greatly inhibit others from engaging in creative endeavors that build

⁶⁰ See generally JANICE MUELLER, PATENT LAW 8 (3d ed. 2009) (noting patent law is limited exception to free competition).

⁶¹ See AMY LANDERS, UNDERSTANDING PATENT LAW §1.06 16 (2d ed. 2012). It should be noted that “[t]he decision to grant or deny permanent injunctive relief is an act of equitable discretion by the district court, reviewable on appeal for abuse of discretion.” *eBay Inc. v. MercExchange, L.L.C.*, 547 U.S. 388, 391 (2006). Therefore, patent infringement may result in the patent owner having exclusive rights in the market if the infringer is permanently enjoined from infringing or the patent owner may get damages for past infringement and payment of a royalty for future infringement. *Id.* at 396 (“legal damages may well be sufficient to compensate for the infringement”).

⁶² See generally *Lab. Corp. of Am. Holdings v. Metabolite Labs., Inc.*, 548 U.S. 124, 126-27 (2006) (Breyer, J., dissenting) (noting that patents have potential to impede research and development work).

⁶³ *Id.* at 127 (noting courts must strike a balance between avoiding both overprotection and underprotection); See generally JANICE MUELLER, PATENT LAW 23-28 (3d ed. 2009) (providing cost/benefit analysis of patent law).

⁶⁴ See U.S. CONST. art. I, § 8, cl. 8.

⁶⁵ See generally *Lab. Corp. of Am. Holdings*, 548 U.S. at 126-28 (Breyer, J., dissenting) (2006) (noting that no one should own property rights in fundamental concepts such as laws of nature which are the basic tools of science).

⁶⁶ See generally *In re Chatfield*, 545 F.2d 152, 157 (C.C.P.A. 1976) (“Some inventions, however meritorious, do not constitute patentable subject matter.”).

on, or require use of, such concepts.⁶⁷ This would defeat the constitutional objective of promoting innovation.⁶⁸ The exclusion of laws of nature, physical phenomena, and abstract ideas from patentable subject matter must be understood as an expression of this balance. Likewise, when courts have referred to mental processes, abstract principles, and fundamental truths as being exceptions to patentable subject matter, they are merely referring to the same balance. Often this balance is referred to by the oft-quoted black letter rule of law that ideas are not patentable but applications of ideas are patentable.⁶⁹

One way of thinking about these competing goals is to visualize a continuum as shown below in Fig. 1. At one end of the continuum is a potentially useful discovery. However, it is unknown how to implement or use the discovery such that it can produce a tangible and useful result.⁷⁰ At the other end of the continuum is a fully developed and commercially viable device or method that uses the discovery to bring about a tangible and useful result.⁷¹

⁶⁷ *Lab. Corp. of Am. Holdings*, 548 U.S. at 127-28 (2006) (Breyer, J., dissenting) (noting that patent law seeks to avoid overprotection which would impede innovation).

⁶⁸ *See id.* at 126-27.

⁶⁹ *See, e.g., Rubber-Tip Pencil Co. v. Howard*, 87 U.S. 498, 507 (1874) (“An idea of itself is not patentable, but a new device by which it may be made practically useful is.”); *see also* GARY MYERS, PRINCIPLES OF INTELLECTUAL PROPERTY LAW ¶ 13.02 at 285 (2d ed. 2012) (“patentable subject matter does not include abstract ideas or theories, but only useful applications”). *See generally* *Mackay Radio & Tel. Co. v. Radio Corp. of Am.*, 306 U.S. 86, 94 (1939) (“While a scientific truth, or the mathematical expression of it, is not patentable invention, a novel and useful structure created with the aid of knowledge of scientific truth may be.”).

⁷⁰ *See generally* *Brenner v. Manson*, 383 U.S. 519 (1966) (disallowing a patent on a process, based on a lack of utility under section 101, even though the process worked because it produced a compound that had no known use at the time).

⁷¹ It should be noted that neither commercial viability nor actual construction of an invention is required to obtain a patent. *See* *Joy v. Morgan*, 295 F. 931, 935 (D.C. 1924). Filing a valid patent application that discloses enough information to enable a person of ordinary skill in the relevant art to make and use the invention is sufficient. Such disclosure is referred to as a constructive reduction to practice. *See* *Eastman Kodak Co. v. E. I. DuPont de Nemours & Co.*, 298 F. Supp. 718, 725 (E.D. Tenn. 1969); *see also* *Hybritech, Inc. v. Monoclonal Antibodies, Inc.*, 802 F.2d 1367, 1376 (Fed. Cir. 1986) (“constructive reduction to practice occurs when a patent application on the claimed invention is filed”).

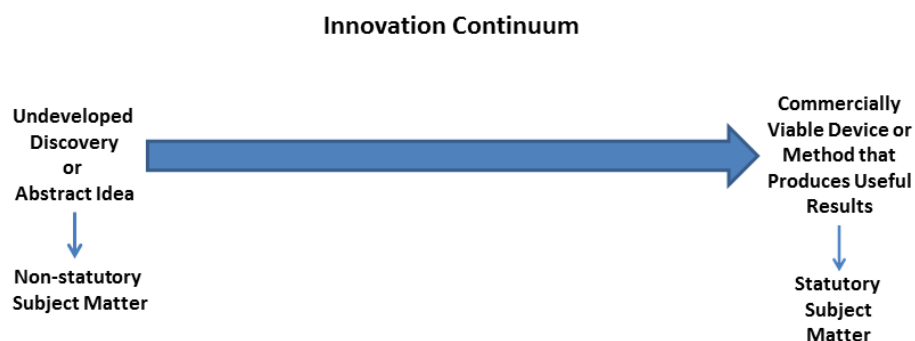


Fig. 1

If undeveloped discoveries and abstract ideas were viewed as potentially patentable subject matter, it would arguably incentivize a certain amount of early stage research and development activity due to the significant potential economic value of such subject matter.⁷² It could be further argued that such incentivizing might be necessary to facilitate early stage research in capital-intensive areas of technology. If such early stage discoveries are ineligible for patent protection until they are developed into commercially viable products, that increases the economic risk and this may be a disincentive to devote resources to such activities.⁷³ Nevertheless, a counterargument is that allowing early stage discoveries and abstract ideas to be patent eligible may inhibit further research and development activities by others.⁷⁴

The Supreme Court has repeatedly indicated that early stage discoveries and abstract ideas should be viewed as “the basic tools of scientific and technological work”⁷⁵ that should be free for everyone to utilize in order to prevent future innovation from being inhibited.⁷⁶

⁷² See *Mayo Collaborative Servs. v. Prometheus Labs., Inc.*, 132 S. Ct. 1289, 1301 (2012) (granting patents to “those who discover new laws of nature and the like might well encourage their discovery”); see also *Morton v. N.Y. Eye Infirmary*, 2 F. Cas. 320 (S.D.N.Y. 1862) (No. 9865) (determining that the discovery that ether could be used as an anesthetic during surgery was not patentable even though its value was so great that it could not be quantified).

⁷³ See, e.g., *Lab. Corp. of Am. Holdings v. Metabolite Labs., Inc.*, 548 U.S. 124, 126-27 (2006) (Breyer, J., dissenting) (incentives are relevant to early stage research which is both expensive and time consuming to conduct).

⁷⁴ See, e.g., *Mayo Collaborative Servs.*, 132 S. Ct. at 1301 (noting that “[t]he [Supreme] Court has repeatedly emphasized . . . a concern that patent law not inhibit further discovery by improperly tying up the future use of law of nature.”).

⁷⁵ *Gottschalk v. Benson*, 409 U.S. 63, 67 (1972); see also *Mayo Collaborative Servs.*, 132 S. Ct. at 1301; *Bilski v. Kappos*, 130 S. Ct. 3218, 3258 (2010); *Parker v. Flook*, 437 U.S. 584, 599 (1978) (Stewart, J., dissenting).

⁷⁶ See, e.g., *Mayo Collaborative Servs.*, 132 S. Ct. at 1301.

Hence, the Supreme Court has stated in multiple opinions that patent law must strike a balance between utilizing patents to incentivize innovation and avoiding granting patents that inhibit future innovation.⁷⁷ The law's goal is therefore to locate the optimum point on the continuum shown in Fig. 1, above, where the transition from unpatentable subject matter to patent-eligible subject matter is deemed to occur. The terms, "laws of nature," "physical phenomena," "abstract ideas," "mental processes," "abstract principles," and "fundamental truths" have been used by the Supreme Court to identify subject matter deemed unpatentable.⁷⁸ However, these terms can be viewed merely as conclusions that are applied to an invention after it has been deemed to fall outside the statutory categories in section 101.⁷⁹ Although the Federal Circuit unsuccessfully attempted to adopt a specific controlling test—the machine-or-transformation test⁸⁰—to determine patent eligibility of processes under section 101, the Supreme Court has taken a more flexible and open-ended approach. In contrast to the Federal Circuit, the Supreme Court has held that the machine-or-transformation test can be utilized, but it made clear that the test is not controlling⁸¹ and that other tests could also be used.⁸²

⁷⁷ See, e.g., *Pfaff v. Wells Elecs., Inc.*, 525 U.S. 55, 63 (1998) (“[T]he patent system represents a carefully crafted bargain that encourages both the creation and the public disclosure of new and useful advances in technology, in return for an exclusive monopoly for a limited period of time. The balance between the interest in motivating innovation and enlightenment by rewarding invention with patent protection on the one hand, and the interest in avoiding monopolies that unnecessarily stifle competition on the other, has been a feature of the federal patent laws since their inception.”); see also *Bonito Boats, Inc. v. Thunder Craft Boats, Inc.*, 489 U.S. 141, 146 (1989) (“The Patent Clause itself reflects a balance between the need to encourage innovation and the avoidance of monopolies which stifle competition without any concomitant advance in the ‘Progress of Science and useful Arts.’”); *Bilski*, 130 S. Ct. at 3228 (“[T]he patent law faces a great challenge [today] in striking the balance between protecting inventors and not granting monopolies over procedures that others would discover by independent, creative application of general principles.”).

⁷⁸ See, e.g., *Lab. Corp. of Am. Holdings*, 548 U.S. at 126 (Breyer, J., dissenting) (“The relevant principle of law ‘[e]xcludes from . . . patent protection . . . law of nature, natural phenomena, and abstract ideas.”).

⁷⁹ See Mark A. Lemley, Michael Risch, Ted Sichelman & R. Polk Wagner, *Life after Bilski*, 63 STAN. L. REV. 1315, 1317 (June 2011) (noting that the rule making abstract ideas unpatentable can be viewed as a rule against overclaiming by inventors).

⁸⁰ *In re Bilski*, 545 F.3d 943, 954 (Fed. Cir. 2008) (stating that under the machine or transformation test “[a] claimed process is surely patent eligible under § 101 if: (1) it is tied to a particular machine or apparatus, or (2) it transforms a particular article into a different state or thing.”).

⁸¹ *Id.* at 956 (stating that an invention was not a patent-eligible process under section 101, and “the machine-or-transformation test . . . is the governing test for

Judge Linn adroitly summed up the state of the law with regard to patent-eligible subject matter in a recent Federal Circuit decision that addressed the meaning of abstract idea. Judge Linn stated:

The abstractness of the “abstract ideas” test to patent eligibility has become a serious problem, leading to great uncertainty and to the devaluing of inventions of practical utility and economic potential In *Bilski*, the Supreme Court offered some guidance by observing that “[a] principle, in the abstract, is a fundamental truth; an original cause; a motive; these cannot be patented, as no one can claim in either of them an exclusive right.” (citation omitted) This court has also attempted to define “abstract ideas,” explaining that “abstract ideas constitute disembodied concepts or truths which are not ‘useful’ from a practical standpoint standing alone, i.e., they are not ‘useful’ until reduced to some practical application.” (citation omitted) More recently, this court explained that the “disqualifying characteristic” of abstractness must exhibit itself “manifestly” “to override the broad statutory categories of patent eligible subject matter.” (citation omitted) Notwithstanding these well-intentioned efforts and the great volume of pages in the Federal Reporters treating the abstract ideas exception, the dividing line between inventions that are directed to patent ineligible abstract ideas and those that are not remains elusive. “Put simply, the problem is that no one understands what makes an idea ‘abstract.’” (citation omitted)⁸³

The theoretical backdrop for the question of what is and is not

determining patent eligibility of a process under § 101.”), *cert. granted*, 130 S. Ct. 3218, 3227, 3231 (2010) (upholding the conclusion of the Federal Circuit that the invention at issue was not statutory subject matter under section 101; however, noting, contrary to the Federal Circuit’s opinion, that the machine or transformation test could be utilized but that it was not the sole controlling test); *see Bilski*, 130 S. Ct. at 3235 (Stevens, J., concurring) (opining that although the machine-or-transformation test is not controlling it is still an effective test for evaluating the patent eligibility of most processes).

⁸² *See Bilski*, 130 S. Ct. at 3231 (“In disapproving an exclusive machine-or-transformation test, we by no means foreclose the Federal Circuit’s development of other limiting criteria that further the purposes of the Patent Act and are not inconsistent with its text.”).

⁸³ *CLS Bank Int’l v. Alice Corp. Pty. Ltd.*, 685 F.3d 1341, 1348-49 (Fed. Cir. 2012), *vacated for en banc reh’g.*, *CLS Bank Int’l v. Alice Corp. Pty. Ltd.*, 2012 U.S. App. LEXIS 20906 (Fed. Cir. 2012).

patent-eligible subject matter is both clear and logical in light of the balancing between competing policies enunciated by the Supreme Court. However, application of theory to specific factual scenarios is a challenge for lower courts in the absence of clear rules or tests. Nevertheless, courts will have to apply the legal theory on a case-by-case basis in an effort to produce the most equitable decision between competing parties. A consequence of this approach will be a lack of predictability, which is problematic.

IV. THE IMPORTANCE OF PREDICTABILITY

Patent law and law in general provide a framework of rules that facilitate an orderly society.⁸⁴ This promotes marketplace conduct oriented to competitive activities for economic gain. This can only occur if the law demonstrates a high degree of predictability, which is necessary for economic decision making and future planning.⁸⁵ Application of a variety of tests including the machine-or-transformation test,⁸⁶ which are discussed below, to determine whether

⁸⁴ See generally *Miami Laundry Co. v. Fla. Dry Cleaning & Laundry Bd.*, 182 So. 759, 763-64 (Fla. 1938) (“Laws are nothing more than rules promulgated by government as a means to an ordered society.”); *Baer v. Jarzombek*, 153 Misc. 2d 351, 353 (Civ. Ct. City of N.Y. 1992) (Loft law enacted as an attempt to bring order to the confusing body of law for resolving landlord tenant disputes involving lofts). See generally Zunaira Zaki, *Fiscal Cliff’ Worries Add to Jobless Woes*, ABC NEWS CONSUMER REPORT (Dec. 3, 2012, 12:54pm) available at <http://abcnews.go.com/blogs/business/2012/12/fiscal-cliff-worries-add-to-jobless-woes/> (noting effects of uncertainty on businesses caused by dispute between Congress and the President about how to modify the federal budget to avoid the so-called impending fiscal cliff); Hayden W. Gregory, *Proving Infringement in Divided Performance Process Claims: Something’s Gotta Give*, 5 LANDSLIDE vol. 2, at 1 (November/December 2012) (“The success and viability of any legal system is dependent upon its ability to provide stability and certainty while at the same time sufficient flexibility to adjust and adapt to changing conditions and needs.”).

⁸⁵ See generally Ronald J. Colombo, *Cooperation With Securities Fraud*, 61 ALA. L. REV. 61, 117 (2009) (“Businessmen and businesswomen require clear and predictable laws in order to appropriately conduct themselves and their businesses.”); Christopher Guzelian, *True and False Speech*, 51 B.C. L. REV. 669, 672 (2010) (noting some commentators have asserted that it is important for law to be predictable so that consequences of one’s actions can be known in advance); Jill Fisch, *The Peculiar Role of the Delaware Courts in the Competition for Corporate Charters*, 68 U. CIN. L. REV. 1061, 1070 (2000) (“Commentators have observed that, with respect to business transactions, it is often more important that the applicable legal rules be settled than that they be settled correctly.”). See generally *Bilski*, 130 S. Ct. at 3231 (Stevens, J., concurring) (“In the area of patents, it is especially important that the law remain stable and clear.”).

⁸⁶ In *Bilski v. Kappos*, 130 S. Ct. 3218, 3231 (2010), the Court seemed to be giving the Federal Circuit express permission to develop new tests to be used in
continued . . .

a particular innovation is statutory subject matter under section 101 has the advantage of some degree of predictability.⁸⁷ Certainly it will produce a more predictable result than the Supreme Court's open-ended approach. In light of the many years that courts have struggled with this issue, the Court's open-ended approach can arguably be viewed as a quest to find the perfect test. Unfortunately, it is an imperfect world, so a quest for the perfect test amounts to an attempt to attain the unattainable. In light of this, the machine-or-transformation test and the additional suggested tests discussed below, although imperfect, may represent the best possible approach for providing some degree of certainty or predictability.

Arguably, use of the machine-or-transformation test and the other tests suggested below may cause certain problems. First, the tests have the potential to draw somewhat arbitrary lines, which might result in some inventions that should be deemed patent-eligible subject matter being found to be outside the domain of statutory subject matter. Alternatively, some inventions that are not patent eligible may be found eligible. Second, it may have a disproportionate effect on some industries that rely more on patent protection than other industries.⁸⁸ Finally, it may lead to unreasonable or unfair results under certain circumstances. None of these concerns are limited to statutory subject matter issues. These concerns arise in many areas of the law including under other provisions of the patent law.

For example, an invention that is deemed statutory subject matter must also be found to be new or novel to be patentable.⁸⁹ One requirement of novelty is that no printed publications publicly available anywhere in the world disclose that a third party previously invented the same invention.⁹⁰ Courts have applied a somewhat rigid

conjunction with, or in lieu of, the machine-or-transformation test when it stated "[i]n disapproving an exclusive machine-or-transformation test, we by no means foreclose the Federal Circuit's development of other limiting criteria that further the purposes of the Patent Act and are not inconsistent with its text."

⁸⁷ See generally *In re Chatfield*, 545 F.2d 152, 161 (C.C.P.A. 1976) (Rich, J., dissenting) (noting at a time when patent eligibility of software was unsettled that having settled law on this was an important socioeconomic issue of great magnitude).

⁸⁸ For example, in Herbert Hovenkamp, *Empire: Innovation and the Domain of Competition Policy*, 60 ALA. L. REV. 103, 124-25 (2008), the author notes that the pharmaceutical industry favors strong patents; but the high tech industry, which is largely made up of software companies, favors weak patents. See generally Robert Mazzoleni & Richard Nelson, *The Benefits and Costs of Strong Patent Protection*, 27 RESEARCH POLICY 273, 281 (1998) (noting differing economic effect of patent law on different areas of technology).

⁸⁹ 35 U.S.C. § 102 (Supp. V 2012).

⁹⁰ Previously, Patent Law section 35 U.S.C. § 102(a) (2006) provided that an
continued . . .

test, which can result in unfair results, at least from a reasonableness perspective. Typically, a public accessibility standard applies today.⁹¹ For example, under this test most documents that are properly indexed in a paper card catalogue at the library or in a modern computerized catalogue are considered prior art if they could be reasonably discovered by searching the paper or electronic catalogues. This applies despite the fact that it is unreasonable to expect an inventor to search every library catalogue for relevant printed publications. An obscure publication that few people are aware exists could potentially bar an inventor from obtaining a patent on an invention he or she spent substantial time, effort, and money developing. Likewise, such an obscure reference may never be discovered and a patent may be issued to a person who is not in fact the first inventor. Applying a reasonableness standard such that only printed publications that an inventor could reasonably be expected to find would produce a fairer result. However, such a reasonableness standard would produce uncertainty. One might explain rejection of such a standard as an effort to inject predictability into the process of determining novelty. Alternatively, this strict standard can be viewed as a balance between granting an inventor a patent on his or her innovation and the importance of preventing public domain subject matter from being removed from the public domain by issuance of a patent for a previously known invention.⁹² Strict judicial application of this rule suggests courts strongly favor protecting the public storehouse of knowledge from being diminished.

Novelty can also be negated by public use of an invention.⁹³

invention “described in a printed publication in this or a foreign country, before the invention thereof by the applicant for patent” prevents the applicant from obtaining a patent. Effective March 16, 2013, this section was renamed 35 U.S.C. § 102(a)(1) (Supp. V 2012) and it provides that an invention “described in a printed publication before the effective filing date of the claimed invention” prevents the applicant from obtaining a patent. The previous law will continue to be applicable to patent applications filed prior to March 16, 2013 and the new law will be applicable to patent applications filed on or after March 16, 2013.

⁹¹ *In re Hall*, 781 F.2d 897, 898-99 (Fed. Cir. 1986); *see also In re Klopfenstein*, 380 F.3d 1345, 1347, 52 (Fed. Cir. 2004) (slide presentation of 14 slides which were printed and pasted onto poster boards, and made accessible to the public for several days was held to be a printed publication).

⁹² *See* AMY LANDERS, UNDERSTANDING PATENT LAW §14.02[B][2], at 188 (2d ed. 2012) (publicly accessible printed publications are in the public domain and therefore they cannot be removed from the public domain and made private property via granting a patent).

⁹³ Previously, under 35 U.S.C. § 102(b) (2006), an invention was not patentable if “the invention was . . . in public use . . . more than one year prior to the date of the application for patent in the United States” Effective March 16, 2013, recodified as 35 U.S.C. § 102(a)(1) (Supp. V 2012), an invention will not be

continued . . .

Courts have strictly interpreted public use such that it is triggered when an inventor reveals his invention to a single person who never discloses or tells anyone else about the invention.⁹⁴ Placing an invention on sale may also destroy novelty.⁹⁵ A single prior sale of an invention satisfies the on-sale bar.⁹⁶ Again, it can be argued that the above results strongly favor predictability even if the result may be viewed as unreasonable or unfair in some circumstances.

The goal of predictability, even if it trumps reasonableness or fairness in some situations, is not limited to patent law. Assume, for example, that Amy leaves her watch at a store that both fixes watches and sells used watches. Inadvertently, her watch is sold to Bob who entered the store looking to buy a used watch. At common law, Amy's ownership rights would enable her to recover the watch from Bob.⁹⁷ However, under Article Two of the Uniform Commercial Code,⁹⁸ adopted by most states, Bob would typically become the owner of the watch,⁹⁹ and Amy's only recourse would be a suit for damages against the store.¹⁰⁰ This result is unfair because it improperly deprives Amy of her property, and it places the burden of

patentable if the invention was "in public use . . . before the effective filing date of the claimed invention" The previous 35 U.S.C. § 102(b) (2006) will continue to be applicable to applications filed prior to March 16, 2013, and applications filed on or after March 16, 2013 will be governed by § 102(a)(1) (Supp. V 2012).

⁹⁴ See *Egbert v. Lippmann*, 104 U.S. 333, 336 (1881); see also *Watson v. Allen*, 254 F.2d 342, 345 (D.C.C. 1958) ("[P]ublic use exists where the invention is used by, or exposed to, anyone other than the inventor or persons under an obligation of secrecy to the inventor.").

⁹⁵ Previously, under 35 U.S.C. § 102(b) (2006), an invention was not patentable if "the invention was . . . on sale in this country, more than one year prior to the date of the application for patent in the United States" Effective March 16, 2013, recodified as 35 U.S.C. § 102(a)(1) (Supp. V 2012), an invention will not be patentable if the invention was "on sale . . . before the effective filing date of the claimed invention" The previous law will continue to be applicable to applications filed prior to March 16, 2013, and applications filed on or after March 16, 2013 will be governed by § 102(a)(1) (Supp. V 2012).

⁹⁶ *Pfaff v. Wells Elecs., Inc.*, 525 U.S. 55, 67-68 (1998) (applying the on-sale bar to an invention subject to a commercial offer of sale when it was ready for patenting).

⁹⁷ See generally *Beverage Prods. Corp. v. Robinson*, 769 S.W.2d 424, 425 (Ark. Ct. App. 1989) (citing RALPH BOYER, SURVEY OF THE LAW OF PROPERTY 712-13 (3d ed. 1981)) (noting the common law rule that a seller cannot convey better title to a purchaser than that which he had).

⁹⁸ See generally UNIF. COMMERCIAL CODE – SALES §§ 2-101 – 2-725 (2003), 1 U.L.A. 385 to 1C U.L.A. 10-878 (2012).

⁹⁹ See U.C.C. § 2-403(2) (2003); see generally BOYER, *supra* note 97 (explaining how U.C.C. § 2-403 alters the common law by allowing a buyer, under certain circumstances, to acquire a better title than seller had to sell).

¹⁰⁰ See U.C.C. § 2-403(2) (2003).

bringing legal action for compensation on her.¹⁰¹ Nevertheless, this allows a shopper purchasing goods in good faith and in the ordinary course of business to assume the store has ownership of the goods it is selling.¹⁰² This eliminates placing the burden on shoppers to verify ownership of goods purchased in commonplace retail transactions, which would make such transactions cumbersome and consequently more costly.¹⁰³ This bright-line or predictable rule codified in the Uniform Commercial Code favors societal interests over an individual's property rights.¹⁰⁴

Recording statutes in many states likewise enable a non-owner to deprive a true owner of rights in real estate under certain circumstances.¹⁰⁵ For example, in a jurisdiction that has a notice recording statute in effect, a bona fide purchaser¹⁰⁶ of real estate from a non-owner of the real estate may have superior rights to the true owner if the true owner failed to record his or her ownership rights.¹⁰⁷ This is true even though such recording is generally not required.¹⁰⁸ A

¹⁰¹ See generally *Deweldon, Ltd. v. McKean*, 125 F.3d 24, 28 (1st Cir. 1997) (“It shifts the risk of resale to the one who leaves his property with the merchant.”).

¹⁰² See *id.* at 27 (explaining section 2-403(2) “is designed to enhance the reliability of commercial sales by merchants who deal in the kind of goods sold”). See also Patricia Youngblood Reyhan, *A Chaotic Palette: Conflict of Laws in Litigation Between Original Owners and Good-Faith Purchasers of Stolen Art*, 50 DUKE L.J. 955, 973-76 (2001).

¹⁰³ See *Johnson & Johnson Prods., Inc. v. Dal Int’l Trading Co.*, 798 F.2d 100, 104 (3rd Cir. 1986) (“The purpose of the good faith purchaser doctrine [codified in U.C.C. section 2-403] . . . is to promote commerce by reducing transaction costs; it allows people safely to engage in the purchase and sale of goods without conducting a costly investigation of the conduct and rights of all previous possessors in the chain of distribution.”).

¹⁰⁴ See generally BOYER, *supra* note 97 (noting that U.C.C. section 2-403 represents “a valued judgment that security of transactions under [certain] circumstances . . . was more important than the protection of the innocent owner”).

¹⁰⁵ See generally JESSE DUKEMINIER, JAMES E. KRIER, GREGORY S. ALEXANDER & MICHAEL H. SCHILL, *PROPERTY* 646-47 (7th ed. 2010) (explaining that at common law, the first-in-time buyer owns real estate even if he or she does not record the deed, but a subsequent bona fide purchaser may have superior rights to the buyer under an applicable recording statute).

¹⁰⁶ “[T]he term ‘bona fide purchaser’ . . . is generally understood to mean ‘[o]ne who has purchased property for value without notice of any defects in the title of the seller.’” *U.S. v. Watkins*, 320 F.3d 1279, 1283 (11th Cir. 2003) (quoting *In re Walter*, 45 F.3d 1023, 1030 (6th Cir. 1995)). See generally WILLIAM B. STOEBUCK & DALE A. WHITMAN, *THE LAW OF PROPERTY* § 11.10, at 882-89 (3d ed. 2000) (discussing the different types of notice, which can include actual, constructive, or inquiry notice).

¹⁰⁷ JOSEPH WILLIAM SINGER, *PROPERTY* § 11.4.5.2, at 538 (3d ed. 2010).

¹⁰⁸ See *id.* § 11.4.5.1, at 538 (explaining that recording of deed is not required for property transfer to be valid in almost all states).

similar result occurs for a transfer of ownership rights in a patent in light of the recording statute contained in the patent law.¹⁰⁹ Analogous to the rationale for section 2-403, discussed above, the bona fide purchaser rules for real estate and for patents insure the existence of vibrant markets by enabling buyers to have confidence they own the property purchased free of prior claims.¹¹⁰

The concept of constructive notice¹¹¹ also creates a predictable rule with regard to whether a person has knowledge of many publicly available documents such as land transfers, corporate records, liens, financing statements recorded pursuant to Uniform Commercial Code Article 9,¹¹² federal trademark registrations,¹¹³ issued patents,¹¹⁴ and many other public records.¹¹⁵ Under this concept a person is held to have notice of all of these documents without regard to whether he or she actually has such notice.¹¹⁶ This may be unfair in some situations, but it promotes certainty and predictability by encouraging and enabling interested parties to rely on the validity of such documents, which facilitates transactions by reducing transactions costs.

The common law tort doctrine of vicarious liability shifts tort liability to an employer under certain circumstances.¹¹⁷ Generally, it

¹⁰⁹ 35 U.S.C. § 261 (2006) (“An assignment, grant or conveyance shall be void as against any subsequent purchaser or mortgagee for a valuable consideration, without notice, unless it is recorded in the Patent and Trademark Office within three months from its date or prior to the date of such subsequent purchase or mortgage.”). *See generally* *Filmtec Corp. v. Allied-Signal Inc.*, 939 F.2d 1568, 1573-74 (Fed. Cir. 1991) (noting that section 261 utilizes the same underlying concept as a state real property recording statute).

¹¹⁰ *See* JOHN G. SPRANKLING & RAYMOND R. COLETTA, *PROPERTY: A CONTEMPORARY APPROACH* 615 (2d ed. 2012).

¹¹¹ *Schoedel v. State Bank of Newburg*, 13 N.W.2d 534, 535 (Wis. 1944) (“[C]onstructive notice is in point of literal fact neither notice nor knowledge. For the promotion of sound policy or purpose, the legal rights and interests of parties are treated as though they had actual notice and knowledge.”).

¹¹² *See generally* U.C.C. § 9-402 (2003) (describing a financing statement). *See also* JAMES J. WHITE & ROBERT S. SUMMERS, *UNIFORM COMMERCIAL CODE* § 22-14, at 790-802 (4th ed. 1995) (describing an overview of financing statements under U.C.C. Article 9).

¹¹³ 15 U.S.C. § 1072 (2006) (registering of trademark is constructive notice that registrant owns trademark); 15 U.S.C. § 1111 (discussing that an R in a circle with a displayed trademark provides notice of trademark registration).

¹¹⁴ 35 U.S.C. § 287(a) (2006) (explaining that affixing the word “patent” or “pat” along with the patent number puts the public on notice of the patent).

¹¹⁵ *See* BLACK’S LAW DICTIONARY 1088 (7th ed. 1999).

¹¹⁶ *See generally* *Schoedel v. State Bank of Newburg*, 13 N.W.2d 534, 535 (Wis. 1944) (explaining that constructive notice is a legal fiction which ascribes notice to someone without regard to whether he or she has actual notice).

¹¹⁷ Alan Q. Sykes, *The Boundaries of Vicarious Liability: An Economic Analysis of the Scope of Employment Rule and Related Legal Doctrines*, 101 HARV. L. REV.

renders an employer liable for negligent conduct of an employee when the employee negligently injures a third party in the course of employment.¹¹⁸ This rule applies without regard to any culpability on the part of the employer.¹¹⁹ Likewise, banks are typically liable for forged checks¹²⁰ and fraudulent use of credit cards¹²¹ by a third party via statute, without regard to whether the bank has any culpability.¹²² In each of these cases, the law makes a policy-based risk allocation between the bank and an innocent customer. Although such non-culpability-based risk allocation in the above examples is arguably unfair, it allows a business enterprise to plan accordingly for risk by setting aside funds or purchasing insurance. Such a predictable result is preferable to having an unknown, non-quantifiable monetary risk for which is it difficult to plan.

In contrast to promoting predictability, in some situations the law favors a reasonable result when insuring a fair or equitable outcome is more important than achieving predictability. Generally, this approach is heavily fact-based and applies on a case-by-case basis rather than broadly to a class of relationships or transactions, minimizing any potential externalities. For example, a valid and binding contract requires the existence of consideration.¹²³ Nevertheless, under the doctrine of promissory estoppel,¹²⁴ a contract lacking consideration may be enforced against a party who engaged in certain actions that lead another reasonable person to rely on such actions to his or her detriment.¹²⁵ Similar estoppel doctrines exist in other areas of law

563, 563 (1988).

¹¹⁸ *Meyer v. Holley*, 537 U.S. 280, 285-86 (2003).

¹¹⁹ *See Carter v. Reynolds*, 815 A.2d 460, 463 (N.J. 2003) (“Although as a general rule of tort law, liability must be based on personal fault, the doctrine of respondeat superior recognizes a vicarious liability principle pursuant to which a master will be held liable in certain cases for the wrongful acts of his servants or employees.”).

¹²⁰ *See Answers About Forgery and Fraud*, COMPTROLLER OF THE CURRENCY, <http://www.helpwithmybank.gov/get-answers/bank-accounts/forgery-and-fraud/faq-banking-fraud-02.html> (last visited Mar. 24, 2013).

¹²¹ *See Lost or Stolen Credit, ATM, and Debit Cards*, FED. TRADE COMM’N, <http://www.ftc.gov/bcp/edu/pubs/consumer/credit/cre04.shtm> (last visited Mar. 24, 2013) (“Your maximum liability under federal law for unauthorized use of your credit card is \$50.”).

¹²² *See Misused Checking Accounts*, FED. TRADE COMM’N, <http://www.consumer.ftc.gov/articles/0250-misused-checking-accounts> (last visited Mar. 24, 2013).

¹²³ *Advantage Physical Therapy, Inc. v. Cruse*, 165 S.W.3d 21, 24 (Tex. Ct. App. 2005).

¹²⁴ *See, e.g., Simmons Poultry Farms v. Dayton Rd. Dev. Co.*, 82 F.3d 217, 220 (8th Cir. 1996) (listing the prima facie elements of promissory estoppel).

¹²⁵ *See Hill v. Commerce Bancorp, Inc.*, No. 09-3685 (RBK/JS), 2012 U.S. Dist.

continued . . .

such as easement by estoppel,¹²⁶ agency by estoppel,¹²⁷ and corporation by estoppel.¹²⁸

In the context of patent infringement, some aspects of a literal infringement analysis are applied in a somewhat mechanical or predictable fashion. For example, a finding of literal infringement of a typical claim requires that every limitation contained in the claim must exist in the infringing device or method.¹²⁹ Consider the following patent claim:

1. A sealed crustless sandwich, comprising:
a first bread layer having a first perimeter surface coplanar to a contact surface;

LEXIS 26831, at *43 (D.N.J. 2012) (holding that promissory estoppel applies in the absence of consideration). *See generally* Bennett v. Itochu Int'l, Inc., No. 09-CV-4123, 2012 U.S. Dist. LEXIS 119791, at *70-71 (E.D.Pa. 2012) (noting promissory estoppel only applies in the absence of an enforceable contract).

¹²⁶ An easement is a real property interest, which means it is subject to the statute of frauds and therefore requires a written document to be created. *See* GERALD KORNGOLD, PRIVATE LAND USE ARRANGEMENTS: EASEMENTS, REAL COVENANTS AND EQUITABLE SERVITUDES § 3.04(a), at 33 (2d ed. 2004). A license is a personal right that is freely revocable. *Id.* § 3.05(c), at 39. However, a licensee who improves the property by building a road and house on it, relying on the license to his or her detriment, may be able to assert an estoppel argument to bar the license from being revoked. The result is essentially the equivalent of an easement that arises from estoppel in lieu of a writing. *See id.* § 3.05, at 36-39; *Holbrook v. Taylor*, 532 S.W.2d 763 (Ky. 1976).

¹²⁷ Agency by estoppel is an equitable theory under which someone who is not an agent can be held to be an agent of a person who holds out that individual as such, thereby inducing a third party's reliance. *Battle v. Seibels Bruce Ins. Co.*, 288 F.3d 596, 603 (4th Cir. 2002).

¹²⁸ In *Harry Rich Corp. v. Feinberg*, 518 So. 2d 377, 379 (Fla. Dist. Ct. App. 1987), the court stated that

The long-standing rule that an association, until it comes into existence as a corporation, cannot be bound by acts done or promises made in its behalf and cannot therefore be subject to the entry of a judgment against it . . . would produce harsh results if applied without resort to equitable doctrines. One such doctrine is 'corporation by estoppel,' under which private litigants are estopped to assert the nonexistence of the corporation if they have by their conduct or words affirmed or relied on its existence.

See also Cranson v. I.B.M., 200 A.2d 33 (Md. 1964) (holding that the creditor of corporation was estopped from asserting that the corporation did not exist when contract with corporation was signed, in light of the fact that the creditor erroneously dealt with the debtor as if it were a corporation at the time the contract was signed).

¹²⁹ *See* CRAIG ALLEN NARD, THE LAW OF PATENTS 452 (2d ed. 2011). *See also* Larami Corp. v. Amron, No. CIV. A. 91-6145, 1993 WL 69581, at *3 (E.D. Pa. Mar. 11, 1993) (no infringement if any element of the claim is absent from the allegedly infringing invention) (citation omitted).

at least one filling of an edible food juxtaposed to said contact surface;
a second bread layer juxtaposed to said at least one filling opposite of said first bread layer, wherein said second bread layer includes a second perimeter surface similar to said first perimeter surface;
a crimped edge directly between said first perimeter surface and said second perimeter surface for sealing said at least one filling between said first bread layer and said second bread layer;
wherein a crust portion of said first bread layer and said second bread layer has been removed.¹³⁰

If every aspect of the above claim is copied except that the crust is not removed from the bread, the claim is not literally infringed because one limitation contained in the claim—removing the crust from the bread—was omitted.¹³¹

The following claim describes a system for tracking clothing in a dry cleaning business. Assume every aspect of the claim is copied except that a laser printer is used in lieu of a dot matrix printer. Paragraph three of the claim specifically limits the system to using a dot matrix printer so using a laser printer avoids a finding of literal infringement.

1. The inventory control and reporting system, comprising:
 - a data input device for manual operation by an attendant, the input device having switch means operable to encode information relating to sequential transactions, each of the transactions having articles associated therewith, said information including transaction identity and descriptions of each of said articles associated with the transactions;
 - a data processor including memory operable to record said information and means to maintain an inventory total, said data processor having means to associate sequential transactions with unique sequential indicia and to generate at least one report of said total and said transactions, the unique sequential indicia and

¹³⁰ U.S. Patent No. 6,004,596 (filed Dec. 08, 1997) (issued Dec. 21, 1999).

¹³¹ See *London v. Carson Pirie Scott & Co.*, 946 F.2d 1534, 1539 (Fed. Cir. 1991) (“There can be no infringement as a matter of law if a claim limitation is totally missing from the accused device.”) (citation omitted). See also NARD, *supra* note 129, at 456.

the descriptions of articles in the sequential transactions being reconcilable against one another;

a dot matrix printer operable under control of the data processor to generate a written record of the indicia associated with sequential transactions, the written record including optically-detectable bar codes having a series of contrasting spaced bands, the bar codes being printed only in coincidence with each said transaction and at least part of the written record bearing a portion to be attached to said articles; and,

at least one optical scanner connected to the data processor and operable to detect said bar codes on all articles passing a predetermined station,

whereby said system can detect and localize spurious additions to inventory as well as spurious deletions therefrom.¹³²

Nevertheless, the Supreme Court created an equitable doctrine called the doctrine of equivalents,¹³³ which allows, under certain circumstances, a determination that an accused device is infringing even though it is literally not covered by a claim.¹³⁴ This doctrine, which lacks any statutory support under the patent law¹³⁵ and conflicts with the notice function of claims,¹³⁶ has been justified by the Court in order to insure that patent claims are not interpreted so narrowly that a disincentive exists to file patents.¹³⁷

Such a consequence would be inimical to the public interest.

¹³² This claim was involved in an appeal in *Markman v. Westview Instruments, Inc.*, 52 F.3d 967, 972 (Fed. Cir. 1995), *aff'd*, 517 U.S. 370 (1996).

¹³³ See MUELLER, *supra* note 28, at 351 (noting the “doctrine of equivalents is entirely judge-made law”).

¹³⁴ See *Warner-Jenkinson Co. v. Hilton Davis Chem. Co.*, 520 U.S. 17, 21 (1997) (“Under this doctrine [of equivalents], a product or process that does not literally infringe upon the express terms of a patent claim may nonetheless be found to infringe if there is ‘equivalence’ between the elements of the accused product or process and the claimed elements of the patented invention.”). See also LANDERS, *supra* note 11, § 29.08, at 385.

¹³⁵ See MUELLER, *supra* note 28, at 351 (stating “the doctrine of equivalents is entirely judge-made law”).

¹³⁶ *Warner-Jenkinson Co.*, 520 U.S. at 29 (noting conflict between notice function of claims and the doctrine of equivalents). See also MUELLER, *supra* note 28, at 353 (noting tension between notice of equivalents and notice function of patent claims).

¹³⁷ See *Graver Tank & Mfg. Co. v. Linde Air Prods. Co.*, 339 U.S. 605, 607 (1950) (writing absent the doctrine of equivalents, an inventor may be more likely to conceal an invention rather than disclose it via a patent). See also MUELLER, *supra* note 28 at 352-53.

Under this doctrine, a court might find the above claim infringed if a laser printer was used in lieu of a dot matrix printer even if the laser printer was not invented until after the patent containing the above claim was granted.¹³⁸ The important question to address with regard to statutory subject matter under Patent Law section 101 is whether a predictable rule or an equitable rule should be applied.

V. PREDICTABILITY AND STATUTORY SUBJECT MATTER

The importance of predictability in patent law jurisprudence is clear.¹³⁹ Patents are typically commercial documents that affect the viability of business enterprises in diverse ways. This can include raising capital, prioritizing research, and developing budgets and general business planning.¹⁴⁰ The flexible or open-ended approach adopted by the Supreme Court with regard to determining what is or is not statutory subject matter negatively impacts predictability. Both the Federal Circuit¹⁴¹ and commentators have noted that lack of predictability produces uncertainty that is problematic.¹⁴² Nevertheless, adoption of predictable or bright-line rules may create some unintended issues. Such rules may over- or under-include appropriate subject matter; they might produce unfair results in certain situations and they may have disparate effects on different industries. However, on balance, the benefits of predictability outweigh these

¹³⁸ Literal infringement is evaluated at the time a patent application was filed. Infringement under the doctrine of equivalents is determined at the time of infringement. Therefore, technology that exists at the time of infringement can be an equivalent element or limitation under the doctrine even if it did not exist at the time of filing. NARD, *supra* note 129, at 476-78.

¹³⁹ See generally *Bilski v. Kappos*, 130 S. Ct. 3218, 3231 (2010) (Stevens, J., concurring) (“In the area of patents, it is especially important that the law remain stable and clear.”).

¹⁴⁰ See generally LANDERS, *supra* note 11, § 1.06, at 15-16 (2d ed. 2012) (discussing how patent owners use patents).

¹⁴¹ In *CLS Bank Int'l v. Alice Corp. Pty.*, 685 F.3d 1341, 1348-49 (Fed. Cir. 2012), *vacated and reh'g en banc granted*, *CLS Bank Int'l v. Alice Corp. Pty. Ltd.*, No. 2011-1301, 2012 U.S. App. LEXIS 20906 (Fed. Cir. 2012), the court stated, “The abstractness of the ‘abstract ideas’ test to patent eligibility has become a serious problem, leading to great uncertainty and to the devaluing of inventions of practical utility and economic potential.”

¹⁴² Donald S. Chisum, *Weeds and Seeds in the Supreme Court's Business Method Patents Decision: New Directions for Regulating Patent Scope*, 15 LEWIS & CLARK L. REV. 11, 14 (2011) (explaining that current statutory subject matter law can lead to arbitrary and unpredictable results, which can cause uncertainty that “does substantial harm to the effective operation of the patent system”); See Lemley, *supra* note 79, at 1316 (noting that “the problem is that no one understands what makes an idea ‘abstract,’ and hence ineligible for patent protection”).

potential negative effects for a variety of reasons.

First, only a small number of patent disputes have historically involved statutory subject matter under section 101.¹⁴³ It is typically not an issue with regard to product claims.¹⁴⁴ Today, the issue seems to arise most commonly in a limited number of disputes involving method claims for medical diagnostic tests¹⁴⁵ and for methods of doing business.¹⁴⁶ And, even in cases where it does arise, the invention at issue will often be denied patent protection based on obviousness, lack of novelty, or failure to satisfy various disclosure requirements. In light of this, the Federal Circuit has stated:

District courts have great discretion to control the conduct of proceedings before them, including the order of presentation of issues and evidence and the sequence of events proscribed by the Federal Rules and leading up to judgment. *See, e.g., Amado v. Microsoft Corp.*, 517 F.3d 1353, 1358 (Fed. Cir. 2008) ("District courts . . . are afforded broad discretion to control and manage their dockets, including the authority to decide the order in which they hear and decide issues pending before them."). Although § 101 has been characterized as a "threshold test," (citation omitted) [by the Supreme Court], and certainly can be addressed before other matters touching the validity of patents, it need not

¹⁴³ *See generally* NARD, *supra* note 129, at 476-78 (stating the statutory subject matter requirement has not historically been a major impediment to obtaining patent protection).

¹⁴⁴ Nevertheless, in *In re Nuijten*, 500 F.3d 1346, 1348 (Fed. Cir. 2007), the court found a claim to an electronic signal, which was arguably a product claim, was not patent-eligible subject matter under section 101.

¹⁴⁵ *See, e.g., Mayo Collab. Servs v. Prometheus Labs., Inc.*, 132 S. Ct. 1289, 1294-96 (2012) (discussing a method of optimizing treatment of a human patient with a specific drug); *Ass'n for Molecular Pathology v. USPTO*, 689 F.3d 1303, 1309-10 (Fed. Cir. 2012), *cert. granted sub nom. Ass'n for Molecular Pathology v. Myriad Genetics*, 133 S. Ct. 694 (2012) (discussing a method of screening for breast cancer); *PerkinElmer, Inc. v. Intema Ltd.*, No. 2011-1577, 2012 U.S. App. LEXIS 23845, at *2 (Fed. Cir. 2012) (discussing a method of screening pregnant women to estimate risk of fetal Down's syndrome); *Classen Immunotherapies, Inc. v. Biogen Idec*, 659 F.3d 1057, 1059 (Fed. Cir. 2011) (discussing a method of administering/scheduling infant immunizations).

¹⁴⁶ *See, e.g., Bilski v. Kappos*, 130 S. Ct. 3218, 3231 (2010) (discussing a method of hedging financial risk in the commodities market); *CLS Bank Int'l*, 685 F.3d at 1343 (discussing method and product claims for a trading platform that minimizes settlement risk when exchanging financial obligations); *In re Comisky*, 554 F.3d 967, 970 (Fed. Cir. 2009) (discussing method and product claims for an arbitration system).

always be addressed first, particularly when other sections might be discerned by the trial judge as having the promise to resolve a dispute more expeditiously or with more clarity and predictability. (citation omitted) Thus, consistent with its role as the master of its own docket, a district court properly acts within its discretion in deciding when to address the diverse statutory challenges to validity.¹⁴⁷

Therefore, in some disputes it may be advisable for a court to initially evaluate a patent or patent application under Patent Law sections 102,¹⁴⁸ 103,¹⁴⁹ and 112.¹⁵⁰ Only if the invention passes muster under these sections should a statutory subject matter analysis be undertaken.¹⁵¹ This would minimize the instances of invoking section 101 because it would typically only be relevant in the limited number of cases where the discovery at issue is novel, nonobvious, and has utility¹⁵² in addition to satisfying the enablement,¹⁵³ written description,¹⁵⁴ and definiteness¹⁵⁵ requirements.

This approach is not unique to patent law. It is commonplace for courts to avoid a difficult issue if a dispute can be resolved by resorting to an alternate issue.¹⁵⁶ Such avoidance is often appropriate

¹⁴⁷ *CLS Bank Int'l*, 685 F.3d at 1348. See generally *Bilski*, 130 S. Ct. at 3225 (explaining that to be patentable an invention must be patent eligible under section 101 in addition to satisfying Patent Law sections 102, 103 and 112).

¹⁴⁸ 35 U.S.C. § 102(a)(1) (Supp. V 2012) (requiring novelty).

¹⁴⁹ 35 U.S.C. § 103 (Supp. V 2012) (requiring nonobviousness).

¹⁵⁰ 35 U.S.C. § 112 (2006) (requiring disclosure).

¹⁵¹ *Graham v. John Deere Co. of Kansas City*, 383 U.S. 1, 14 (1966).

¹⁵² 35 U.S.C. § 101 (2006).

¹⁵³ The enablement requirement, which is contained in 35 U.S.C. § 112(a), is satisfied if the patent discloses sufficient information so that a person of ordinary skill in the relevant technology can make and use the invention without having to engage in undue experimentation. See *MagSil Corp. v. Hitachi Global Storage Techs.*, 687 F.3d 1377, 1380 (Fed. Cir. 2012).

¹⁵⁴ The written description requirement, which is contained in 35 U.S.C. § 112(a), is satisfied if the patent discloses sufficient information to show that the inventor was in possession of the claimed invention at the time the patent application was initially filed. See *Crown Packaging Tech., Inc. v. Ball Metal Bev. Container Corp.*, 635 F.3d 1373, 1380 (Fed. Cir. 2011).

¹⁵⁵ Section 112 states that the patent shall include “one or more claims particularly pointing out and distinctly claiming the subject matter which the inventor or a joint inventor regards as the invention.” 35 U.S.C. § 112(b) (2006). This is commonly referred to as the definiteness requirement. See *NovelPoint Learning LLC v. Leapfrog Enters., Inc.*, No. 6:10-cv-229 JDL, 2012 U.S. Dist. LEXIS 24701, at *6-7 (E.D. Tex. 2012). See also *Noah Sys. Inc. v. Intuit Inc.*, 675 F.3d 1302, 1311 (Fed. Cir. 2012).

¹⁵⁶ See, e.g., *Monroe v. Rawlins*, 49 N.W.2d 55, 55 (Mich. 1951) (resolving
continued . . .

in order to avoid creating precedent that may create unintended consequences.

Second, over- or under-inclusion is a common issue whenever a bright-line rule is utilized in the context of balancing competing policies. Over time, if certain systemic issues continuously arise, courts can develop additional rules to resolve these problems. This is the typical way the law develops because it is impossible to foresee the unique situations and technological advances that will arise in the future. And, if those unique situations or advances become commonplace the rule can be modified, adapted, or changed in the future as appropriate.

Examination of the creation and development of the judicial doctrine of equivalents infringement provides a case study for how the law can develop.¹⁵⁷ Initially, the Supreme Court was concerned about creating a disincentive to file patent applications if patent claims were construed too narrowly because the consequence would be a reduction in the public storehouse of knowledge gained from patent disclosures.¹⁵⁸ In contrast, the Court understood that patent claims serve a notice function by delineating between what is protected and what is in the public domain.¹⁵⁹ This notice is enhanced by applying a literal infringement analysis. The Court balanced these two competing policies by creating the judicial doctrine of equivalents, which allows a patent owner, under certain circumstances, to prevail in a patent infringement action even though literal infringement is demonstrably

property dispute under an adverse possession theory so the court did not need to decide the validity of a tax deed); *Van Sandt v. Royster*, 83 P.2d 698, 703 (Kan. 1938) (stating it was unnecessary to address prescription issue because case resolved based on finding creation of an easement by implication). *See generally* *Cummings v. Conglobal Indus.*, No. 07-CV-409-TCK-SAJ, 2008 U.S. Dist. LEXIS 81967, at *7-8 (N.D. Okla. 2008) (explaining that federal courts should avoid deciding constitutional law issues if alternate grounds exist to resolve the dispute).

¹⁵⁷ *Graver Tank & Mfg. Co. v. Linde Air Prods. Co.*, 339 U.S. 605, 607-09 (1950) (explaining that infringement can be asserted even if there is no literal infringement when the allegedly infringing device “performs substantially the same function [as the patented invention] in substantially the same way to obtain the same result”). *See also* *Warner-Jenkinson Co. v. Hilton Davis Chem. Co.*, 520 U.S. 17, 21 (1997) (citing *Graver Tank & Mfg. Co.* and reaffirming the validity of the doctrine of equivalents).

¹⁵⁸ *See Graver Tank & Mfg. Co.*, 339 U.S. at 607 (noting that without the doctrine of equivalents, a copyist may be able to easily avoid literal infringement with a minor change and this would facilitate concealing an invention which is contrary to the one of the goals of the patent law which is public disclosure of patented inventions).

¹⁵⁹ *Warner-Jenkinson Co. v. Hilton Davis Chem. Co.*, 520 U.S. 17, 29 (1997) (noting that broad application of the doctrine of equivalents conflicts with notice function of claims).

absent.¹⁶⁰ This doctrine, which the Court characterized as equitable in nature, creates uncertainty because literally inventing around a claim will not insure avoidance of infringement.¹⁶¹ The doctrine essentially created a gray area which was bounded on one end by the literal claim limitations but potentially unbounded on the other end. Such uncertainty or lack of predictability, as noted earlier, is an undesirable aspect of a legal system.¹⁶² However, rather than abandon the judicial doctrine of equivalents, the Supreme Court and the Federal Circuit have slowly evolved specific rules that provide limits on the doctrine so that its scope is somewhat more predictable. The end result is a set of bright-line rules that provide some limits on how far beyond literal infringement a claim can be stretched under the doctrine of equivalents.¹⁶³ Nevertheless, like any rule of law that balances competing interests or policies, a zone of uncertainty exists. This is unavoidable and should not be a basis for rejecting use of a bright-line rule to ascertain statutory subject matter under section 101.

Finally, the disparate effect of the patent law on different industries has long been an issue. Industries such as pharmaceuticals, which typically rely on one or two patents from internal research and

¹⁶⁰ See, e.g., *Graver Tank & Mfg. Co.*, 339 U.S. at 612 (finding infringement based on the doctrine of equivalents, despite finding no literal infringement). See generally LANDERS, *supra* note 11, § 29.01, at 372-73 (noting the balance between preserving an incentive to seek patents with the public notice function of a patent which underlies the patent system).

¹⁶¹ *Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co.*, 535 U.S. 722, 731-32 (2002).

¹⁶² See *id.* at 730-31 (explaining that clear patent claim boundaries promote efficient investment in technology).

¹⁶³ In *Festo Corp.*, 535 U.S. at 733-38, the Court noted that the doctrine of prosecution history estoppel bars a patentee from using the doctrine of equivalents in an infringement action to recapture any part of the claim's scope that was surrendered or abandoned during prosecution via amendment, in order to overcome objections to patentability. In *Johnson & Johnson Assocs., Inc. v. R.E. Serv. Co.*, 285 F.3d 1046, 1054 (Fed. Cir. 2002) (en banc), the court stated that "when a patent drafter discloses but declines to claim subject matter . . . this action dedicates that unclaimed subject matter to the public" and it cannot be recaptured with the doctrine of equivalents. This is generally referred to as the public dedication rule. NARD, *supra* note 129, at 494. In *Wilson Sporting Goods Co. v. David Geoffrey & Assocs.*, 904 F.2d 677, 684 (Fed. Cir. 1990), the court noted that the doctrine of equivalents could not be used to capture prior art. In *Scimed Life Sys., Inc. v. Advanced Cardiovascular Sys., Inc.*, 242 F.3d 1337, 1345-46 (Fed. Cir. 2001), the court held that if the specification expressly or impliedly excludes something from a claim it cannot be recaptured by the doctrine of equivalents. This is referred to as the specific exclusion rule. NARD, *supra* note 129, at 502. Finally, the all limitations rule is applied so that each limitation in a claim must have a literal or equivalent element in the allegedly infringing device. *Warner-Jenkinson Co. v. Hilton Davis Chem. Co.*, 520 U.S. 17, 29 (1997).

development activities to protect a drug, favor strong patents.¹⁶⁴ In contrast, other industries, such as technology and software companies, which produce products that rely on a multitude of patents—many of which must be licensed from third parties—prefer a weaker patent system.¹⁶⁵ This issue is not limited to patent law. Typically, any law of general application has the potential to cause this problem. The only potential solution is to enact specific subject-based legislation in lieu of laws of general application. This is unlikely to occur in patent law, whose basic concepts have remained largely unchanged for a long time.¹⁶⁶ Additionally, it is doubtful that law would evolve quickly enough to keep pace with rapid changes in technology. Hence, this should likewise not be a reason to reject bright-line rules for determining what is or is not statutory subject matter because the various industries will likely develop marketplace adaptations

¹⁶⁴ See Herbert Hovenkamp, *Innovation and the Domain of Competition Policy*, 60 ALA. L. REV. 103, 124-25 (2008) (noting that the pharmaceutical industry favors strong patents).

¹⁶⁵ See *id.* at 125 (noting that high tech industry, which is largely made up of software companies, favors weak patents).

¹⁶⁶ However, some limited areas of subject matter have been identified and made subject to special provisions. See, e.g., 35 U.S.C. § 287(c)(1) (2006) (showing that remedies for infringement of certain medical and surgical procedures are limited). See generally MUELLER, *supra* note 28, at 286-87. Provisions of the recently enacted America Invents Act bar patents on tax strategies. See Memorandum from Robert W. Bahr, Acting Assoc. Comm'r for Patent Examination Policy, U.S. Patent and Trademark Office, to Patent Examining Corps, *Tax Strategies Are Deemed To Be Within the Prior Art* (Sept. 20, 2011) available at http://www.uspto.gov/aia_implementation/tax-strategies-memo.pdf. It also provides that “[n]otwithstanding any other provision of law, no patent may issue on a claim directed to or encompassing a human organism.” See Memorandum from Robert W. Bahr, Senior Patent Counsel and Acting Assoc. Comm'r for Patent Examination Policy, U.S. Patent and Trademark Office, to Patent Examining Corps, *Claims Directed to or Encompassing a Human Organism* (Sept. 20, 2011), available at http://www.uspto.gov/aia_implementation/human-organism-memo.pdf. See also *Ex Parte Kamrava*, No. 2010-010201 (P.T.A.B. Nov. 26, 2012), available at <http://www.patentlyo.com/files/10080177.pdf> (showing in a recent administrative appeal in the Patent and Trademark Office, patent claims were rejected for various reasons including an attempt to obtain a claim that encompassed a human organism). In contrast to patent law, numerous provisions of copyright law have been enacted for specific subject areas. See, e.g., 17 U.S.C. § 106(6) (2006) (stating that the right is limited to performance of sound recordings via a digital audio transmission); 17 U.S.C. § 109(e) (2006) (stating that the provision is only applicable to copies of “an electronic audiovisual game intended for use in a coin-operated equipment”); 17 U.S.C. § 119(a)(11) (2006) (providing special rules related to secondary transmission of television signals via satellite to a recreational vehicle); 17 U.S.C. § 110(5)(B)(ii) (2006) (providing special rules for “a food service or drinking establishment” based on gross square feet, the number of speakers used and the size of any television or other audio display device).

provided some degree of certainty exists in the law.¹⁶⁷

VI. PROPOSED TESTS IN ADDITION TO THE MACHINE-OR-TRANSFORMATION TEST

In *Bilski* the Supreme Court approved of the machine-or-transformation test, provided it was not used as the sole or controlling test to ascertain whether a process was patent-eligible subject matter.¹⁶⁸ In lieu of relying on this test the Court held that the claimed method of hedging was an abstract idea, which was not patent-eligible subject matter.¹⁶⁹ Additionally, the Court noted that one of the claims at issue reduced the concept of hedging to a mathematical formula, which is not patent-eligible subject matter.¹⁷⁰ The Court also stated that “[a]llowing petitioners to patent risk hedging would pre-empt use of this approach in all fields, and would effectively grant a monopoly over an abstract idea.”¹⁷¹ Arguably, the Court’s statements effectively create two tests in addition to the machine-or-transformation test: (a) mathematical formulas are not patent eligible (hereinafter the “equation test”), and (b) the preemption test.¹⁷² This raises two questions: (1) whether the machine-or-transformation test, the equation test, and the preemption test will produce predictable results,¹⁷³ and (2) whether additional tests should be used in lieu of or

¹⁶⁷ Such adaptations could include reliance on other bodies of intellectual property law such as design patent law, copyright law, trademark law, and trade secrets law. *See generally* 35 U.S.C. §§ 171-173 (2006) (covering patent law); 17 U.S.C. § 101 (2006) (covering copyright law); 15 U.S.C. § 1051 (2006) (covering trademark law); PAUL GOLDSTEIN AND R. ANTHONY REESE, *SELECTED STATUTES AND INTERNATIONAL AGREEMENTS ON PATENT, COPYRIGHT, TRADEMARK AND UNFAIR COMPETITION* 28-32 (2012) (discussing the Uniform Trade Secrets Act, which has been adopted by most states).

¹⁶⁸ *Bilski v. Kappos*, 130 S. Ct. 3218, 3227 (2010) (“This Court’s precedents establish that the machine-or-transformation test is a useful and important clue, an investigative tool, for determining whether some claimed inventions are processes under § 101. The machine-or-transformation test is not the sole test for deciding whether an invention is a patent-eligible ‘process.’”).

¹⁶⁹ *Id.* at 3230.

¹⁷⁰ *Id.* at 3231.

¹⁷¹ *Id.*

¹⁷² *See id.* (holding that hedging is a mathematical formula that is not patent eligible, and that allowing patent protection would preempt the field and monopolize an abstract idea).

¹⁷³ *See generally id.* at 3227 (suggesting that use of the machine-or-transformation test could have a negative effect on technology such as software and diagnostic medical tests because it could make patentability of such inventions uncertain).

in addition to these tests.¹⁷⁴ Arguably, the *Bilski* Court approves of the Federal Circuit developing additional tests.¹⁷⁵

A. Statement of the Machine-or-Transformation Test

Under the machine-or-transformation test, a process is statutory subject matter under Patent Law section 101 if either of the following applies: (1) the claim is tied to a particular machine; or (2) the claim transforms an article.¹⁷⁶ Additionally, two limitations apply. First, “the use of a specific machine or transformation of an article must impose meaningful limits on the claim’s scope to impart patent-eligibility”¹⁷⁷ (hereinafter “preemption rule”). This is sometimes referred to as the preemption test.¹⁷⁸ Second, “the involvement of the machine or transformation in the claimed process must not merely be insignificant extra-solution activity”¹⁷⁹ (hereinafter “insignificant limitation rule”).

Legal rules cannot be properly applied in a vacuum. They can only be applied in light of the underlying reasons that justify the rule. The machine-or-transformation test represents an attempt to identify where on the innovation continuum, shown above in Fig. 1, the claimed invention falls. Additionally, the Supreme Court has expressly stated that mathematical formulas and the discovery of something that occurs in nature are not patent-eligible subject matter.¹⁸⁰ However, use of a mathematical formula or a discovery that amounts to an application of that formula or discovery may be patentable because it is further along the invention continuum.¹⁸¹

¹⁷⁴ See *id.* at 3227-28 (suggesting that the inquiry as to a patentable process should not be confined to the machine-or-transformation test, but failing to specify whether such additional inquiries should replace or support the traditional test).

¹⁷⁵ See *id.* at 3231 (“In disapproving an exclusive machine-or-transformation test, we by no means foreclose the Federal Circuit’s development of other limiting criteria that further the purposes of the Patent Act and are not inconsistent with its text.”).

¹⁷⁶ *In re Bilski*, 545 F.3d 943, 961-62 (Fed. Cir. 2008), *aff’d sub nom.* *Bilski v. Kappos*, 130 S. Ct. 3218 (2010).

¹⁷⁷ *Id.*

¹⁷⁸ Under this test, a process claim is not statutory subject matter if it essentially preempts use of a law of nature or an abstract idea in all contexts. See *generally* *Mayo Collaborative Servs. v. Prometheus Labs., Inc.*, 132 S. Ct. 1289, 1294 (2012); *Bilski v. Kappos*, 130 S. Ct. 3218, 3231 (2010).

¹⁷⁹ *In re Bilski*, 545 F.3d 943, 961-62 (Fed. Cir. 2008), *aff’d sub nom.* *Bilski v. Kappos*, 130 S. Ct. 3218 (2010).

¹⁸⁰ *Mayo Collaborative Servs.*, 132 S. Ct. at 1293; *Diamond v. Chakrabarty*, 447 U.S. 303, 309 (1980).

¹⁸¹ See *Funk Bros. Seed Co. v. Kalo Inoculant Co.*, 333 U.S. 127, 130 (1948) (“He who discovers a hitherto unknown phenomenon of nature has no claim to a
continued . . .

Hence, the machine-or-transformation test focuses on ascertaining if a machine is part of the process claim; or, in the absence of a machine, whether something is transformed.

The presence of either a machine or a transformation signals that the claimed process is potentially far enough along the invention continuum to be treated as patent-eligible subject matter. Nevertheless, the Court has recognized the practical reality that patent claims can be drafted so that they include extra verbiage to render them literally within the machine-or-transformation test even though the invention should not be treated as patent eligible.¹⁸² Therefore, the preemption rule, discussed above, tells a court to look beyond the actual claim language and ascertain whether, despite any limiting language in the claim, the claim in fact really preempts most or all meaningful uses of a mathematical formula, discovery of something that is naturally occurring, or any other non-patentable subject matter. If such preemption occurs, the claim can be treated as an attempt to claim something that is not patent eligible.¹⁸³

The insignificant limitation rule, discussed above, recognizes that a claim can include various structural elements and/or transformative steps that may literally satisfy the machine-or-transformation test, but in reality do not provide any significant limitation on the claimed subject matter.

B. Proposed Tests

In addition to the machine-or-transformation test for process claims, the following alternative tests are proposed for both product and process claims. Multiple tests are necessary because no single test will produce predictable and consistent results in light of the different types of subject matter that can be patented and the variation in how patent claims are drafted.¹⁸⁴ Although failure to satisfy the machine-

monopoly of it which the law recognizes. If there is to be invention from such a discovery, it must come from the application of the law of nature to a new and useful end.”); *Parker v. Flook*, 437 U.S. 584, 591 (1978) (quoting the same language in *Funk Bros.*). *See also* *Diamond v. Diehr*, 450 U.S. 175, 188 (1981) (“Arrhenius' equation is not patentable in isolation, but when a process for curing rubber is devised which incorporates in it a more efficient solution of the equation, that process is at the very least not barred at the threshold by § 101.”).

¹⁸² *Mayo Collaborative Servs.*, 132 S. Ct. at 1300.

¹⁸³ *See Bilski*, 130 S. Ct. at 3231 (concluding that a patent claim covering risk hedging was not patent-eligible subject matter, in part, because the claim would essentially preempt use of hedging generally).

¹⁸⁴ *See generally id.* at 3227 (noting that machine-or-transformation test may be useful for tangible inventions that were typical for the industrial age, but it may not be useful for technological inventions in the current information age).

or-transformation test is not determinative,¹⁸⁵ it is suggested that failure to satisfy one or more of the following proposed tests should render a claim unpatentable for failure to claim statutory subject matter under Patent Law section 101.

1. Preemption Test and Insignificant Limitation Test

The preemption rule and the insignificant limitation rule, discussed above with regard to the machine-or-transformation test, can be applied independently. Additionally, *Bilski* relied on the preemption rule, in part, in concluding that a claimed method of hedging was not patent-eligible subject matter.¹⁸⁶ Finally, these rules can be utilized with some or all of the following tests, where appropriate.

2. Equation Test

The Supreme Court has clearly stated that equations such as $E=MC^2$, $F=MA$, or $I=V/R$ are not patent eligible.¹⁸⁷ Additionally, the *Bilski* Court endorsed finding subject matter ineligible for patent protection if a claim merely covers a mathematical formula.¹⁸⁸ Therefore, if a claim is merely a disguised attempt to cover a formula or equation, it should be determined that it is not patent-eligible subject matter. This test can be applied broadly by viewing an equation as any type of relationship that is expressed mathematically. If the claim includes, but is not limited to an equation, it is likely patent-eligible subject matter.¹⁸⁹ The preemption rule, discussed

¹⁸⁵ *Id.*

¹⁸⁶ *See id.* at 3231 (“[A]llowing petitioners to patent risk hedging would preempt use of this approach in all fields, and would effectively grant a monopoly over an abstract idea.”).

¹⁸⁷ *Parker v. Flook*, 437 U.S. 584, 585 (1978) (“[D]iscovery of a novel and useful mathematical formula may not be patented.”); *see also* *Mayo Collaborative Servs. v. Prometheus Labs., Inc.*, 132 S. Ct. 1289, 1293 (2012); *Diamond v. Chakrabarty*, 447 U.S. 303, 309 (1980); $E=mc^2$, AM. INST. OF PHYSICS, <http://www.aip.org/history/einstein/emc1.htm> (last visited Mar. 24, 2013) (stating that $E=MC^2$ is Einstein’s famous equation that expresses the relationship between energy and mass); *Newton’s Second Law*, NASA, <http://www.grc.nasa.gov/WWW/k-12/airplane/newton2.html> (last visited Mar. 24, 2013) (stating $F=MA$ expresses Newton’s second law of motion which is that force equals mass times acceleration); *Ohm’s Law*, NDT RES. CTR., <http://www.ndt-ed.org/EducationResources/HighSchool/Electricity/ohmslaw.htm> (last visited Mar. 24, 2013) (stating $I=V/R$ is known as Ohm’s law and it expresses the relationship between current, voltage, and resistance in an electrical circuit).

¹⁸⁸ *See Bilski*, 130 S. Ct. at 3231 (“[C]oncept of hedging . . . reduced to a mathematical formula in claim 4, is an unpatentable abstract idea . . .”).

¹⁸⁹ *See Diamond v. Diehr*, 450 U.S. 175, 187 (1981) (“[A] claim drawn to
continued . . .

above, can be used to help ascertain if the claim at issue is only covering an equation. Under this rule, if the claim essentially preempts use of the equation or mathematical relationship in virtually all meaningful contexts, then it is not patent-eligible subject matter. Instead, it is really fundamental knowledge that is part of “the basic tools of scientific and technological work” that is part of the public domain and hence not patent eligible.¹⁹⁰ Additionally, the insignificant limitation rule, discussed above, can also be used. Sometimes a claim contains numerous structural elements or other limitations that make the claim presumptively appear to be claiming more than solely an equation and therefore it is patent eligible. However, these limitations can be examined to determine if they in fact limit the claimed subject matter. The existence of meaningful limits indicates the claim is likely patent-eligible subject matter. Alternatively, the lack of any meaningful limits indicates the claim is directed to ineligible subject matter.

3. *Human Intervention Test*

The discovery of a new plant species or a new mineral may be very valuable but they are not patent-eligible subject matter.¹⁹¹ Both of these things are examples of fundamental information or knowledge that are considered part of the public domain that anyone can freely use.¹⁹² Nevertheless, if the discovered item is altered or modified such that it is now in a state that is not naturally available and it has different properties than the naturally available item, it is typically considered patent-eligible subject matter by the U.S. Patent and Trademark Office¹⁹³ and the Federal Circuit.¹⁹⁴ An example would be an isolated portion of naturally occurring DNA that has been chemically manipulated to create isolated DNA that is different than

subject matter otherwise statutory does not become nonstatutory simply because it uses a mathematical formula . . .”).

¹⁹⁰ See *Mayo Collaborative Servs.*, 132 S. Ct. at 1292.

¹⁹¹ See *Diamond v. Chakrabarty*, 447 U.S. 303, 309 (1980).

¹⁹² *Id.*; see also *Funk Bros. Seed Co. v. Kalo Inoculant Co.*, 333 U.S. 127, 130 (1948).

¹⁹³ See generally USPTO Utility Examination Guidelines, 66 Fed. Reg. 1092, 1095 (Jan. 5, 2001), available at <http://www.uspto.gov/web/offices/com/sol/notices/utilexmguide.pdf> (“An isolated and purified DNA molecule may be patentable because a molecule is a ‘composition of matter,’ one of the four classes of invention authorized by 35 U.S.C. 101.”).

¹⁹⁴ *Ass'n for Molecular Pathology v. USPTO*, 689 F.3d 1303, 1328-29 (Fed. Cir. 2012), cert. granted sub nom. *Ass'n for Molecular Pathology v. Myriad Genetics, Inc.*, 133 S. Ct. 694 (2012).

naturally occurring DNA.¹⁹⁵ The human intervention that changes the naturally occurring thing to a new state has resulted in a novel thing, which is patent eligible. Nevertheless, the preemption test can be applied if the differences between the naturally occurring product and the new product are so insignificant that a patent on the novel product amounts to de facto property rights in the naturally occurring product.

4. *Data Comparison Test*

A claim that merely includes the act of comparing data should not render the claim unpatentable. However, if the claim solely covers the act of comparing data, it should not be patent-eligible subject matter. Typically, such a claim will control access to naturally occurring phenomena, natural relationships, or mental processes, all of which are outside the domain of patent law protection.¹⁹⁶ As discussed above, both the preemption rule and the insignificant limitation rule can be used to facilitate determining the realistic scope of a claim directed at comparing data.

C. Application of the Proposed Tests to Process Claims

The following analysis looks at several Supreme Court and Court of Appeals for the Federal Circuit decisions that addressed the question of whether specific claims were based on patent-eligible subject matter. The machine-or-transformation test and the other proposed tests, discussed above, are applied to ascertain whether the results comport with the judicial decisions on review in each case.

1. *The Prometheus Laboratories Decision*

In *Prometheus Laboratories*, the Court considered the following method claim for optimizing administration of a drug to treat a disorder:

A method of optimizing therapeutic efficacy for treatment of an immune-mediated gastrointestinal disorder, comprising: “(a) administering a drug providing 6-thioguanine to a subject having said immune-mediated gastrointestinal disorder; and . . . (b) determining the level of 6-thioguanine in said subject

¹⁹⁵ *Id.* at 1328; see generally NARD, *supra* note 129, at 169-70 (discussing how human intervention that isolates and purifies a portion of a naturally occurring gene can render that isolated gene patent-eligible subject matter).

¹⁹⁶ See *Chakrabarty*, 447 U.S. at 309.

having said immune-mediated gastrointestinal disorder . . . wherein the level of 6-thioguanine less than about 230 pmol per 8×10^8 red blood cells indicates a need to increase the amount of said drug subsequently administered to said subject and . . . wherein the level of 6-thioguanine greater than about 400 pmol per 8×10^8 red blood cells indicates a need to decrease the amount of said drug subsequently administered to said subject.”¹⁹⁷

This claim, stripped to its bare essence, involves: administration of a specific drug to a patient with a certain disorder, measuring the resulting concentration of the drug in the patient, and then raising or lowering the amount administered in order to achieve a concentration within a specific range.¹⁹⁸ The claim simply compares the measured data with a known range to determine if it is within the required range.¹⁹⁹ Under the proposed data comparison test, this claim would not be considered patent-eligible subject matter because the only thing claimed is the data comparison.

The same result would occur under the proposed preemption test because this claim would essentially prevent anyone from adjusting the dose for the specific medicine in the claim based on the amount present in the person’s blood.²⁰⁰ The fact that the claim is limited to administering a specific drug for a specific medical disorder—immune-mediated gastrointestinal disorder—is not a sufficient limitation to overcome preemption.²⁰¹ At most, this can be viewed as an insignificant limitation, and therefore the insignificant limitation test would also negate patent eligibility.

Likewise, this claim does not survive the machine-or-transformation test. The claim is not tied to a machine, nor is anything transformed via the claim. In contrast, the Federal Circuit found that the second prong of the test was satisfied because the human body, or the blood removed from a person, satisfied the transformation requirement.²⁰² This analysis was properly rejected by the Supreme

¹⁹⁷ *Mayo Collaborative Servs. v. Prometheus Labs., Inc.*, 132 S. Ct. 1289, 1295 (2012).

¹⁹⁸ *See id.* at 1294 (describing the claimed process).

¹⁹⁹ *See id.* at 1298 (stating the claims at issue “simply tell doctors to gather data from which they may draw an inference in light of the correlations.”).

²⁰⁰ *Id.* at 1294-95 (The amount in a patient’s blood varies because different people metabolize the drug differently).

²⁰¹ *See id.* at 1298.

²⁰² *Id.* at 1296-97.

Court.²⁰³ Such broad application of the test would render it ineffective because very little subject matter would be found unpatentable under such a broad application.

The conclusion, based on the proposed tests, that the above claim is not directed to patent-eligible subject matter disagrees with the Federal Circuit, although it is consistent with the Supreme Court's conclusion.²⁰⁴

2. *The Diehr Decision*

In *Prometheus Laboratories*,²⁰⁵ the Supreme Court, reasoning by analogy, reviewed two prior decisions that analyzed patent eligibility of process claims.²⁰⁶ In *Diehr*, the Court found that the claims at issue, which referred to the operation of a press as part of an industrial process, satisfied section 101.²⁰⁷ However, in *Flook*, the Court found that the claim at issue, which was related to a chemical process, was not patent-eligible subject matter.²⁰⁸

One of the representative claims at issue in *Diehr* stated:

A method of operating a rubber-molding press for precision molded compounds with the aid of a digital computer, comprising: providing said computer with a data base for said press including at least, natural logarithm conversion data (ln), the activation energy constant (C) unique to each batch of said compound being molded, and a constant (x) dependent upon the geometry of the particular mold of the press, initiating an interval timer in said computer upon the closure of the press for monitoring the elapsed time of said closure, constantly determining the temperature (Z) of the mold at a location closely adjacent to the mold

²⁰³ *Id.*

²⁰⁴ *Id.* at 1296; *Mayo Collaborative Servs. v. Prometheus Labs., Inc.*, 130 S. Ct. 3543, 3543 (2010). *See generally Mayo Collaborative Servs.*, 132 S. Ct. at 1290-92 (the trial court initially rejected a patent claim on the basis that it did not cover patent-eligible subject matter. On appeal, the Federal Circuit reversed. The Supreme Court granted certiorari, vacated the judgment of the Federal Circuit and remanded to the Federal Circuit to reconsider the case in light of the Supreme Court's recent decision in *Bilski v. Kappos*, 130 S. Ct. 3218 (2010). After reconsidering the case, the Federal Circuit reaffirmed its early holding. The Supreme Court again granted certiorari and again reversed the Federal Circuit).

²⁰⁵ *Mayo Collaborative Servs.*, 132 S. Ct. at 1289.

²⁰⁶ *Id.* at 1298-301.

²⁰⁷ *Diamond v. Diehr*, 450 U.S. 175, 191-93 (1981).

²⁰⁸ *Parker v. Flook*, 437 U.S. 584, 594-95 (1978).

cavity in the press during molding, constantly providing the computer with the temperature (Z), repetitively calculating in the computer, at frequent intervals during each cure, the Arrhenius equation for reaction time during the cure, which is $\ln v = CZ + x$ where v is the total required cure time, repetitively comparing in the computer at said frequent intervals during the cure each said calculation of the total required cure time calculated with the Arrhenius equation and said elapsed time, and opening the press automatically when a said comparison indicates equivalence.²⁰⁹

The above claim involves use of a standard equation known as the Arrhenius equation.²¹⁰ However, it also includes using a computer to perform calculations as part of carrying out an industrial process to make molded rubber products with a press.²¹¹ Under the equation test, the question is whether this claim is a disguised attempt to claim an equation. Application of the preemption rule indicates that the claim actually covers an industrial process for making molded rubber products, and it does not preempt virtually any uses of the equation. Consequently, in light of these tests, the claim is patent-eligible subject matter.

Applying the machine-or-transformation test produces the same result. The claimed process is tied to a machine—a rubber molding press—and therefore it is presumptively patent-eligible subject matter. As noted above, application of the preemption rule to this claim does not negate patent eligibility. The insignificant limitation rule also does not apply because the various limitations contained in the claim are necessary to carry out the claimed industrial process rather than being mere extraneous and unnecessary verbiage.

The other proposed tests are not applicable to this claim. Therefore, application of the proposed equation test, coupled with the preemption and insignificant limitation tests, agrees with the Supreme Court's conclusion that the above claim is directed to patent-eligible

²⁰⁹ *Diehr*, 450 U.S. at 180 n.5 (quoting from Respondents' application) (superfluous quotation marks omitted).

²¹⁰ See generally Definition of arrhenius-equation, BRITANNICA ONLINE ENCYCLOPEDIA, <http://www.britannica.com/EBchecked/topic/36095/Arrhenius-equation> (last visited Mar. 6, 2013) (explaining that this equation is a “mathematical expression that describes the effect of temperature on the velocity of a chemical reaction”). See also Univ. of Cal., Davis, UC DAVIS CHEMWIKI, http://chemwiki.ucdavis.edu/Physical_Chemistry/Kinetics/Reaction_Rates/Temperature_Dependence_of_Reaction_Rates/Arrhenius_Equation (last visited Mar. 6, 2013) (containing a detailed discussion of the equation).

²¹¹ *Diehr*, 450 U.S. at 180, n.5.

subject matter.²¹²

3. *The Flook Decision*

The claim at issue in *Flook* stated:

A method for updating the value of at least one alarm limit on at least one process variable involved in a process comprising the catalytic chemical conversion of hydrocarbons wherein said alarm limit has a current value of $B_o + K$ wherein B_o is the current alarm base and K is a predetermined alarm offset which comprises: (1) Determining the present value of said process variable, said present value being defined as PVL; (2) Determining a new alarm base B_1 , using the following equation: $B_1 = B_o(1.0-F) + PVL(F)$ where F is a predetermined number greater than zero and less than 1.0; (3) Determining an updated alarm limit which is defined as $B_1 + K$; and thereafter (4) Adjusting said alarm limit to said updated alarm limit value.²¹³

The above claim in *Flook* is distinguishable from the claim at issue in *Diehr*. First, under the equation test, the claim in *Flook* appears to be an attempt to claim a mathematical relationship. In fact, the *Flook* Court noted that the equation in the claim was a novel mathematical formula discovered by the patent applicant.²¹⁴ Although the claim preamble does indicate that it applies to the catalytic chemical conversion of hydrocarbons, no other part of the claim includes any specific structural components or limitations.²¹⁵ Instead the claim merely includes a series of steps necessary to perform a calculation that is only generally tied to the chemical conversion of hydrocarbons.²¹⁶ The claim is not limited to a specific industrial process nor does it recite a specific product created by the process.²¹⁷ It also does not recite which hydrocarbons are converted, what they are converted into or how the catalytic process is used.²¹⁸ Finally, the Court noted:

²¹² *Id.* at 174.

²¹³ *Flook*, 437 U.S. at 596-97 (quoting from Claim 1 of the patent) (superfluous quotation marks omitted).

²¹⁴ *Id.* at 585.

²¹⁵ *Id.* at 596-97.

²¹⁶ *See id.*

²¹⁷ *See id.*

²¹⁸ *See id.*

The patent application does not purport to explain how to select the appropriate margin of safety, the weighting factor, or any of the other variables. Nor does it purport to contain any disclosure relating to the chemical processes at work, the monitoring of process variables, or the means of setting off an alarm or adjusting an alarm system. All that it provides is a formula for computing an updated alarm limit.²¹⁹

In light of the above holding in *Flook*, under the preemption test, this claim would not be patent-eligible subject matter because it is an attempt to claim the use of a specific mathematical relationship in any process that involves converting hydrocarbons into another state via the use of any type of catalytic chemical conversion.

Under the first prong of the machine-or-transformation test, the claim is also not statutory subject matter because the process is not tied to a machine. However, under the second prong of the test it could be argued that hydrocarbons are transformed. Nevertheless, as noted above, the preemption rule, which is a limitation on the machine-or-transformation test, would render the claim non-statutory subject matter.

Therefore, application of the proposed equation test modified by the preemption test produces the same result as the Supreme Court's conclusion;²²⁰ the above claim is not directed to patent-eligible subject matter.

4. *The Metabolite Decision*

In *Metabolite Laboratories, Inc. v. Laboratory Corp. of American Holdings*,²²¹ the court considered the following claim for a diagnostic test for detecting a vitamin deficiency: "A method for detecting a deficiency of cobalamin or folate in warm-blooded animals comprising the steps of: assaying a body fluid for an elevated level of total homocysteine; and correlating an elevated level of total homocysteine in said body fluid with a deficiency of cobalamin or folate."²²² At the most basic level this method involves measuring a specific body fluid—homocysteine—which is a naturally occurring

²¹⁹ *Id.* at 586.

²²⁰ *Id.* at 594.

²²¹ *Metabolite Labs., Inc. v. Lab. Corp. of Am. Holdings*, 370 F.3d 1354, 1358-59 (Fed. Cir. 2004), *cert. granted*, 546 U.S. 999 (2005), *cert. dismissed*, 548 U.S. 124 (2006) (dismissing certiorari as improvidently granted but including a lengthy dissent to dismissal).

²²² *Id.* at 1358-59.

amino acid found in blood.²²³ If the homocysteine level is elevated, it is known that the person has a deficiency of cobalamin or folate, which is commonly referred to as vitamin B-12.²²⁴ So in essence, a person's homocysteine level is measured and is then compared to a normal level; if it is elevated, the person has a vitamin deficiency, and if it is not elevated, there is no vitamin deficiency.²²⁵

This claim does not pass muster under the first prong of the machine-or-transformation test because no machine of any type is involved in the claim. Additionally, it fails under the second prong because nothing is transformed. The “assaying” step merely refers to analyzing the body fluid to determine the amount of homocysteine present,²²⁶ and the “correlating” step merely refers to comparing the measured homocysteine level with a normal level.

Additionally, this claim is not patent-eligible subject matter under the proposed data comparison test because the act of comparing data is the sole thing it claims. It would also fail the proposed preemption test because this claim prevents anyone from using the naturally occurring correlation that exists between homocysteine and vitamin B-12.

Ultimately, this claim was upheld as valid on other grounds because the issue of statutory subject matter was raised for the first time in the writ of certiorari filed with the Supreme Court.²²⁷ Although the writ was initially granted on the question of whether this claim was made patent ineligible by violating the prohibition on patenting “laws of nature, natural phenomena, and abstract ideas,”²²⁸ the Court subsequently dismissed the writ.²²⁹

Based on the above analysis using the proposed data comparison test, the claim is not patent-eligible subject matter. Interestingly, at least three Supreme Court justices agreed with this conclusion in a non-binding dissenting opinion, which accompanied the dismissal of

²²³ Definition of Homocysteine, ON-LINE MEDICAL DICTIONARY, <http://medical-dictionary.thefreedictionary.com/homocysteine> (last visited Dec. 24, 2012).

²²⁴ Shereen Jegtvig, *Basic Nutrition: Vitamin B-12*, ABOUT.COM NUTRITION, <http://nutrition.about.com/od/nutrientglossary/g/vitaminb12.htm> (last visited Dec. 24, 2012).

²²⁵ *Metabolite Labs., Inc.*, 370 F.3d at 1363-64 (holding that when interpreting this claim that the step of “correlating” meant “comparing the elevated [homocysteine] level with the normal homocysteine level.”).

²²⁶ Definition of Assay, MEDICINET.COM, <http://www.medterms.com/script/main/art.asp?articlekey=8412> (last visited Dec. 24, 2012).

²²⁷ *Lab. Corp. of Am. Holdings v. Metabolite Labs., Inc.*, 548 U.S. 124, 132 (2006) (Breyer, J., dissenting).

²²⁸ *Lab. Corp. of Am. Holdings v. Metabolite Labs., Inc.*, 543 U.S. 1185 (2005).

²²⁹ *Lab. Corp. of Am. Holdings*, 548 U.S. at 124.

the writ.²³⁰

5. *The Biogen Idec Decision*

Several recent Federal Circuit decisions seem to reach inconsistent results. In *Classen Immunotherapies, Inc. v. Biogen Idec*,²³¹ the court reviewed the patent eligibility of the claims in three related patents.²³² The district court originally found the claims to be non-statutory subject matter under section 101.²³³ The Federal Circuit affirmed that result,²³⁴ but the Supreme Court vacated the decision and remanded it for reconsideration in light of its decision in *Bilski*.²³⁵ Following the remand, the Federal Circuit held that the following claim for evaluating the effectiveness of an immunization schedule was not statutory subject matter:²³⁶

A method of determining whether an immunization schedule affects the incidence or severity of a chronic immune-mediated disorder in a treatment group of mammals, relative to a control group of mammals, which comprises immunizing mammals in the treatment group of mammals with one or more doses of one or more immunogens, according to said immunization schedule, and comparing the incidence, prevalence, frequency or severity of said chronic immune-mediated disorder or the level of a marker of such a disorder, in the treatment group, with that in the control group.²³⁷

In contrast, the court held that the following claim related to immunization scheduling was statutory subject matter:²³⁸

A method of immunizing a mammalian subject which comprises:

²³⁰ *Id.* at 134-38 (Justice Breyer, whose dissenting opinion was joined by Justices Stevens and Souter, makes it clear that he believes the claim at issue is not patent-eligible subject matter).

²³¹ *Classen Immunotherapies, Inc. v. Biogen IDEC*, 659 F.3d 1057 (Fed. Cir. 2011).

²³² *Id.* at 1060.

²³³ *Classen Immunotherapies, Inc. v. Biogen Idec*, 304 F. App'x 866, 867 (Fed. Cir. 2008), *vacated*, 130 S. Ct. 3541 (2010).

²³⁴ *Id.*

²³⁵ *Classen Immunotherapies, Inc. v. Biogen IDEC*, 130 S. Ct. 3541 (2010), *vacating* 304 F. App'x 866 (Fed. Cir. 2008).

²³⁶ *Classen Immunotherapies, Inc.*, 659 F.3d at 1065.

²³⁷ *Id.* at 1061 (quoting from Claim 1 of the '283 patent).

²³⁸ *Id.* at 1065.

-
- (I) screening a plurality of immunization schedules, by
- (a) identifying a first group of mammals and at least a second group of mammals, said mammals being of the same species, the first group of mammals having been immunized with one or more doses of one or more infectious disease-causing organism-associated immunogens according to a first screened immunization schedule, and the second group of mammals having been immunized with one or more doses of one or more infectious disease-causing organism-associated immunogens according to a second screened immunization schedule, each group of mammals having been immunized according to a different immunization schedule, and
 - (b) comparing the effectiveness of said first and second screened immunization schedules in protecting against or inducing a chronic immune-mediated disorder in said first and second groups, as a result of which one of said screened immunization schedules may be identified as a lower risk screened immunization schedule and the other of said screened schedules as a higher risk screened immunization schedule with regard to the risk of developing said chronic immune mediated disorder(s),
- (II) immunizing said subject according to a subject immunization schedule, according to which at least one of said infectious disease-causing organism-associated immunogens of said lower risk schedule is administered in accordance with said lower risk screened immunization schedule, which administration is associated with a lower risk of development of said chronic immune-mediated disorder(s) than when said immunogen was administered according to said higher risk screened immunization schedule.²³⁹

Contrary to the Federal Circuit, I would argue that both of the above claims merely cover a comparison of data that yields useful information for combating disease via immunization. Under the proposed data comparison test, both claims should be found deficient under section 101 because neither claim is directed to anything more than making data comparisons. Arguably, application of the machine-

²³⁹ *Id.* at 1060-61 (quoting from Claim 1 of the '739 patent).

or-transformation test would support finding neither claim to be patent-eligible subject matter since neither claim is tied to a machine, and neither involve a transformation of anything.²⁴⁰

6. *The PerkinElmer Decision*

In *PerkinElmer, Inc. v. Intema Ltd.*,²⁴¹ the Federal Circuit concluded that the following claim for determining the risk of giving birth to a child with Down's syndrome was not patent-eligible subject matter:²⁴²

A method of determining whether a pregnant woman is at an increased risk of having a fetus with Down's syndrome, the method comprising the steps of: measuring the level of at least one screening marker from a first trimester of pregnancy by: (i) assaying a sample obtained from the pregnant woman at said first trimester of pregnancy for at least one first biochemical screening marker; and/or (ii) measuring at least one first ultrasound screening marker from an ultrasound scan taken at said first trimester of pregnancy; measuring the level of at least one second screening marker from a second trimester of pregnancy, the at least one second screening marker from the second trimester of pregnancy being different from the at least one first screening marker from the first trimester of pregnancy, by: (i) assaying a sample obtained from the pregnant woman at said second trimester of pregnancy for at least one second biochemical screening marker; and/or (ii) measuring at least one second ultrasound screening marker from an ultrasound scan taken at said second trimester of pregnancy; and determining the risk of Down's syndrome by comparing the measured levels of both the at least one first screening marker from the first trimester of pregnancy and the at least one second screening marker from the second trimester of pregnancy with observed relative frequency distributions of marker levels in Down's syndrome

²⁴⁰ *Classen Immunotherapies, Inc. v. Biogen Idec*, 304 F. App'x. 866 (Fed. Cir. 2008), *vacated*, 130 S. Ct. 3541 (2010) (The Federal Circuit initially reached this conclusion prior to the case being vacated and remanded by the Supreme Court.).

²⁴¹ *PerkinElmer, Inc. v. Intema Ltd.*, No. 2011-1577, 2012 U.S. App. LEXIS 23845 (Fed. Cir. Nov. 20, 2012).

²⁴² *Id.* at *1-2.

pregnancies and in unaffected pregnancies.²⁴³

The above claim solely involves obtaining certain biological data from a pregnant woman during her first and second trimesters of pregnancy, and then comparing that data to predict whether she is at an increased risk of giving birth to a baby with Down's syndrome.²⁴⁴ The court was correct in finding that this claim does not cover patent-eligible subject matter. The same result would be reached under the proposed data comparison test. Arguably, the machine-or-transformation test would also support the same conclusion because the claim does not involve any machine, or a transformation of anything.

7. *The Association for Molecular Pathology Decision*

In *Association for Molecular Pathology v. U.S. P.T.O.*,²⁴⁵ the Federal Circuit held that the following claim for a method of screening for breast cancer did not cover patent-eligible subject matter.²⁴⁶

A method for screening a tumor sample from a human subject for a somatic alteration in a BRCA1 gene in said tumor which comprises [] *comparing* a first sequence selected from the group consisting of a BRCA1 gene from said tumor sample, BRCA1 RNA from said tumor sample and BRCA1 cDNA made from mRNA from said tumor sample with a second sequence selected from the group consisting of BRCA1 gene from a nontumor sample of said subject, BRCA1 RNA from said nontumor sample and BRCA1 cDNA made from mRNA from said nontumor sample, wherein a difference in the sequence of the BRCA1 gene, BRCA1 RNA or BRCA1 cDNA from said tumor sample from the sequence of the BRCA1 gene, BRCA1 RNA or BRCA1 cDNA from said nontumor sample indicates a somatic alteration in the BRCA1 gene in said tumor sample.²⁴⁷

²⁴³ U.S. Patent No. 6,573,103, claim 1 (filed Apr. 29, 1999) (issued June 3, 2003). *See also id.* at *2-3 (citing an abbreviated portion of the claim).

²⁴⁴ *PerkinElmer, Inc.*, 2012 U.S. App. LEXIS 23845 at *2.

²⁴⁵ *Ass'n Molecular Pathology v. U.S. P.T.O.*, 689 F.3d 1303, 1309-10 (Fed. Cir. 2012), *cert. granted sub nom.*, *Ass'n Molecular Pathology v. Myriad Genetics*, 133 S. Ct. 694 (2012).

²⁴⁶ *See id.* at 1333.

²⁴⁷ *Id.* at 1310 (quoting from Claim 1 of the '999 patent).

The court noted that this claim was merely related to comparing data to screen individuals for breast cancer.²⁴⁸ Therefore, the court concluded that because the claim amounted to no more than obtaining and comparing data, it was not patent eligible.²⁴⁹

In contrast to the above result, the Federal Circuit held in the same decision that the following claim for screening cancer therapeutics was directed to patent-eligible subject matter:²⁵⁰

A method for screening potential cancer therapeutics which comprises: growing a *transformed eukaryotic host cell* containing an altered BRCA1 gene causing cancer in the presence of a compound suspected of being a cancer therapeutic, growing said *transformed eukaryotic host cell* in the absence of said compound, determining the rate of growth of said host cell in the presence of said compound and the rate of growth of said host cell in the absence of said compound and comparing the growth rate of said host cells, wherein a slower rate of growth of said host cell in the presence of said compound is indicative of a cancer therapeutic.²⁵¹

A cursory examination of claims 1 and 20, quoted above respectively, indicates they both involve obtaining and comparing data to predict a result. However, the court finds a distinction between the two claims; it concludes that claim 1 only requires the comparison of data,²⁵² but that claim 20 requires the creation of a transformed eukaryotic host cell, which is then used to obtain and compare the resulting data.²⁵³ This host cell is not a naturally occurring cell;²⁵⁴ it is essentially created in a laboratory via human intervention. Therefore, as the court notes, it is analogous to the Supreme Court's decision in *Diamond v. Chakrabarty*,²⁵⁵ which held that an artificially created life-

²⁴⁸ *Id.* at 1334.

²⁴⁹ *Id.* at 1334-35.

²⁵⁰ *Id.* at 1337.

²⁵¹ *Id.* at 1310 (quoting from Claim 20 of the '282 patent).

²⁵² *Id.* at 1335.

²⁵³ *Id.* at 1336-37.

²⁵⁴ *Id.* at 1335-36.

²⁵⁵ *Diamond v. Chakrabarty*, 447 U.S. 303 (1980). *See Ass'n Molecular Pathology*, 689 F.3d at 1336 ("Claim 20 thus recites a screening method premised on the use of 'transformed' host cells. Those cells, like the patent-eligible cells in *Chakrabarty*, are not naturally occurring. Rather, they are derived by altering a cell to include a foreign gene, resulting in a man-made, transformed cell with enhanced function and utility.").

form was statutory subject matter because it was not naturally occurring.²⁵⁶ Hence, claim 20 essentially requires creating a non-naturally occurring cell, which is then used to obtain data. That data is subsequently compared for screening potential cancer treatments. Consequently, claim 20 is directed to patent-eligible subject matter, but claim 1 is directed to non-statutory subject matter. Based on the factual assertions by the court, its conclusions appear to be correct.

Applying the proposed tests leads to the same conclusions as those reached in the Federal Circuit decision. Claim 1 would be held to be non-patentable subject matter under the data comparison test. In contrast, claim 20 would be patent eligible because it requires more than merely comparing data; it requires the creation of a non-naturally occurring host cell,²⁵⁷ and therefore, under the proposed human intervention test, it would be patent-eligible subject matter. If the machine-or-transformation test is applied, the result will arguably be consistent with this analysis. Claim 1 does not involve either a machine or a transformation of anything, but claim 20 arguably involves transforming a naturally occurring cell into a non-naturally occurring cell. Therefore, the machine-or-transformation test would negate claim 1 but uphold claim 20.

8. *The Bilski Decision*

In *Bilski*, the Supreme Court found that a business method claim²⁵⁸ for hedging²⁵⁹ was not patent-eligible subject matter.²⁶⁰ Both the

²⁵⁶ *Chakrabarty*, 447 U.S. at 309-10.

²⁵⁷ In contrast, although claim 1 in *Ass'n for Molecular Pathology* requires the creation of "BRAC1 cDNA made from mRNA" for both the tumor and the non-tumor samples, both cDNA and mRNA are naturally occurring, although they can also be artificially synthesized. A gene or other genetic material is not patent-eligible subject matter in its naturally occurring state. See CRAIG NARD, *THE LAW OF PATENTS* 169 (2d ed. 2011). But if such material is isolated and purified so that it exists in a form or state that does not occur in nature, it is potentially patent-eligible subject matter. *Id.* U.S. Patent and Trademark Office guidelines state that "an inventor's discovery of a gene can be the basis for a patent on the genetic composition isolated from its natural state and processed through purifying steps that separate the gene from other molecules naturally associated with it." *Id.*

²⁵⁸ *Bilski v. Kappos*, 130 S. Ct. 3218, 3228-29 (noting that the category of business method claims was not per se non-statutory subject matter under section 101).

²⁵⁹ See *id.* at 3223 (Hedging is a method of minimizing the risk of price changes.). See also *Hedging*, BRITANNICA ONLINE ENCYCLOPEDIA, <http://www.britannica.com/EBchecked/topic/259286/hedging> (last visited Dec. 31, 2012).

²⁶⁰ *Bilski*, 130 S. Ct. at 3230 ("[A]ll members of the Court agree that the patent application at issue here falls outside of § 101 because it claims an abstract idea.").

Patent and Trademark Office and the Federal Circuit had previously reached the same conclusion.²⁶¹ One of the claims at issue stated:

A method for managing the consumption risk costs of a commodity sold by a commodity provider at a fixed price comprising the steps of:

- (a) initiating a series of transactions between said commodity provider and consumers of said commodity wherein said consumers purchase said commodity at a fixed rate based upon historical averages, said fixed rate corresponding to a risk position of said consumer;
- (b) identifying market participants for said commodity having a counter-risk position to said consumers; and
- (c) initiating a series of transactions between said commodity provider and said market participants at a second fixed rate such that said series of market participant transactions balances the risk position of said series of consumer transactions.²⁶²

The Supreme Court deemed the above claim to be an attempt to claim hedging.²⁶³ The Court then concluded that hedging was merely an abstract idea, and therefore not patent eligible.²⁶⁴ However, the Court did not provide a specific test or criteria for ascertaining whether a claim is, or is not, directed to an abstract idea. Arguably, the Court was using a test akin to the proposed equation test when it stated that the above claim, as a practical matter, reduced the concept of hedging to a mathematical formula, which is not patent-eligible subject matter.²⁶⁵ It also relied on the proposed preemption test when it concluded that the claim at issue would preempt the use of the abstract idea of hedging.²⁶⁶ Ultimately, the Court's holding, as noted above, is consistent with the results of using the proposed tests.

Application of the machine-or-transformation test, although not determinative, also supports the Court's conclusion because the claim does not include the use of any machine, nor does it transform anything. The claim only involves buying and selling commodities such that any risk of loss is hedged.

²⁶¹ *Id.* at 3224.

²⁶² *See In re Bilski*, 545 F.3d 943, 949 (Fed. Cir. 2008) (quoting Claim 1 of the '892 patent application).

²⁶³ *Bilski*, 130 S. Ct. at 3231.

²⁶⁴ *Id.* at 3230.

²⁶⁵ *See id.* at 3231.

²⁶⁶ *See id.*

9. *The In re Comiskey Decision*

The Federal Circuit, sitting en banc, found the following claim to cover a business method²⁶⁷ in the form of mandatory arbitration:

A method for mandatory arbitration resolution regarding one or more unilateral documents comprising the steps of: enrolling a person and one or more unilateral documents associated with the person in a mandatory arbitration system at a time prior to or as of the time of creation of or execution of the one or more unilateral documents; incorporating arbitration language, that is specific to the enrolled person, in the previously enrolled unilateral document wherein the arbitration language provides that any contested issue related to the unilateral document must be presented to the mandatory arbitration system, in which the person and the one or more unilateral documents are enrolled, for binding arbitration wherein the contested issue comprises one or more of a challenge to the documents, interpretation of the documents, interpretation or application of terms of the documents and execution of the documents or terms of the documents; requiring a complainant to submit a request for arbitration resolution to the mandatory arbitration system wherein the request is directed to the contested issue related to the unilateral document containing the arbitration language; conducting arbitration resolution for the contested issue related to the unilateral document in response to the request for arbitration resolution; providing support to the arbitration resolution; and determining an award or a decision for the contested issue related to the unilateral document in accordance with the incorporated arbitration language, wherein the award or the decision is final and binding with respect to the complainant.²⁶⁸

The court's conclusion that the above claim is not patent-eligible subject matter was based on finding that the claim merely covered a mental process for resolving a dispute via arbitration.²⁶⁹ Additionally, the court noted that the parties conceded that the claim would not

²⁶⁷ *In re Comiskey*, 554 F.3d 967, 975-76 (Fed. Cir. 2009) (en banc).

²⁶⁸ *Id.* at 970 n.1 (quoting from Claim 1 of the '742 patent application).

²⁶⁹ *Id.* at 981.

survive the machine-or-transformation test.²⁷⁰

10. The CLS Bank International Decision

In this case, the following business method claim was analyzed to determine if it was patent-eligible subject matter:

A method of exchanging obligations as between parties, each party holding a credit record and a debit record with an exchange institution, the credit records and debit records for exchange of predetermined obligations, the method comprising the steps of:

(a) creating a shadow credit record and a shadow debit record for each stakeholder party to be held independently by a supervisory institution from the exchange institutions;

(b) obtaining from each exchange institution a start-of-day balance for each shadow credit record and shadow debit record;

(c) for every transaction resulting in an exchange obligation, the supervisory institution adjusting each respective party's shadow credit record or shadow debit record, allowing only these [sic] transactions that do not result in the value of the shadow debit record being less than the value of the shadow credit record at any time, each said adjustment taking place in chronological order; and

(d) at the end-of-day, the supervisory institution instructing one of the exchange institutions to exchange credits or debits to the credit record and debit record of the respective parties in accordance with the adjustments of the said permitted transactions, the credits and debits being irrevocable, time invariant obligations placed on the exchange institutions.²⁷¹

The district court concluded that the above claim was not patent-

²⁷⁰ *See id.* (conceding the claims do not require a machine, they do not describe a manufacturing process, nor do they include a process that alters a composition of matter).

²⁷¹ *CLS Bank Int'l v. Alice Corp. Pty. Ltd.*, 685 F.3d 1341, 1343-44 (Fed. Cir. 2012) (quoting from Claim 33 of the '479 patent), *vacated & reh'g en banc granted*, 484 F. App'x 559 (Fed. Cir. 2012).

eligible subject matter.²⁷² The Federal Circuit initially disagreed and determined that the claim was patent-eligible subject matter.²⁷³ The court's reasoning was based on its finding that the above claim was directed to more than an abstract idea.²⁷⁴ The court held that it claimed a practical application of a business method, which required implementation on a computer.²⁷⁵ Additionally, the court noted that, because the claim would have to be implemented on a computer, it would likely satisfy the machine prong of the machine-or-transformation test.²⁷⁶ Subsequently, the Federal Circuit vacated this decision and agreed to rehear the case en banc.²⁷⁷

Under the proposed preemption test, it can be argued that the above claim is not directed to patent-eligible subject matter. The claimed business method can be described as:

a computerized trading platform for exchanging obligations in which a trusted third party settles obligations between a first and second party so as to eliminate "settlement risk." Settlement risk is the risk that only one party's obligation will be paid, leaving the other party without its principal. The trusted third party eliminates this risk by either (a) exchanging both parties' obligations or (b) exchanging neither obligation.²⁷⁸

Any requirement that this method must be performed on a computer is not a realistic limitation because any modern financial transaction of this type would only be viable if it utilized a computer system. This limitation, therefore, is not relevant under the insignificant limitation test. Additionally, under the proposed preemption test, this claim would not be patent-eligible subject matter because it would preempt the basic idea of using a trusted third party to hold assets that will only be distributed under certain circumstances. This is a basic and commonly used idea which is analogous to the typical arrangement used in real estate transactions.²⁷⁹ Moreover, the

²⁷² *Id.* at 1345.

²⁷³ *Id.* at 1343.

²⁷⁴ *See id.* at 1346-47 (holding that this claim was patent-eligible subject matter after stating that abstract ideas are not patent-eligible subject matter).

²⁷⁵ *Id.* at 1355.

²⁷⁶ *Id.*

²⁷⁷ *CLS Bank Int'l v. Alice Corp. Pty. Ltd.*, 484 F. App'x 559 (Fed. Cir. 2012).

²⁷⁸ *CLS Bank Int'l v. Alice Corp. Pty. Ltd.*, 685 F.3d 1341, 1343 (Fed. Cir. 2012).

²⁷⁹ JOHN SPRANKLING AND RAYMOND COLETTA, *PROPERTY—A CONTEMPORARY APPROACH* 562 (2d ed. 2012) (In many states an escrow agent acts

claimed business method involves comparing various data to determine if an obligation should be honored by a financial institution. Arguably, this may cause the method to also be considered not patent-eligible subject matter under the proposed data comparison test.

D. Application of the Proposed Tests to Product Claims

1. The Association for Molecular Pathology Decision

In addition to the process claims discussed above, the *Association for Molecular Pathology* case also involved several “composition of matter” claims directed to isolated DNA molecules.²⁸⁰ The following is a representative claim which was held to be patent-eligible subject matter by the Federal Circuit:²⁸¹ “An isolated DNA coding for a BRCA1 polypeptide, said polypeptide having the amino acid sequence set forth in SEQ ID NO:2.”²⁸² The court concluded that this claim covered a patent eligible composition of matter and explained:

The [claimed] isolated DNA molecules before us are not found in nature. They are obtained in the laboratory and are man-made, the product of human ingenuity. While they are prepared from products of nature, so is every other composition of matter. All new chemical or biological molecules, whether made by synthesis or decomposition, are made from natural materials. For example, virtually every medicine utilized by today's medical practitioners, and every manufactured plastic product, is either synthesized from natural materials (most often petroleum fractions) or derived from natural plant materials. But, as such, they are different from natural materials, even if they are ultimately derived from them. The same is true of isolated DNA molecules.²⁸³

The court's holding is consistent with the proposed human intervention test which is based on the Supreme Court decision in

as a neutral third party who holds money and related documents involved in a purchase and sale of real estate. Once the buyer and seller complete all contractual obligations, the money and documents are distributed to the relevant parties.).

²⁸⁰ *Ass'n Molecular Pathology v. U.S.P.T.O.*, 689 F.3d 1303, 1309 (Fed. Cir. 2012) *cert. granted sub nom.*, *Ass'n Molecular Pathology v. Myriad Genetics*, 133 S. Ct. 694 (2012).

²⁸¹ *Id.* at 1325.

²⁸² *Id.* at 1309 (quoting Claim 1 of the '282 patent).

²⁸³ *Id.* at 1325.

Chakrabarty.²⁸⁴ Nevertheless, the proposed preemption test may negate patent eligibility. Under that test, if the above claim on an isolated DNA molecule would prevent anyone from utilizing that DNA in its natural state, then the claim is not statutory subject matter. The application of this test to the above claim turns on a factual question: is the claimed DNA so similar to the naturally occurring DNA that allowance of the claim essentially preempts others from utilizing the naturally occurring DNA? If the answer is yes, the claim should be held to be not patent-eligible subject matter. If the answer is no, the claim was correctly found to be patent-eligible subject matter by the Federal Circuit.

2. *The State Street Bank Decision*

This Federal Circuit decision,²⁸⁵ which categorically stated that business method patents were not per se invalid,²⁸⁶ actually involved a product claim, not a business method claim.²⁸⁷ The following claim was at issue:

A data processing system for managing a financial services configuration of a portfolio established as a partnership, each partner being one of a plurality of funds, comprising:

- (a) computer processor means [a personal computer including a CPU] for processing data;
- (b) storage means [a data disk] for storing data on a storage medium;
- (c) first means [an arithmetic logic circuit configured to prepare the data disk to magnetically store selected data] for initializing the storage medium;
- (d) second means [an arithmetic logic circuit configured to retrieve information from a specific file, calculate incremental increases or decreases based on specific input, allocate the results on a percentage basis, and store the output in a separate file] for processing

²⁸⁴ See, e.g., Douglas L. Rogers, *Coding For Life—Should Any Entity Have The Exclusive Right To Use And Sell Isolated DNA?*, 12 U. PITT. J. TECH. & POL'Y 1, 23-24 (2011) (inquiring whether or not “purification [is] the kind of human intervention into naturally occurring products that the Supreme Court in *Chakrabarty* contemplated as the dividing between patentable and unpatentable subject matter?”).

²⁸⁵ *State St. Bank & Trust Co. v. Signature Fin. Grp., Inc.*, 149 F.3d 1368 (Fed. Cir. 1998).

²⁸⁶ *Id.* at 1375.

²⁸⁷ *Id.* at 1371 (illustrating claim at issue directed to a machine).

data regarding assets in the portfolio and each of the funds from a previous day and data regarding increases or decreases in each of the funds, [sic, funds'] assets and for allocating the percentage share that each fund holds in the portfolio;

(e) third means [an arithmetic logic circuit configured to retrieve information from a specific file, calculate incremental increases and decreases based on specific input, allocate the results on a percentage basis and store the output in a separate file] for processing data regarding daily incremental income, expenses, and net realized gain or loss for the portfolio and for allocating such data among each fund;

(f) fourth means [an arithmetic logic circuit configured to retrieve information from a specific file, calculate incremental increases and decreases based on specific input, allocate the results on a percentage basis and store the output in a separate file] for processing data regarding daily net unrealized gain or loss for the portfolio and for allocating such data among each fund; and

(g) fifth means [an arithmetic logic circuit configured to retrieve information from specific files, calculate that information on an aggregate basis and store the output in a separate file] for processing data regarding aggregate year-end income, expenses, and capital gain or loss for the portfolio and each of the funds.²⁸⁸

The above claim is for a machine, which makes rapid calculations with regard to a pool of mutual funds.²⁸⁹ Such rapid calculations are necessary²⁹⁰ to obtain certain tax advantages and economies of scale with regard to a financial product.²⁹¹ A careful examination of the claim indicates it involves having a computer make a series of calculations, and then outputting the data to a computer file.

The broad nature of the claim essentially covers an algorithm based on a variety of data sources. In essence, this claim is no more than an attempt to claim data calculations, which is akin to claiming an equation. Under the proposed equation test, this claim therefore does

²⁸⁸ *Id.* at 1371-72 (quoting Claim 1 of the '056 patent).

²⁸⁹ *Id.* at 1370.

²⁹⁰ *Id.* at 1371.

²⁹¹ *See id.* at 1370 (providing a brief explanation of the financial product at issue).

not cover patent-eligible subject matter.

Although it could correctly be argued that this claim is specifically limited to performing the calculations on a computer system, such a limitation is inadequate to convert this claim into statutory subject matter. From a practical perspective, the necessary calculations in the claim can only be easily performed on a computer. Additionally, it is the speed with which a computer is able to carry out the claimed calculations that make the system viable. Hence, this claim could arguably also be considered patent ineligible subject matter under the proposed preemption test because it preempts all realistic use of the claimed calculations. Moreover, the claim limitations requiring use of a computer can also be viewed as insignificant limitations.

As a result, under the proposed tests, this claim would be directed to non-statutory subject matter, the opposite conclusion of the one reached by the Federal Circuit.

VII. CONCLUSION

The determination of what subject matter is potentially eligible for patent protection has long been, and continues to be, an unclear issue. Patent law specifically identifies four broad categories of subject matter—process, machine, manufacture, or composition of matter—that are patent eligible. Although very few things fall outside these categories, the Supreme Court has engrafted some exceptions and limitations onto these statutory categories. Patentable subject matter that is otherwise within these categories is deemed not to be patent eligible if it is a “law of nature,” a “physical phenomenon,” or an “abstract idea.” The precise meaning or scope of these limitations is difficult to enunciate despite numerous Supreme Court and lower court decisions, which have attempted to define these terms. Nevertheless, these limitations can be viewed merely as labels that are attached after a judicial balance has been made between competing or conflicting underlying concepts: providing patent protection to promote innovation, and denying patent protection when it disincentives innovative activities. Early stage research often produces discoveries such as previously unknown mathematical relationships, fundamental concepts, physical forces, biological data, or correlations. These discoveries are fundamental building blocks which are very valuable starting points for engaging in future research that will lead to new technological products and processes that have real world practical applications. Such discoveries are denied patent protection because they are potentially too valuable. Granting patent protection would ultimately impede future innovation based on these building blocks. Hence, fundamental building blocks are labeled as a

“law of nature,” a “physical phenomenon,” or an “abstract idea” to signify they are not patent-eligible subject matter. Once the level of innovation and development moves far enough downstream on the innovation continuum, the subject matter becomes patent eligible. Divining the precise point on the innovation continuum where the divide between patent-eligible and unpatentable subject matter occurs has eluded courts.

This article asserts that the commercial importance of patents in the modern marketplace strongly favors predictable determinations of what is, and what is not patent-eligible subject matter. This can only be accomplished via relatively bright-line rules which may be over- or under-inclusive, and which may have disparate and potentially inequitable impacts on different industries. Analogous to other areas of law, these potential problems are outweighed by the importance of having predictable results.

The variety of new technology, and the multitude of ways patent claims are drafted make it impossible to create a single rule for ascertaining whether something is patent-eligible subject matter. Therefore, this article proposes a number of different tests where failure to satisfy any one of the tests negates patent eligibility. These tests include the preemption test, which holds that a claim is not patent eligible if it essentially preempts all meaningful use of a law of nature, natural phenomena, or an abstract idea in substantially all contexts. The insignificant limitation test helps to recognize inclusion of limitations in claims that appear to limit claim scope, but in fact do not provide any significant practical limitation on claim scope, and therefore, the claim should be determined to cover unpatentable subject matter. The equation test disallows a claim that amounts to no more than a disguised attempt to claim a formula, equation, or mathematical relationship. The human intervention test provides that a fundamental discovery of something, such as a new plant species, a new mineral, a new compound, or a new biological material, is patent eligible if it is altered or modified so that it is in a non-naturally occurring state and has properties that are not exhibited in its naturally occurring form. Finally, the data comparison test negates patent eligibility if a claim merely covers the act of comparing data without more.

Volume 98, No. 3

Pages 306-593

Journal of the Patent and Trademark Office Society

A medium of expression for the exchange of thought in the fields of Patents, Trademarks and Copyrights; a forum for the presentation and discussion of legal and technical subjects relating to the useful arts; a periodical for the dissemination of knowledge of the functional attribute of the patent, trademark, and copyright laws, in order to effect a more uniform practice thereof and through which all interested in the development and appreciation thereof may work to a common end. Published quarterly by members of the Patent and Trademark Office Society.

Managerial Staff

Seahvosh Nikmanesh
Executive Director

Johnathan Lindsey
Financial Director

Matthew Bradley
Assistant Director

Editorial Staff

Sean Patrick Burke
Editor-in-Chief

Roland Casillas
Blog Editor

Articles Editors

Christopher Braniff
Josephine Chang
Justin Darrow
Brandi Doyle

Brandon Marsh
Asha Puttaiah
Alex Sofocleous
Roy Rabindranath
David Sosnowski

Blog Contributors

Justin Blaufeld **David Youngkin**
John Kirkpatrick

Board of Governors

Elizabeth Dougherty, *Board Chair*
Hannah Pak, *Vice Chair*
Bratislav Stankovic, *Secretary*

Society Officers

Seahvosh Nikmanesh, *President*
Fred Guillermet, *Vice President*

web
jptos.org

facebook
facebook.com/JPTOS

linkedin
linkd.in/1c3GBor

POSTMASTER-Send address changes to:
The Journal of the Patent and Trademark Office Society
PO Box 2600, Arlington, Virginia 22202

Contents

The Bedeviling Mess of *ePlus*, Contempt, and Article III

Wayne A. Kalkwarf & Matthew D. Tanner.....306

Two Years After *Alice v. CLS Bank*

Jasper L. Tran.....354

Curiouser and Curiouser! Why the Federal Circuit Can't Make Sense of *Alice*

Austin Steelman.....374

The Failure to Preserve CRISPR-Cas9's Patentability post *Myriad* and *Alice*

Benjamin C. Tuttle.....391

From Camera Obscura To Camera Futura How Patents Shaped Two Centuries of Photographic Innovation and Competition

Elliot Brown, Ben Hattenbach, & Ian Washburn.....406

Patents in Outer Space: An Approach to the Legal Framework of Future Inventions

Juan Felipe Jiménez.....447

The Patent Attorney in Popular Culture

Robert M. Jarvis.....469

When All You Have is a Hammer, Everything Looks Like a Nail: *In re Tam* and the Federal Circuit's Conflation of Federal Trademark Registration and the First Amendment

Drew Jurgensen.....512

Note: An Overview and Comparison of U.S. and Japanese Patent Litigation

Kyle Pietari.....540

Note: Trading on the Outcomes of Patent Challenges: Short-Selling Petitioners and Possible Modifications to the Inter Partes Review Process

Feng Ye.....557

Review: Secrets: Managing Information Assets in the Age of Cyberspace by James Pooley and The New Era of Regulatory Enforcement: A Comprehensive Guide for Raising the Bar to Manage the Risk by Richard H. Girgenti and Timothy P. Hedley

Sean Patrick Burke & Asha Puttaiah.....590

Two Years After *Alice v. CLS Bank*

Jasper L. Tran*

Contents

I. <i>Alice</i> at One	356
A. <i>Alice's</i> Recap	356
B. <i>Alice's</i> One-Year Review	357
II. <i>Alice</i> at Two	358
A. <i>Alice's</i> Two-Year Statistics	358
B. Analysis and Recommendation	359
III. The Federal Circuit Cases in <i>Alice's</i> Second Year	360
A. Federal Circuit Cases from <i>Alice's</i> One-Year Mark to Pre- <i>Enfish</i>	360
B. <i>Enfish v. Microsoft</i>	364
C. <i>In re TLI Communications LLC Patent Litigation</i>	366
D. The USPTO's Reaction Immediately After <i>Enfish</i> and <i>TLI Communications</i>	368
E. <i>BASCOM v. AT&T</i>	368
IV. Conclusion	370
Appendix A	371

*Judicial Clerk, Google Policy Fellow. Views are my own, in my individual capacity. Email: tran4lr@gmail.com. © Jasper L. Tran.

Abstract

As of June 19, 2016, courts have examined 568 challenged patents brought under § 101 motions citing *Alice*, resulting in 190 valid patents and 378 patents invalidated with an average invalidation rate of 66.5%. Specifically, the Federal Circuit upheld 3 patents and invalidated 34 patents—an average invalidation rate of 91.9%. Also, courts have decided a total of 500 motions brought under § 101 citing *Alice*, resulting in 109 validation holdings and 391 invalidation holdings with an average invalidation rate of 78.2%. Specifically, the Federal Circuit has decided 26 motions, resulting in 2 validation holdings and 24 invalidation holdings with an average invalidation rate of 92.3%. The district courts have decided 251 motions, resulting in 84 validation holdings and 167 invalidation holdings with an average invalidation rate of 66.5%. The PTAB has decided 209 motions, resulting in 23 validation holdings and 186 invalidation holdings with an average invalidation rate of 89.7%.

Justice Stephen Breyer's recent statement fully captured the U.S. Supreme Court's view on software patents: "[T]here are these [] patent trolls, and [] the Patent Office has been issuing billions of patents that shouldn't have been issued – I overstate, but only some."¹

On June 19, 2014, the Supreme Court decided *Alice Corp. v. CLS Bank Int'l*,² raising the patentability standard for computer-implemented inventions under 35 U.S.C. § 101. The Court held that implementing an abstract idea on a computer is not enough to transform that idea into patentable subject matter.³ Put simply, *Alice* was a "noticeable judicial move[] to curb excessive patent assertion,"⁴ and § 101 post-*Alice* has proven "deadly" for software patents.⁵ For instance, between July 1 and August 15, 2014 (immediately after *Alice*), there were 830 patent applications related computer-implemented inventions withdrawn from the U.S. Patent and Trademark Office ("USPTO").⁶

At *Alice*'s one-year mark, I reviewed all lower court decisions that cited *Alice* to invalidate software patents.⁷ Specifically, as of June 19, 2015, there were a total of 272 court cases—198 Patent Trial and Appeal Board ("PTAB") decisions, 63 district court decisions, and 11 Federal Circuit opinions—that cited *Alice* to invalidate software patents, accounting for an average invalidation rate of 82.9%.⁸ I also estimated that—without accounting for selection bias—out of roughly 240,000 software patents in force as of 2015, about 199,000 of those, if challenged, would likely be invalidated under *Alice*, leaving about 41,000 actually valid patents.⁹

¹Justice Breyer made this statement on April 25, 2016 during *Cuozzo Speed Technologies v. Lee*'s oral arguments. See Transcript of Oral Argument, p. 14 ll. 8–12, *Cuozzo Speed Techs., LLC v. Lee*, 136 S. Ct. 890 (No. 15–446), available at http://www.supremecourt.gov/oral_arguments/argument_transcripts/15-446_2dp3.pdf. In fact, *Alice* was a 9-0 decision with 3 concurring justices. *Alice Corp. v. CLS Bank Int'l*, 134 S. Ct. 2347, 2351 (2014).

²134 S. Ct. 2347 (2014).

³*Id.* at 2355, 2357.

⁴Christopher Beauchamp, *The First Patent Litigation Explosion*, 125 *YALE L.J.* 848, 934 (2016).

⁵Foley Hoag LLP, *The Post Office Gets into the Alice Act*, PTAB BLOG (Oct. 27, 2015), <http://www.ptab-blog.com/2015/10/27/the-post-office-gets-into-the-alice-act/>. For a background discussion on patents, see generally Jasper L. Tran, *Timing Matters: Prior Art's Age Infers Patent Nonobviousness*, 50 *GONZ. L. REV.* 189, 194–97 (2015) (discussing patent nonobviousness and prior arts); Jasper L. Tran, *Rethinking Intellectual Property Transactions*, 43 *S.U. L. REV.* 149, 150–56 (2015) (discussing patent transaction).

⁶See Tristan Gray–Le Coz & Charles Duan, *Apply It to the USPTO: Review of the Implementation of Alice v. CLS Bank in Patent Examination*, 2014 *PATENTLY-O PATENT L.J.* 1, 3 (2014).

⁷Jasper L. Tran, *Software Patents: A One-Year Review of Alice v. CLS Bank*, 97 *J. PAT. & TRADEMARK OFF. SOC'Y* 532, 539–45 (2015).

⁸*Id.* at 540.

⁹*Id.* at 541–42.

This Article continues my previous review at *Alice*'s two-year mark. As of June 19, 2016, courts have examined 568 challenged patents brought under § 101 motions citing *Alice*, resulting in 190 valid patents and 378 patents invalidated with an average invalidation rate of 66.5%. The Federal Circuit has upheld 3 patents and invalidated 34 patents—an average invalidation rate of 91.9%.

Courts have also decided a total of 500 motions brought under § 101 citing *Alice*, resulting in 109 validation holdings and 391 invalidation holdings with an average invalidation rate of 78.2%. Specifically, the Federal Circuit has decided 26 motions, resulting in 2 validation holdings and 24 invalidation holdings with an average invalidation rate of 92.3%. The district courts have decided 251 motions, resulting in 84 validation holdings and 167 invalidation holdings with an average invalidation rate of 66.5%. The PTAB has decided 209 motions, resulting in 23 validation holdings and 186 invalidation holdings with an average invalidation rate of 89.7%.

The Federal Circuit notably released *Enfish, LLC v. Microsoft Corp.*,¹⁰ on May 12, 2016, marking the second Federal Circuit decision to uphold patent validity since *Alice*¹¹ and shed more light on how to analyze § 101 under *Mayo/Alice*. In *Enfish*, the Federal Circuit made clear that it was “not persuaded that the invention’s ability to run on a general-purpose computer dooms the claims.”¹² The Federal Circuit then released *BASCOM Global Internet Services, Inc. v. AT & T Mobility LLC*¹³ on June 27, 2016, marking the third Federal Circuit decision to uphold patent validity since *Alice*.

This Article proceeds in four parts. Part I quickly recaps the *Alice v. CLS Banks* decision and *Alice*'s one-year statistics. Part II lays out and analyzes *Alice*'s two-year statistics. Part III reviews the Federal Circuit cases in *Alice*'s second year, including *Enfish*, *TLI Communications*, and *BASCOM*, with a quick coverage of the USPTO's reaction post-*Enfish*. Part IV concludes. Additionally, Appendix A includes the information of the patents or patent applications that courts have upheld under *Alice* from June 20, 2015 to June 19, 2016.

I. *Alice* at One

A. *Alice*'s Recap

My one-year review of *Alice* discussed *Alice*'s procedural history and opinion in detail.¹⁴ In short, *Alice* built on *Mayo Collaborative Services v. Prometheus Laboratories, Inc.*¹⁵ and established a two-step framework for patentable subject matter of computer-implemented inventions:

1. The *Mayo/Alice* step one “determine[s] whether the claims at issue are directed to a patent-ineligible concept. If so, the Court then asks whether the claim’s [additional] elements, considered both individually and as an ordered combination,

¹⁰No. 2015-1244, 2016 WL 2756255 (Fed. Cir. May 12, 2016).

¹¹The first Federal Circuit decision that upheld patent validity since *Alice* was *DDR Holdings, LLC v. Hotels.com, L.P.*, 773 F.3d 1245 (Fed. Cir. 2014).

¹²*Id.* at *7.

¹³No. 2015-1763, 2016 WL 3514158 (Fed. Cir. June 27, 2016).

¹⁴Tran, *One-Year Review*, *supra* note 7, at 535–39.

¹⁵132 S. Ct. 1289 (2012).

transform the nature of the claim into a patent-eligible application.”¹⁶

2. The *Mayo/Alice* step two “examine[s] the elements of the claim to determine whether it contains an inventive concept sufficient to transform the claimed abstract idea into a patent-eligible application. A claim that recites an abstract idea must include additional features to ensure that the claim is more than a drafting effort designed to monopolize the abstract idea.”¹⁷ Adequate “transformation into a patent-eligible application requires more than simply stating the abstract idea while adding the words ‘apply it.’”¹⁸

In *Alice* the challenged patents claimed “a computer-implemented scheme for mitigating ‘settlement risk’ (i.e., the risk that only one party to a financial transaction will pay what it owes) by using a third-party intermediary.”¹⁹ The Supreme Court found the claims were “directed to a patent-ineligible concept: the abstract idea of intermediated settlement,” and were “not enough to supply the inventive concept needed to make th[e] transformation” into a patent-eligible application because the claims did “no more than simply instruct the practitioner to implement the abstract idea of intermediated settlement on a generic computer.”²⁰

B. *Alice*'s One-Year Review

Following its § 101 framework in *Mayo*,²¹ the Supreme Court considered *Alice* a “minor case.”²² In fact, CLS Bank—at *Alice*'s oral argument—framed the issue as “a very small problem” that would only impact the “most marginal, most dubious, most skeptical patents,” citing the statistics of 57 district court on § 101 and 12 Federal Circuit cases on computer implementation in the four years following *Bilski*.²³ But the reality post-*Alice* has unfolded in the opposite direction.

Following *Alice*, the USPTO issued the 2014 Interim Guidance on Patent Subject Matter Eligibility to examiners on implementing *Alice*.²⁴ The 2014 Guidance allowed software claims of either “[i]mprovements to another technology or technical field; [i]mprovements to the functioning of the computer itself; [or m]eaningful limitations beyond generally linking the use of an abstract idea to a particular technological environment.”²⁵

Between July 1 and August 15, 2014, there were 830 patent applications related computer-implemented inventions withdrawn from the U.S. Patent and Trademark

¹⁶ *Alice Corp. Pty. v. CLS Bank Int'l*, 134 S. Ct. 2347, 2350 (2014) (citing *Mayo Collaborative Servs. v. Prometheus Labs., Inc.*, 132 S. Ct. 1289, 1291 (2012)) (internal quotations omitted).

¹⁷ *Id.* at 2357 (citing *Mayo*, 132 S. Ct. at 1294, 1297–98) (internal quotations omitted).

¹⁸ *Id.* (some internal quotations omitted).

¹⁹ *Id.* at 2351–52.

²⁰ *Id.* at 2350–51, 2357 (internal quotations omitted).

²¹ *Mayo Collaborative Servs. v. Prometheus Labs., Inc.*, 132 S. Ct. at 1289 (2012).

²² Robert R. Sachs, *Two Years After Alice: A Survey of the Impact of a “Minor Case,” Part I*, *BILSKI BLOG* (June 16, 2016), <http://www.bilskiblog.com/blog/2016/06/two-years-after-alice-a-survey-of-the-impact-of-a-minor-case.html> (last visited June 20, 2016) (citing a conversation with a Supreme Court Justice).

²³ Transcript of Oral Argument, pp. 43–44, *Alice Corp. Pty. v. CLS Bank Int'l*, 134 S.Ct. 2347 (No. 13–298), available at http://www.supremecourt.gov/oral_arguments/argument_transcripts/13-298_869d.pdf.

²⁴ Memorandum from Andrew H. Hirschfield, Deputy Comm’r of the U.S. Pat. & Trademark Off. to Patent Examiners (June 25, 2014), available at http://www.uspto.gov/sites/default/files/patents/announce/alice_pec_25jun2014.pdf.

²⁵ *Id.*

Office (“USPTO”).²⁶ By December 15, 2014, there were 36 lower court cases—32 in the district courts and 4 in the Federal Circuit—that cited *Alice* to invalidate software patents.²⁷

By June 19, 2015 (*Alice*'s one-year mark), the case was cited in 190 PTAB decisions, 60 district court decisions, and 9 Federal Circuit opinions, in a total of 261 court cases, to invalidate patents under § 101.²⁸ Specifically, the PTAB upheld 18 patent applications and invalidated 170 patent applications—an invalidation rate of 90.4%.²⁹ The district courts upheld 40 patents and invalidated 89 patents—an invalidation rate of 69.0%.³⁰ The Federal Circuit upheld 1 patent and invalidated 14 patents—an invalidation rate of 93.3%.³¹ In total, 273 invalidations out of 332 patents or patent applications yield an average invalidation rate of 82.2% before the three venues.³²

II. *Alice* at Two

A. *Alice*'s Two-Year Statistics

By the end of 2015, patent grants had dropped for the first time in seven years, “a drop likely attributable to the *Alice* decision’s impact on obtaining and asserting software patents,” according to an annual study by PricewaterhouseCoopers analysts.³³

Under the *Mayo/Alice* standard, patents’ validity can be challenged in district court under § 101 motions. Table 1 shows the statistics of courts’ implementation of *Alice* from June 19, 2014 to June 19, 2016.³⁴

Patents. As of June 19, 2016 (i.e. *Alice*'s two-year mark), courts have examined 568 challenged patents brought under § 101 motions citing *Alice*, resulting in 190 valid patents and 378 patents invalidated with an average invalidation rate of 66.5%. Specifically, the Federal Circuit upheld 3 patents and invalidated 34 patents—an average invalidation rate of 91.9%. The USPTO has rejected over 36,000 published patent applications

²⁶ See Gray–Le Coz & Duan, *supra* note 6, at 3.

²⁷ See Jennifer A. Albert et al., *Impact of the Alice V. CLS Bank Decision – A Year-End Review*, GOODWIN PROCTER: IP ALERT (Dec. 19, 2014), <http://www.goodwinprocter.com/Publications/Newsletters/IP-Alert/2014/1219-Impact-of-the-Alice-V-CLS-Bank-Decision.aspx?article=1>.

²⁸ Tran, *One-Year Review*, *supra* note 7, at 540.

²⁹ *Id.*

³⁰ *Id.*

³¹ *Id.*

³² *Id.*

³³ Kevin Penton, *Patent Grants Dropped For First Time In 7 Years, Report Says*, LAW360 (May 17, 2016), <http://www.law360.com/ip/articles/797381>. Note that in May 2016, President Obama signed the Uniform Trade Secret Act into law, which creates a federal cause of action for trade secret infringement and could affect the landscape of patent filing in the future. The Defend Trade Secrets Act of 2015, S. 1890, H.R. 3326, 114th Cong. (2015).

³⁴ Methodology note: Using WestlawNext, I searched for all cases citing *Alice* from June 19, 2014 to June 19, 2016. In performing my research, I compared my own data on *Alice* with the data of Fenwick & West’s Bilski Blog, Sachs, *Part I*, *supra* note 22, at tbl. 1 (containing table and chart); see also *Decoding Patent Eligibility Post-Alice: Patent Eligibility Case Analysis Tool*, Fenwick & West LLP, <https://www.fenwick.com/pages/post-alice.aspx> (last visited May 18, 2016) (containing the case names, holdings, and reasonings of cases decided in 2015 and the latter half of 2014). To explain the minor disagreement between the two sets of data: my collection included data of cases until June 19, 2016 to meet the actual two-year anniversary date of *Alice* whereas Sachs’ set of data ended on June 8, 2016. See also Jason Rantanen, *Empirical Analyses of Judicial Opinions: Methodology, Metrics and the Federal Circuit*, 49 CONN. L. REV. __ (forthcoming 2016), available at <http://ssrn.com/abstract=2774307> (examining how to consider reported data in collective terms and discussing substantial variation of reported empirical results even when using the same parameter to measure).

June 19, 2014 to June 19, 2016		§ 101 motions				Patents	
		Fed. Cir.	Distr. Ct.	PTAB	Total	Fed. Cir.	Total
Holding	Invalid	24	167	200	391	34	378
	Valid	2	84	23	109	3	190
	Total	26	251	223	500	37	568
Invalidation Rate		92.3%	66.5%	89.7%	78.2%	91.9%	66.5%

Table 1: *Alice* statistics from June 19, 2014 to June 19, 2016.

under *Alice*, where over 5,000 such applications were abandoned.³⁵

§ 101 Motions. Courts decided a total of 500 motions brought under § 101 citing *Alice*, resulting in 109 validation holdings and 391 invalidation holdings with an average invalidation rate of 78.2%. Specifically, the Federal Circuit decided 26 motions, which resulted in 2 validation holdings and 24 invalidation holdings with an average invalidation rate of 92.3%. The district courts decided 251 motions, resulting in 84 validation holdings and 167 invalidation holdings with an average invalidation rate of 66.5%. The PTAB decided 209 motions, resulting in 23 validation holdings and 186 invalidation holdings with an average invalidation rate of 89.7%.

B. Analysis and Recommendation

Alice's invalidation rate seemed to slightly drop through *Alice's* second year, but the drop was almost unnoticeable.³⁶ Individually, the invalidation rate ranged from 66% to 93%, which remains very high. Before three venues, namely the district courts, the PTAB and the Federal Circuit, the average invalidation rate was 82.9% at *Alice's* one-year³⁷ and 78.2% at *Alice's* two-year. Given that *Enfish* and *BASCOM* came out very late toward the end of *Alice's* second year, a determination of whether *Enfish* and *BASCOM* (in combination with *DDR Holdings*) affect *Alice's* interpretation will have to wait until *Alice's* third-year review.

At *Alice's* first year, the Federal Circuit has the highest invalidation rate at 93.3% with the PTAB immediately behind at 90.4%, whereas the district courts have the lowest invalidation rate of 69.0%. The numbers remain similar at *Alice's* second year review, where the Federal Circuit had the highest invalidation rate at 92.3% with the PTAB immediately behind at 89.7%, whereas the district courts again had the lowest invalidation rate of 66.4%. Because the PTAB continues to aggressively implement *Alice*,³⁸ my rec-

³⁵Robert R. Sachs, *Two Years After Alice: A Survey of the Impact of a "Minor Case" (Part 2)*, BILSKIBLOG (June 20, 2016), <http://www.bilskiblog.com/blog/2016/06/two-years-after-alice-a-survey-of-the-impact-of-a-minor-case.html> (last visited July 20, 2016). Sachs further noted: "Actually, it's worse than that because statistics presented here are based on published applications, which have historically accounted for 60% of all patent applications. It is reasonable to assume that unpublished applications get the same treatment with respect to § 101 as published ones. The upshot: the actual number of applications rejected due to *Alice* is likely closer 60,000, and the number abandoned is likely closer to 8,400." *Id.* at n.1.

³⁶Tran, *One-Year Review*, *supra* note 7, at 541.

³⁷*Id.* at 540.

³⁸*Id.* at 541; *see also* Albert, *supra* note 27 (arriving at the same conclusion). Note that the sample size of the § 101 motions at the Federal Circuit remains insufficiently small (n=26) to fully predict its behavior, thus the opinions may not be wholly indicative of the Federal Circuit's view on software patents. For a tally on how the Federal Circuit judges have voted on § 101 since *Alice*, *see* Sachs, *Part I supra* note 22, at fig. 3. However, this does not apply to the PTAB (n=223) and the district courts (n=251), where their larger sample sizes could sufficiently predict the cases' outcomes at the PTAB and the district courts.

ommendation remains the same: Plaintiffs should file an invalidation motion at the PTAB, whereas defendants should defend patent validity at the district court.³⁹

III. The Federal Circuit Cases in *Alice's* Second Year

A. Federal Circuit Cases from *Alice's* One-Year Mark to Pre-*Enfish*

In *Internet Patents Corp., v. Active Network, Inc.*⁴⁰ (June 23, 2015), the district court characterized the challenged patent as claiming “the use of a conventional web browser Back and Forward navigational functionalities without data loss in an online application consisting of dynamically generated web pages.”⁴¹ The Federal Circuit found the claims directed to ineligible subject matter because they “represent merely generic data collection steps or siting the ineligible concept in a particular technological environment.”⁴² In other words, the claims here were directed to the abstract idea of maintaining computer state without recitation of specific activity used to generate that result.

In *Intellectual Ventures I LLC, v. Capital One Bank (USA)*⁴³ (July 6, 2015), the two patents at issue claimed (1) “methods of budgeting, particularly methods of tracking and storing information relating to a user’s purchases and expenses and presenting that information to the user vis-à-vis the user’s pre-established, self-imposed spending limits,” and (2) “methods and systems for providing customized web page content to the user as a function of user-specific information and the user’s navigation history.”⁴⁴ The Federal Circuit found the first patent “directed to an abstract idea: tracking financial transactions to determine whether they exceed a pre-set spending limit (i.e., budgeting), . . . [and] the budgeting calculations . . . ‘could still be made using a pencil and paper’ with a simple notification device even in real time as expenditures were being made.”⁴⁵ Likewise, the Federal Circuit found that the second patent “claim[s] an abstract idea and do[es] not otherwise claim an inventive concept.” In short, the claims simply added generic computer components to financial budgeting. Notably, the Federal Circuit in *Intellectual Ventures I* held in dicta that the “claims here do not address problems unique to the Internet, so *DDR* has no applicability.”⁴⁶ This statement of the Federal Circuit⁴⁷ essentially narrows *DDR’s* holding to only claims “address[ing] prob-

³⁹Tran, *One-Year Review*, *supra* note 7, at 541.

⁴⁰790 F.3d 1343 (Fed. Cir. 2015). For a thorough treatment of the Federal Circuit cases in *Alice’s* first year, see generally Tran, *One-Year Review*, *supra* note 7, at 542–45.

⁴¹*Id.* at 1344 (citing Dist. Ct. Op. at 1269). The district court described the challenged patent “subject matter as retaining information lost in the navigation of online forms,” and deemed it as an abstract concept ineligible for patenting. *Id.* at 1344.

⁴²*Id.* at 1349.

⁴³792 F.3d 1363 (Fed. Cir. 2015).

⁴⁴*Id.* at 1365.

⁴⁵*Id.* at 1367–69 (internal citations omitted).

⁴⁶*Id.* at 1371 (citing *DDR Holdings, LLC v. Hotels.com, L.P.*, 773 F.3d 1245, 1256–69 (Fed. Cir. 2014)). Recall *DDR Holdings, LLC v. Hotels.com, L.P.* was one of the only two opinions that the Federal Circuit has ever upheld patent-eligibility of a computer-implemented invention under *Alice*. *DDR*, 773 F.3d 1245 (Fed. Cir. 2014). *DDR’s* patent covers “systems and methods of generating a composite web page that combines certain visual elements of a ‘host’ website with content of a third-party merchant.” *Id.* at 1248.

⁴⁷It might be important to note that a panel of Judges Dyk, Reyna and Chen resided over this case, with Judge Dyk writing for the Court, thus this view on *DDR* might only represent their own views and not of all Federal Circuit judges. *Intellectual Ventures I*, 792 F.3d at 1365.

lems unique to the Internet.”⁴⁸

In *Versata Development Group, Inc., v. SAP America, Inc.*⁴⁹ (July 9, 2015), the challenged “invention operate[d] under the paradigm of WHO (the purchasing organization) is buying WHAT (the product).”⁵⁰ The Federal Circuit found that the claimed invention was “a covered business method patent as that term is understood, and it does not fall within the meaning of a ‘technological invention.’”⁵¹ The Federal Circuit invalidated the CMB patent as the computer performed “purely conventional” steps to carry out an “abstract idea of determining a price using organization and product group hierarchies.”⁵²

In *Morales v. Square, Inc.*⁵³ (October 16, 2015), the challenged patent claimed a “system [which] allows viewers of television programs to respond to offers for products and services displayed on the television screen using a remote control.”⁵⁴ The Federal Circuit, via a one-line order,⁵⁵ affirmed the district court’s invalidation of the claims as “an abstract idea because it describes the fundamental concept of relaying a signal containing the sender’s identity.”⁵⁶ The district court viewed the claims as “simply too broadly drawn to withstand the scrutiny required by the Supreme Court’s admonition that patents not impede innovation by preempting the basic tools of scientific and technological work.”⁵⁷ The U.S. Supreme Court denied certiorari review on March 21, 2016.⁵⁸

In *Cloud Satchel, LLC v. Barnes & Noble, Inc.*⁵⁹ (December 17, 2015), the challenged “patents are directed to systems, devices, and methods for enabling the transmission and storage of document references or ‘tokens,’ each of which is associated with an electronic document stored in a database.”⁶⁰ The Federal Circuit, via a one-line order,⁶¹ affirmed the district court’s invalidation of the claims as abstract idea because the “[p]laintiff [was] unable to meaningfully address the fact that the specification unambiguously states that the portable electronic reference transport device may be any ‘suitable’ portable computer, [nor was] plaintiff able to address the fact that the specification states that the electronic document reference may appear in ‘any suitable format’ and the distributed document subsystem consists of purely ‘conventional’ elements

⁴⁸*Id.* at 1371.

⁴⁹793 F.3d 1306 (Fed. Cir. 2015).

⁵⁰*Id.* at 1311.

⁵¹*Id.* at 1336.

⁵²*Id.* at 1333–34. Concurring in part and dissenting in part, Judge Hughes “agree[d] with the majority that the Patent Trial and Appeal Board properly held that the [p]atent claims at issue were invalid under § 101,” but opined that the Federal Circuit “do[es] not have jurisdiction to review the Board’s determination that [p]laintiff’s patent is a ‘covered business method patent,’ ALA § 18(d).” *Id.* at 1336–37, 1343 (Hughes, J., concurring-in-part, dissenting-in-part).

⁵³621 F. App’x 660 (Fed. Cir. 2015).

⁵⁴*Morales v. Square, Inc.*, 75 F. Supp. 3d 716, 719 (W.D. Tex. 2014).

⁵⁵*Morales*, 621 F. App’x 660 at 661. Technically, the four Federal Circuit cases of (1) *Morales v. Square, Inc.*, 621 F. App’x 660 (Fed. Cir. 2015), (2) *Cloud Satchel, LLC v. Barnes & Noble, Inc.*, 626 F. App’x 1010 (Fed. Cir. 2015), (3) *Wireless Media Innovations, LLC v. Maher Terminals, LLC*, No. 2015-1634, 2016 WL 463218 (Fed. Cir. Feb. 8, 2016), and (4) *Clear with Computers LLC v. Altec Industry Inc.*, No. 2015-1525, 2016 WL 494593 (Fed. Cir. Feb. 9, 2016). did not per se cite *Alice* to invalidate software patents (as I initially set out to do), but it did invalidate software patents under the *Alice* § 101 standard via affirmance (thus I included this order in the count of the Federal Circuit cases).

⁵⁶*Morales*, 75 F. Supp. 3d at 725.

⁵⁷*Id.* at 727.

⁵⁸*Morales v. Square, Inc.*, 136 S. Ct. 1461 (2016).

⁵⁹626 F. App’x 1010 (Fed. Cir. 2015).

⁶⁰*Cloud Satchel, LLC v. Amazon.com, Inc.*, 76 F. Supp. 3d 553, 557–58 (D. Del. 2014).

⁶¹*Cloud Satchel*, 626 F. App’x at 1011; see also discussion in *supra* note 55.

connected by a 'conventional' network."⁶² The U.S. Supreme Court denied certiorari review on April 25, 2016.⁶³

In *Vehicle Intelligence & Safety LLC v. Mercedes-Benz USA, LLC*⁶⁴ (December 28, 2015), the challenged "patent claims methods and systems that screen equipment operators for impairment, selectively test those operators, and control the equipment if an impairment is detected."⁶⁵ The Federal Circuit found the claims "drawn to a patent-ineligible concept, specifically the abstract idea of testing operators of any kind of moving equipment for any kind of physical or mental impairment" because "[n]one of the claims at issue are limited to a particular kind of impairment, explain how to perform either screening or testing for any impairment, specify how to program the 'expert system' to perform any screening or testing, or explain the nature of control to be exercised on the vehicle in response to the test results."⁶⁶ Furthermore, the Federal Circuit found "[n]othing in these claims—considered as individual elements or an ordered combination—disclose an inventive concept sufficient to transform the abstract idea of testing operators of any kind of moving equipment for any kind of physical or mental impairment into a patent-eligible application of that idea."⁶⁷ The Supreme Court denied certiorari review on May 31, 2016.⁶⁸

In *Mortgage Grader, Inc. v. First Choice Loan Services Inc.*⁶⁹ (January 20, 2016), the challenged claims were "directed to systems and methods for assisting borrowers to obtain loans."⁷⁰ The Federal Circuit invalidated the claims as "directed to the abstract idea of 'anonymous loan shopping'" because the claims "recite nothing more than the collection of information to generate a 'credit grading' and to facilitate anonymous loan shopping," and simply "'add' only generic computer components such as an 'interface,' 'network,' and 'database.'"⁷¹ Notably, the Federal Circuit again reiterated *DDR's* claims as "solv[ing] a problem unique to the Internet."⁷²

In *Wireless Media Innovations, LLC v. Maher Terminals, LLC*⁷³ (February 8, 2016), the two challenged patents claimed "a system for monitoring shipping containers, . . . 5 steps for monitoring the location and load status of shipping containers, . . . a computerized system for monitoring and recording location and load status of shipping containers relative to a facility, . . . [and] steps for generating a report for monitoring containers to be unloaded without first being placed in a yard at the container facility."⁷⁴ The Federal Circuit, via a one-line order,⁷⁵ affirmed the district court's invalidation of the claims as "directed to the same abstract idea: monitoring locations, movement, and load status of shipping containers within a container-receiving yard,

⁶²*Cloud Satchel*, 76 F. Supp. 3d at 564 (internal citations omitted).

⁶³*Cloud Satchel, LLC v. Barnes & Noble, Inc.*, No. 15-1161, 2016 WL 1059941 (U.S. Apr. 25, 2016).

⁶⁴No. 2015-1411, 2015 WL 9461707 (Fed. Cir. Dec. 28, 2015).

⁶⁵*Id.* at *1.

⁶⁶*Id.* at *2 (analyzing under *Mayo/Alice* step one).

⁶⁷*Id.* at *3 (analyzing under *Mayo/Alice* step two).

⁶⁸*Vehicle Intelligence & Safety LLC v. Mercedes-Benz USA, LLC*, No. 15-1201, 2016 WL 1171121 (U.S. May 31, 2016).

⁶⁹811 F.3d 1314 (Fed. Cir. 2016).

⁷⁰*Id.* at 1318.

⁷¹*Id.* at 1324.

⁷²*Id.* at 1325 (citing *DDR Holdings, LLC v. Hotels.com, L.P.*, 773 F.3d 1245, 1257 (Fed. Cir. 2014)); see also discussion in *supra* note 46.

⁷³No. 2015-1634, 2016 WL 463218 (Fed. Cir. Feb. 8, 2016).

⁷⁴*Wireless Media Innovations, LLC v. Maher Terminals, LLC*, 100 F. Supp. 3d 405, 414–15 (D.N.J. 2015).

⁷⁵*Wireless Media*, 2016 WL 463218 at *1; see also discussion in *supra* note 55.

and storing, reporting and communicating this information in various forms through generic computer functions."⁷⁶

In *Clear with Computers LLC v. Altec Industry Inc.*⁷⁷ (February 9, 2016), "[t]he patents-in-suit relate to computer-implemented systems and methods for creating a sales proposal."⁷⁸ The Federal Circuit, again via a one-line order,⁷⁹ affirmed the district court's invalidation of "the asserted claims [as] directed to the abstract idea of creating a customized sales proposal for a customer."⁸⁰ The district court acknowledged that "the contours are often unclear between those inventions that are directed to an abstract idea and those that are not," but found "the claims in this particular case plainly fall within the category of claims that, without some additional inventive concept, are directed to abstract ideas which are ineligible for patent protection."⁸¹ Notably, the district court in *Clear with Computers* made "clear [that it] does not hold that all claims in software-based patents are directed to an abstract idea,"⁸² which is consistent with the Federal Circuit's view in *Enfish*.⁸³

In *In re Smith*⁸⁴ (March 10, 2016), the challenged invention "relate[d] to a wagering game utilizing real or virtual standard playing cards."⁸⁵ The Federal Circuit affirmed the rejection of the invalid claims as "directed to rules for conducting a wagering game, compare to other 'fundamental economic practices' found abstract by the Supreme Court" because the claimed "method of conducting a wagering game [here] is drawn to an abstract idea much like *Alice's* method of exchanging financial obligations and *Bilski's* method of hedging risk."⁸⁶ Notably, the Federal Circuit declined to review the USPTO's 2014 Interim Guidance on Patent Subject Matter Eligibility to examiners on how to apply *Alice* because the Interim Eligibility Guidance "is not intended to create any right or benefit, substantive or procedural, enforceable by any party against the Office, [but] Rejections will continue to be based upon the substantive law, and it is these rejections that are appealable."⁸⁷

In *Genetic Techs. Ltd. v. Merial L.L.C.*⁸⁸ (April 8, 2016), the challenged "patent claim[ed] methods of analyzing sequences of genomic deoxyribonucleic acid ('DNA')."⁸⁹ Citing to *Ariosa Diagnostics, Inc. v. Sequenom, Inc.*⁹⁰ and *In re BRCA1-*

⁷⁶ *Wireless Media*, 100 F. Supp. 3d at 413.

⁷⁷ No. 2015-1525, 2016 WL 494593 (Fed. Cir. Feb. 9, 2016).

⁷⁸ *Clear with Computers, LLC v. Altec Indus., Inc.*, No. 6:14-CV-79, 2015 WL 993392 (E.D. Tex. Mar. 3, 2015). It might be important to note that this case is from Judge Rodney Gilstrap's docket. *Id.* See generally Daniel Klerman & Greg Reilly, *Forum Selling*, 89 S. CAL. L. REV. 241 (2016), for a discussion of Judge Gilstrap's patent docket, who resides over roughly a quarter of all patent cases filed in the United States.

⁷⁹ *Clear with Computers*, 2016 WL 494593 at *1; see also discussion in *supra* note 55.

⁸⁰ *Clear with Computers*, 2015 WL 993392 at *4.

⁸¹ *Id.*

⁸² *Id.*

⁸³ See *Enfish, LLC v. Microsoft Corp.*, No. 2015-1244, 2016 WL 2756255, at *7 (Fed. Cir. May 12, 2016) (stating "we are not persuaded that the invention's ability to run on a general-purpose computer dooms the claims").

⁸⁴ 815 F.3d 816 (Fed. Cir. 2016).

⁸⁵ *Id.* at 817.

⁸⁶ *Id.* at 818–19. The Federal Circuit further noted that a "wagering game is, effectively, a method of exchanging and resolving financial obligations based on probabilities created during the distribution of the cards." *Id.*

⁸⁷ *Id.* at 819 (quoting Interim Eligibility Guidance, 79 Fed. Reg. 74618, 74619 (Dec. 16, 2014)).

⁸⁸ No. 2015-1202, 2016 WL 1393573 (Fed. Cir. Apr. 8, 2016).

⁸⁹ *Id.* at *1.

⁹⁰ 788 F.3d 1371, 1373 (Fed. Cir. 2015) (invalidating patent claiming certain methods of using cell-free fetal DNA ('cffDNA')). The Supreme Court denied certiorari review on June 27, 2016. *Sequenom, Inc. v. Ariosa Diagnostics, Inc.*, No. 15-1182, 2016 WL 1117246 (U.S. June 27, 2016).

*BRCA2–Based Hereditary Cancer Test*⁹¹ as “instructive,” the Federal Circuit nixed this non-coding gene sequencing patent as “directed to patent-ineligible subject matter” because the challenged patent was “directed to the relationship between non-coding and coding sequences in linkage disequilibrium and the tendency of such non-coding DNA sequences to be representative of the linked coding sequences—a law of nature.”⁹²

In *In re Brown*⁹³ (April 22, 2016), the challenged invention “claims methods of cutting hair.”⁹⁴ The Federal Circuit invalidated the claims as “drawn to the abstract idea of assigning hair designs to balance head shape” “coupled with routine and conventional hair-cutting steps.”⁹⁵

B. *Enfish v. Microsoft*

As of June 19, 2016, the Federal Circuit has only issued two opinions that upheld the patent-eligibility of a software invention under *Alice*: (1) *DDR Holdings, LLC v. Hotels.com, L.P.*⁹⁶ (Dec. 5, 2014), and (2) *Enfish, LLC v. Microsoft Corp.*⁹⁷ (May 12, 2016). *DDR* was covered in depth in my one-year review of *Alice*.⁹⁸ On June 27, 2016, the Federal Circuit issued a third opinion that upheld the patent-eligibility of a software invention under *Alice*: *BASCOM Global Internet Services, Inc. v. AT & T Mobility LLC*,⁹⁹ which is covered in depth in Part III.E.

In *Enfish, LLC v. Microsoft Corp.*¹⁰⁰ (May 12, 2016), the two patents at issue were “directed to an innovative logical model for a computer database, . . . [that] includes all data entities in a single table, with column definitions provided by rows in that same table, . . . as the ‘self-referential’ property of the database.”¹⁰¹ The district court found the claims were “directed to the abstract idea of ‘storing, organizing, and retrieving memory in a logical table’ or, more simply, ‘the concept of organizing information using tabular formats.’”¹⁰²

Conversely, the Federal Circuit found “the plain focus of the claims is on an improvement to computer functionality itself, not on economic or other tasks for which a computer is used in its ordinary capacity.”¹⁰³ The claimed “self-referential table . . . is a specific type of data structure designed to improve the way a computer stores and retrieves data in memory.”¹⁰⁴ Furthermore, the patent “specification’s disparagement of conventional data structures, combined with language describing the ‘present

⁹¹774 F.3d 755, 757 (Fed. Cir. 2014) (invalidating patents “cover[ing] compositions of matter and methods relating to the BRCA1 and BRCA2 genes”).

⁹²*Id.* at *4, *9.

⁹³No. 2015-1852, 2016 WL 1612776 (Fed. Cir. Apr. 22, 2016).

⁹⁴*Id.* at *1; see also Michael S. Kwun, *Alice Tells a Joke*, 19 GREEN BAG 2D 329 (2016).

⁹⁵*In re Brown*, 2016 WL 1612776 at *1, *2.

⁹⁶773 F.3d 1245 (Fed. Cir. 2014).

⁹⁷No. 2015-1244, 2016 WL 2756255 (Fed. Cir. May 12, 2016).

⁹⁸See Tran, *One-Year Review*, *supra* note 7, at 544–45.

⁹⁹No. 2015-1763, 2016 WL 3514158 (Fed. Cir. June 27, 2016).

¹⁰⁰No. 2015-1244, 2016 WL 2756255 (Fed. Cir. May 12, 2016). It might be important to note that Judges Hughes, Moore, and Taranto resided over this case, with Judge Hughes writing for the Court. *Id.* Five days later, Judge Hughes also wrote for the court in *In re TLI Communications LLC Patent Litigation*, No. 2015-1372, 2016 WL 2865693 (Fed. Cir. May 17, 2016), a decision that came out in the opposite direction from *Enfish*.

¹⁰¹*Id.* at *1.

¹⁰²*Id.* at *6.

¹⁰³*Id.* at *5.

¹⁰⁴*Id.* at *8.

invention' as including the features that make up a self-referential table, confirm that our characterization of the 'invention' for purposes of the § 101 analysis has not been deceived by the 'draftsman's art.'¹⁰⁵ The Federal Circuit characterized the claims here as "directed to an improvement in the functioning of a computer" and as "directed to a specific improvement to computer functionality" to distinguish *Enfish* from precedents that invalidated software patents as abstract ideas.¹⁰⁶ The Federal Circuit found the claims here "not simply directed to any form of storing tabular data, but instead are specifically directed to a self-referential table for a computer database."¹⁰⁷ Put simply, the Federal Circuit was "not faced with a situation where general-purpose computer components are added post-hoc to a fundamental economic practice or mathematical equation. Rather, the claims were directed to a specific implementation of a solution to a problem in the software arts."¹⁰⁸ Accordingly, the Federal Circuit found the claims were "not directed to an abstract idea within the meaning of *Alice*. Rather, they were directed to a specific improvement to the way computers operate, embodied in the self-referential table."¹⁰⁹

Notably (but unsurprisingly), the Federal Circuit was "not persuaded that the invention's ability to run on a general-purpose computer dooms the claims."¹¹⁰ Unlike the lower courts, the Federal Circuit in *Enfish* "do[es] not read *Alice* to broadly hold that all improvements in computer-related technology are inherently abstract and, therefore, must be considered at [*Mayo/Alice*] step two. . . . [nor] think that claims directed to software, as opposed to hardware, are inherently abstract and therefore only properly analyzed at the second step of the *Alice* analysis."¹¹¹ Indeed, "[m]uch of the advancement made in computer technology consists of improvements to software that, by their very nature, may not be defined by particular physical features but rather by logical structures and processes. [The Federal Circuit] do not see in *Bilski* or *Alice*, or [their] cases, an exclusion to patenting this large field of technological progress."¹¹²

The *Enfish* analysis reframes the *Mayo/Alice* step one inquiry into a bright-line dichotomy of "whether the focus of the claims is on the specific asserted *improvement in computer capabilities* . . . or, instead, on a process that qualifies as an 'abstract idea' for which computers are *invoked merely as a tool*."¹¹³ In other words, the *Enfish* framework asks: "is the claimed invention something that makes a computer work better? Or are computers merely being used to do another task?"¹¹⁴ The former is patentable; whereas the latter proceeds to *Mayo/Alice* step two analysis.¹¹⁵ The Federal Circuit's *Enfish* framework signifies a huge departure from "the Supreme Court's rejection of 'categorical rules' to decide subject matter eligibility [as in] *Bilski v. Kappos*."¹¹⁶

¹⁰⁵*Id.*

¹⁰⁶*Id.* at *7.

¹⁰⁷*Id.* at *5-6. The Federal Circuit noted that "[b]ecause the claims are not directed to an abstract idea under step one of the *Alice* analysis, we do not need to proceed to step two of that analysis." *Id.* at *8.

¹⁰⁸*Id.* at *8.

¹⁰⁹*Id.* at *5.

¹¹⁰*Id.* at *7.

¹¹¹*Id.* at *4.

¹¹²*Id.* at *8.

¹¹³*Id.* at *5 (emphasis added).

¹¹⁴Jason Rantanen, *Judge Hughes and the New § 101 Dichotomy*, PATENTLYO (May 23, 2016), <http://patentlyo.com/patent/2016/05/hughes-%C2%A7-dichotomy.html>.

¹¹⁵*Id.*

¹¹⁶In re TLI Commc'ns LLC Patent Litig., No. 2015-1372, 2016 WL 2865693, at *5 (Fed. Cir. May 17, 2016) (citing *Bilski v.*

Central to *Enfish* is the Federal Circuit's recognition of what is *not* patentable subject matter.¹¹⁷ To distinguish the *Enfish* claims, the Federal Circuit listed the precedents:

[T]he claims at issue in *Alice* and *Versata* can readily be understood as simply adding conventional computer components to well-known business practices. See *Alice*, 134 S. Ct. at 2358–60; *Versata*, 793 F.3d at 1333–34 (computer performed “purely conventional” steps to carry out claims directed to the “abstract idea of determining a price using organization and product group hierarchies”); see also *Mortgage Grader*, 811 F.3d at 1324–25 (claims attaching generic computer components to perform “anonymous loan shopping” not patent eligible); *Intellectual Ventures I*, 792 F.3d at 1367–69 (claims adding generic computer components to financial budgeting); *OIP Techs.*, 788 F.3d at 1362–64 (claims implementing offer-based price optimization using conventional computer activities); *Ultramercial, Inc. v. Hulu, LLC*, 772 F.3d 709, 714–17 (Fed. Cir. 2014) (claims applying an exchange of advertising for copyrighted content to the Internet); *buySAFE, Inc. v. Google, Inc.*, 765 F.3d 1350, 1354–55 (Fed. Cir. 2014) (claims adding generic computer functionality to the formation of guaranteed contractual relationships). And unlike the claims here that are directed to a specific improvement to computer functionality, the patent-ineligible claims at issue in other cases recited use of an abstract mathematical formula on any general purpose computer, see *Gottschalk v. Benson*, 409 U.S. 63, 93 (1972), see also *Alice*, 134 S. Ct. at 2357–58, or recited a purely conventional computer implementation of a mathematical formula, see *Parker v. Flook*, 437 U.S. 584, 594 (1978); see also *Alice*, 134 S. Ct. at 2358, or recited generalized steps to be performed on a computer using conventional computer activity, see *Internet Patents*, 790 F.3d at 1348–49 (claims directed to abstract idea of maintaining computer state without recitation of specific activity used to generate that result), *Digitech Image Techs., LLC v. Electrs. For Imaging, Inc.*, 758 F.3d 1344, 1351 (Fed. Cir. 2014) (claims directed to abstract idea of “organizing information through mathematical correlations” with recitation of only generic gathering and processing activities).¹¹⁸

C. *In re TLI Communications LLC Patent Litigation*

In *In re TLI Communications LLC Patent Litigation*¹¹⁹ (May 17, 2016, five days after *Enfish*), the challenged patent claimed “an apparatus for recording of a digital image, communicating the digital image from the recording device to a storage device, and to admin-

Kappos, 561 U.S. 604, 610 (2010)).

¹¹⁷Rantanen, *supra* note 114. The *Enfish* “opinion does not try to fight the idea that there is some subject matter that is not patentable. Instead, it acknowledges that there are limits on patentable subject matter and works with those limits. [The Federal Circuit] considers the precedents in this area and identifies them as fundamentally involving the use of a computer as a general-purpose tool. By defining what is not patentable subject matter in this way, [the Federal Circuit] is freed to identify some ‘other’ that is outside that impermissible category: developments that improve on the operation of the computer itself.” See Rantanen, *supra* note 114.

¹¹⁸*Enfish*, 2016 WL 2756255, at *7 (some internal citations were modified to shorten the block quote).

¹¹⁹No. 2015-1372, 2016 WL 2865693 (Fed. Cir. May 17, 2016). It might be important to note that Judges Hughes, Dyk, and Schall resided over this case, with Judge Hughes again writing for the Court (Judge Hughes also penned the *Enfish* opinion, see discussion in *supra*, note 100). *TLI Communications*, 2016 WL 2865693.

istering the digital image in the storage device.”¹²⁰ The Federal Circuit analyzed the claims under the new *Enfish* framework, “ask[ing] whether the claims are directed to an improvement to computer functionality versus being directed to an abstract idea.”¹²¹ Unlike the *Enfish* claims, the Federal Circuit found the claims were “not directed to a specific improvement to computer functionality, [but r]ather, they are directed to the use of conventional or generic technology in a nascent but well-known environment, without any claim that the invention reflects an inventive solution to any problem presented by combining the two.”¹²² In other words, the claims here are “simply directed to the abstract idea of classifying and storing digital images in an organized manner,” and “fail to recite any elements that individually or as an ordered combination transform the abstract idea of classifying and storing digital images in an organized manner into a patent-eligible application of that idea.”¹²³

In addition to defining what is *not* patentable subject matter in *Enfish*, the Federal Circuit in *TLI Communications* contours some characteristics of what *is* patentable subject matter, such as “a solution to a ‘technological problem’ as was the case in *Diamond v. Diehr*” or an “attempt to solve a challenge particular to the Internet [as in] *DDR Holdings*.”¹²⁴ Given the contrasting opinions of *Enfish* and *TLI Communications*, future Federal Circuit opinions (or a Supreme Court decision) would likely shed more light into other characteristics of what is patentable subject matter in the context of computer-implemented invention.

In the two years post-*Alice*, the Federal Circuit has released 26 opinions on § 101 but out of those 26, only 2 opinions upheld patent validity (*DDR Holdings* and *Enfish*). However, past failures do not predict future results,¹²⁵ as *Enfish* has ignited an optimistic fire in many software patent owners.¹²⁶ *Enfish* (and *BASCOM*), which came out very late toward *Alice*’s two-year anniversary,¹²⁷ could mark a significant turning point for the fate of software patents. Before *Enfish*, many plaintiffs cited *DDR Holdings* in attempt to analogize their patents to the patent in *DDR Holdings*. However, this strategy mostly did not work, as seen by the similar invalidation rate in *Alice*’s second year as compared to *Alice*’s first year. Now with *Enfish* and *DDR Holdings* (in combination with *BASCOM*) as ammunition, plaintiffs would foreseeably have more of a shot to win the § 101 battle.¹²⁸

¹²⁰*Id.* at *1.

¹²¹*Id.* at *4 (citing *Enfish, LLC v. Microsoft Corp.*, No. 2015-1244, 2016 WL 2756255, at *11 (Fed. Cir. May 12, 2016)).

¹²²*Id.* at *4.

¹²³*Id.* at *5.

¹²⁴*Id.* at *4. The Federal Circuit “[l]eft unclear [] the meaning of this discussion: does one only get to the solution to a technological problem inquiry if the claims are not directed to a specific improvement to computer functionality? Or is the analysis more flexible than *Enfish* implies?” Rantanen, *supra* note 114.

¹²⁵*Cf.* Jasper L. Tran, *The Law and 3D Printing*, 31 J. MARSHALL J. INFO. TECH. & PRIVACY L. 505, 511 (2015) (“Past performance in law and 3D printing scholarship may not predict future returns in the field”). For a discussion on 3D Printing, see generally Jasper L. Tran, *To Bioprint or Not to Bioprint*, 17 N.C. J.L. & TECH. 123 (2015) (covering 3D bioprinting); Jasper L. Tran, *3D-Printed Food*, 17 MINN. J.L. SCI. & TECH. 855 (2016) (covering 3D-printed food); Jasper L. Tran, *Press Clause and 3D Printing*, 14 N.W. J. TECH. & INTELL. PROP. 75 (2016) (covering the First Amendment right of 3D printing).

¹²⁶E.g., Joff Wild, *After so much 101 Gloom Enfish Is a Major Step in the Right Direction, Says Former Microsoft Chief Patent Counsel*, IAM (May 30, 2016), <http://www.iam-media.com/blog/Detail.aspx?g=81b12b32-c2b9-4b24-801c-b917d430d776>.

¹²⁷*Enfish* came out on May 12, 2016, shortly before *Alice*’s two-year anniversary on June 19, 2016.

¹²⁸It could be that *Alice*’s holding was so hard for software patents (at roughly 80% invalidation rate) that it cannot get lower than that (as there is only one way left to go, i.e. to go back up). Given the Federal Circuit’s release of *Enfish* and *DDR Holdings*, there could likely be an upswing of valid software patents in the coming years.

D. The USPTO's Reaction Immediately After *Enfish* and *TLI Communications*

Following *Enfish* and *TLI Communications*, the USPTO, on May 19, 2016, issued new guidance instructing examiners to immediately implement *Enfish*'s reinterpretation of *Alice/Mayo*.¹²⁹ The new guidance, on its face, instructs examiners to "develop well-reasoned, substantive rejections rather than conclusory rejections."¹³⁰ The guidance emphasizes the Federal Circuit's recognition of *Mayo/Alice* step one in the *Enfish* framework: "comparisons to prior abstract idea determinations; a caution against operating at too high a level of abstraction of the claims, and the rejection of the tissue-paper argument that use of a computer automatically dooms the claim (it doesn't)."¹³¹

The guidance concludes with: "[W]hen performing an analysis of whether a claim is directed to an abstract idea (Step 2A), examiners are to continue to determine if the claim recites (i.e., sets forth or describes) a concept that is similar to concepts previously found abstract by the courts."¹³² However, "a claim is directed to an improvement in computer-related technology can demonstrate that the claim does not recite a concept similar to previously identified abstract ideas."¹³³ Notably, the language used to include "a concept that is similar to concepts previously found abstract by the courts" and "not recite a concept similar to previously identified abstract idea," which are not much help, especially when used with the qualifier "can demonstrate."¹³⁴ Essentially, the guidance says nothing new, as examiners still have broad power over rejecting patent claims as they see fit.¹³⁵

E. *BASCOM v. AT&T*

Eight days outside of *Alice*'s two-year mark, the Federal Circuit released its third opinion that upheld the patent-eligibility of a software invention under *Alice: BASCOM v. AT&T*.¹³⁶ Although this opinion is slightly outside of *Alice*'s two-year review, I would be remiss if I did not cover *BASCOM*.¹³⁷

¹²⁹Memorandum from Robert W. Bahr, Deputy Comm'r for Pat. Examining Pol'y of the U.S. Pat. & Trademark Off. to Pat. Examining Corps. (May 19, 2016) [hereinafter USPTO New Guidance], available at http://www.uspto.gov/sites/default/files/documents/ieg-may-2016_enfish_memo.pdf. This guidance is the latest in the series dating back to 2009 after *Bilski v. Kappos*.

¹³⁰Daniel Young & Jessica Colantonio, *USPTO Provides Updates to Patent Subject Matter Eligibility Guidance*, IPWATCHDOG (June 1, 2016), <http://www.ipwatchdog.com/2016/06/01/uspto-updates-patent-subject-matter-eligibility-guidance/id=69602/>.

¹³¹Rantanen, *supra* note 114.

¹³²USPTO New Guidance, *supra* note 129, at 2 (emphasis added).

¹³³*Id.* (emphasis added).

¹³⁴*Id.* (emphasis added).

¹³⁵Relatedly, Gene Quinn of IPWatchdog "expect[s] examiners] will point to the *TLI Communications* decision as meaning that the *Enfish* decision was nothing more than a blip on the radar in the same way that *DDR Holdings* was a blip on the radar screen." Gene Quinn, *USPTO Gives Examiner Guidance in Light of Enfish v. Microsoft*, IPWATCHDOG (May 19, 2016), <http://www.ipwatchdog.com/2016/05/19/uspto-guidance-enfish-v-microsoft/id=69275/>.

¹³⁶*BASCOM Global Internet Services, Inc. v. AT & T Mobility LLC*, No. 2015-1763, 2016 WL 3514158 (Fed. Cir. June 27, 2016).

¹³⁷Note that eight days after *BASCOM*, the Federal Circuit released a fourth opinion that upheld the patent-eligibility citing *Alice: Rapid Litig. Mgmt. Ltd. v. CellzDirect, Inc.*, No. 2015-1570, 2016 WL 3606624 (Fed. Cir. July 5, 2016). However, given this patent is not directed to computer-implemented invention, but instead describes "an improved process of preserving hepatocytes," *id.* at *2, I will cover this opinion in depth in my three-year review.

In *BASCOM Global Internet Services, Inc. v. AT & T Mobility LLC* (June 27, 2016),¹³⁸ the challenged patent “recite[s] a system for filtering Internet content, [where the] filtering system is located on a remote ISP server that associates each network account with (1) one or more filtering schemes and (2) at least one set of filtering elements from a plurality of sets of filtering elements, thereby allowing individual network accounts to customize the filtering of Internet traffic associated with the account.”¹³⁹ The district court invalidated this patent as directed to the abstract idea of “filtering content [because] content provided on the Internet is not fundamentally different from content observed, read, and interacted with through other mediums like books, magazines, television, or movies.”¹⁴⁰

The Federal Circuit vacated and remanded, finding that under *Mayo/Alice* step two, the claimed patent describes an inventive concept of “installation of a filtering tool at a specific location, remote from the end-users, with customizable filtering features specific to each end user,” even though “the limitations of the claims, taken individually, recite generic computer, network and Internet components, none of which is inventive by itself.”¹⁴¹ The Federal Circuit found this patent similar to one in *DDR Holdings*,¹⁴² because the instant invention “is not claiming the idea of filtering content simply applied to the Internet [but] instead claiming a technology-based solution (not an abstract-idea-based solution implemented with generic technical components in a conventional way) to filter content on the Internet that overcomes existing problems with other Internet filtering systems.”¹⁴³ Furthermore, the Federal Circuit distinguished the patent here with those in *OIP Techs., Inc. v. Amazon.com, Inc.*,¹⁴⁴ *Intellectual Ventures I*,¹⁴⁵ *Content Extraction & Transmission LLC v. Wells Fargo Bank, Nat. Ass’n*,¹⁴⁶ *Ultramercial, Inc. v. Hulu, LLC*,¹⁴⁷ and *Accenture Glob. Servs., GmbH v. Guidewire Software, Inc.*¹⁴⁸ because the claims here “do not preempt the use of the abstract idea of filtering content on the Internet or on generic computer components performing conventional activities, [but] carve out a specific location for the filtering system (a remote ISP server) and require the filtering system to give users the ability to customize filtering for their individual net-

¹³⁸2016 WL 3514158. It might be important to note that a panel of Judges Chen, O’Malley, and Newman resided over this case, with Judge Chen writing for the Court and Judge Newman concurring. *Id.*

¹³⁹*Id.* at *3.

¹⁴⁰*BASCOM Glob. Internet Servs., Inc. v. AT & T Mobility LLC*, 107 F. Supp. 3d 639, 650 (N.D. Tex. 2015).

¹⁴¹*BASCOM*, 2016 WL 3514158, at *6. The Federal Circuit also found the district court’s patent eligibility analysis conflated “with obviousness analysis under 35 U.S.C. § 103.” *Id.*

¹⁴²*DDR Holdings, LLC v. Hotels.com, L.P.*, 773 F.3d 1245, 1248–50, 1257–59 (Fed. Cir. 2014).

¹⁴³*BASCOM*, 2016 WL 3514158, at *7.

¹⁴⁴788 F.3d 1359, 1363 (Fed. Cir.), *cert. denied*, 136 S. Ct. 701 (2015). The Federal Circuit stated, “[u]nlike the claims [here], the patent in *OIP* was not limited to a specific technical solution of the abstract idea.” *BASCOM*, 2016 WL 3514158, at *7.

¹⁴⁵*Intellectual Ventures I LLC v. Capital One Bank (USA)*, 792 F.3d 1363, 1371 (Fed. Cir. 2015). The Federal Circuit stated, “[t]he claims in *Intellectual Ventures I* preempted all use of the claimed abstract idea on the Internet, on a generic computer.” *BASCOM*, 2016 WL 3514158, at *8 (internal quotation omitted).

¹⁴⁶776 F.3d 1343, 1347 (Fed. Cir. 2014), *cert. denied*, 136 S. Ct. 119 (2015). The Federal Circuit stated, “[t]he claims in *Content Extraction* preempted all use of the claimed abstract idea on well-known generic scanning devices and data processing technology.” *BASCOM*, 2016 WL 3514158, at *8.

¹⁴⁷772 F.3d 709, 715–16 (Fed. Cir. 2014), *cert. denied sub nom.*, *Ultramercial, LLC v. WildTangent, Inc.*, 135 S. Ct. 2907 (2015). The Federal Circuit stated, “[t]he claims in *Ultramercial* preempted all use of the claimed abstract idea on the Internet.” *BASCOM*, 2016 WL 3514158, at *8.

¹⁴⁸728 F.3d 1336, 1344–45 (Fed. Cir. 2013). The Federal Circuit stated, “the claims in *Accenture* preempted all use of the claimed abstract idea on generic computer components performing conventional activities.” *BASCOM*, 2016 WL 3514158, at *8.

work accounts.”¹⁴⁹ Accordingly, the Federal Circuit found this invention recite patent-eligible subject matter under *Alice*,¹⁵⁰ making this case the third Federal Circuit case that upheld patent validity since *Alice*.

Takeaway. The Federal Circuit’s behavior toward Alice’s two-year mark is worth paying attention to.¹⁵¹ *BASCOM* clarifies when to transition from the *Mayo/Alice* step one to step two: when step one includes reasonable arguments on either side as to whether a claim is directed to an abstract idea, step two can resolve the question of patent eligibility.¹⁵² In response to § 101 rejections, patent prosecutors can argue (1) under *Enfish*, the claim is unambiguously directed to a technological improvement, thus, eligible under step one, and (2) with step two as a fallback argument under *BASCOM*, that even if step one is a “close call,” the claim still recites patent-eligible subject matter because “the *specific arrangement* of features in the claim improves a technological process.”¹⁵³

IV. Conclusion

As of June 19, 2016, courts have examined 568 challenged patents brought under § 101 motions citing *Alice*, resulting in 190 valid patents and 378 patents invalidated with an average invalidation rate of 66.5%. Specifically, the Federal Circuit upheld 3 patents and invalidated 34 patents—an average invalidation rate of 91.9%. Also, courts have decided a total of 500 motions brought under § 101 citing *Alice*, resulting in 109 validation holdings and 391 invalidation holdings with an average invalidation rate of 78.2%. Specifically, the Federal Circuit has decided 26 motions, resulting in 2 validation holdings and 24 invalidation holdings with an average invalidation rate of 92.3%. The district courts have decided 251 motions, resulting in 84 validation holdings and 167 invalidation holdings with an average invalidation rate of 66.5%. The PTAB has decided 209 motions, resulting in 23 validation holdings and 186 invalidation holdings with an average invalidation rate of 89.7%. In summary, the average invalidation rate of patents before the three venues was 82.9% at *Alice*’s one-year and 78.2% at *Alice*’s two-year, which could be attributed to the Federal Circuit’s release of *DDR Holdings*.

The *Enfish* analysis reframes the *Mayo/Alice* step one inquiry into a bright-line dichotomy of “whether the focus of the claims is on the specific asserted *improvement in computer capabilities* . . . or, instead, on a process that qualifies as an “abstract idea” for which computers are *invoked merely as a tool*.” In *Enfish*, the Federal Circuit made clear that it was “not persuaded that the invention’s ability to run on a general-purpose computer dooms the claims.” *BASCOM* clarifies when to transition from the *Mayo/Alice* step one to step two. Together, *Enfish* and *BASCOM* (in addition to *DDR Holdings*) mark

¹⁴⁹*BASCOM*, 2016 WL 3514158, at *8.

¹⁵⁰*Id.*

¹⁵¹*Cf.* Jasper L. Tran, *The Right to Attention*, 91 *IND. L.J.* 1023 (2016). It’s almost as though the Federal Circuit is trying to stanch Alice’s bleeding, one case at a time. *E.g.*, Richard Lloyd, *Some Hope for Software Patents in the US After the CAFC’s Enfish Decision, But This Is No Game-Changer*, *IAM* (May 13, 2016), <http://www.iam-media.com/blog/detail.aspx?g=96d9253e-7c06-418c-b3ec-3251497a7eac> (“The Federal Circuit will continue, valiantly, to contain, limit and marginally reduce the harm. But, it will not be enough. That is the lesson of *Enfish*.”).

¹⁵²Albert W. Vredevel, *Alice Step 2 Eligibility Refined by Federal Circuit: Bascom Global Internet Services, Inc. v. AT&T Mobility LLC*, *SHUMAKER & SIEFFERT NEWS*, <http://www.ssiplaw.com/news/201606/alice-step-2-eligibility-refined-federal-circuit-bascom-global-internet-services-inc-v>.

¹⁵³*Id.*

a significant turning point for the fate of software patents. Given the late release of *Enfish* and *BASCOM* at the end of *Alice*'s two-year anniversary, the downward trend in invalidation rates could continue in *Alice*'s third year.

Stay tuned!

Appendix A

In my one-review year, I listed the information of the patents or patent applications that withstand the *Alice* test because these challenged patents or patent applications could be useful to patent prosecutors to study and learn how to draft more meaningful claims.¹⁵⁴ For instance, based on statistical analysis of § 101 rejections under *Alice*, a computer program can utilize machine learning to predict subject matter rejections of patent claims.¹⁵⁵ Similarly, Appendix A below provides the information of the patents or patent applications that courts (namely district courts, the PTAB and the Federal Circuit) have upheld under *Alice* from June 20, 2015 to June 19, 2016.

Patent No. or Patent App. No.	Cases	Court	Holding	Reasoning
11/633,647	Ex Parte Edvard Sorgard, Borgar Ljosland, Jorn Nystad, Mario Blazevic, Frank Langtind (Decision on Appeal) 2012-012464 Date: July 16, 2015	PTAB	upheld	Not Abstract
12/765,954	Ex Parte Cyriac J. Wegman III (Decision on Appeal) 2013-008168 Date: September 18, 2015	PTAB	upheld	Not Abstract
6,998,977 and 7,852,212 and 8,144,011 and 7,489,923 and 7,876,218	The Chamberlain Group, Inc., v. Linear LLC (Memorandum Opinion) ILND-1-14-cv-05197 Date: July 7, 2015	DC	upheld	Not Abstract
8,393,007 and 8,370,956 and 7,523,072 and 7,269,576 and 6,963,859 and 7,774,280 and 8,001,053	ContentGuard Holdings, Inc., v. Amazon.com, Inc. (Memorandum Opinion and Order) TXED-2-13-cv-01112, TXED-2-14-cv-00061 Date: August 6, 2015	DC	upheld	Not Abstract
6,101,502	Datatern, Inc., v. Microstrategy, Inc., et al. (Memorandum Order) MAD-1-11-cv-12220 Date: September 4, 2015	DC	upheld	Not Abstract

¹⁵⁴Tran, *One-Year Review*, *supra* note 7, at 546–50.

¹⁵⁵Ben Dugan, *Ask Alice!*, available at <http://alice.cebollita.org:8000/predict> (including a few pre-loaded claims from well-known cases).

Patent No. or Patent App. No.	Cases	Court	Holding	Reasoning
RE44,956 and RE44,973	Carrig Drilling Technology LTD., v. Trinidad Drilling L.P. (Memorandum Order) TXSD-4-15-cv-01821 Date: September 17, 2015	DC	upheld	Not Abstract
5,659,891	Mobile Telecommunications Technologies, LLC, v. Leap Wireless International, Inc. (Memorandum Order) TXED-2-13-cv-00885 Date: September 23, 2015	DC	upheld	Not Abstract
8,572,279 and 8,601,154	SimpleAir, Inc., v. Google Inc. (Memorandum Opinion and Order) TXED-2-14-cv-00011 Date: September 25, 2015	DC	upheld	Not Abstract
7,631,346 and 5,961,601 and 5,796,967 and 7,072,849	International Business Machines Corporation v. The Priceline Group Inc. (Report and Recommendation) 15-137 Date: February 16, 2016	DC	upheld	Not Abstract
7,579,141 and 8,021,832 and 8,974,800	Rutgers v. Qiagen N.V. (Memorandum Order) NJD-15-cv-7187 Date: February 29, 2016	DC	upheld	Not Abstract
7,058,439	ContourMed Inc., v. American Breast Care L.P. (Memorandum Opinion and Order) TXSD-4-15-cv-02769 Date: March 17, 2016	DC	upheld	Not Abstract
6,130,761	Intellectual Ventures I LLC, v. Ricoh Americas Corporation (Memorandum Opinion) DED-1-13-cv-00474 Date: March 22, 2016	DC	upheld	Not Abstract
6,604,101 and 7,516,154	Improved Search LLC, v. AOL Inc. (Memorandum Opinion) DED-1-15-cv-00262 Date: March 22, 2016	DC	upheld	Not Abstract
6,711,615 and 6,484,203	SRI International, Inc., v. Cisco Systems, Inc. (Memorandum Opinion) DED-1-13-cv-01534 Date: April 11, 2016	DC	upheld	Not Abstract
5,764,034 and 6,321,560	Baxter International, Inc., v. Carefusion Corp. (Memorandum and Order) ILND-1-15-cv-09986 Date: May 13, 2016	DC	upheld	Not Abstract
6,891,566 and 8,185,964	JDS Technologies, Inc., v. Exacq Technologies (Memorandum and Order) MIED-2-15-cv-10387 Date: June 7, 2016	DC	upheld	Not Abstract

Patent No. or Patent App. No.	Cases	Court	Holding	Reasoning
13/079,976	Ex Parte Jonah C. Kagen (Decision on Appeal) 2013-008188 Date: December 18, 2015	PTAB	upheld	Significantly More than the Abstract Idea Itself
11/477,767	Ex Parte Juha Kallio (Decision on Appeal) 2014-005647 Date: March 17, 2016	PTAB	upheld	Significantly More than the Abstract Idea Itself
6,151,604 and 6,163,775	Enfish, LLC v. Microsoft Corp. 2015-1244 Date: May 12, 2016	Fed. Cir.	upheld	Significantly More than the Abstract Idea Itself
6,259,789	Luciano F. Paone, v. Broadcom Corporation (Memorandum Decision and Order) NYED-2-15-cv-00596 Date: August 19, 2015	DC	upheld	Significantly More than the Abstract Idea Itself
8,597,678 and 8,709,494	MiMedX Group, Inc., v. Nutech Medical, Inc. (Memorandum Opinion and Order) ALND-2-15-cv-00369 Date: November 24, 2015	DC	upheld	Significantly More than the Abstract Idea Itself
8,285,678	Motio, Inc., v. BSP Software, LLC (Memorandum Opinion and Order) TXED-4-12-cv-00647 Date: January 4, 2016	DC	upheld	Significantly More than the Abstract Idea Itself
6,826,620	Network Congestion Solutions, LLC, v. United States Cellular Corporation (Memorandum Opinion) DED-1-14-cv-00903 Date: March 22, 2016	DC	upheld	Significantly More than the Abstract Idea Itself
6,292,685 and 7,787,923	Exergen Corporation, v. Kaz USA, Inc. (Memorandum and Order) MAD-1-13-cv-10628 Date: March 25, 2016	DC	upheld	Significantly More than the Abstract Idea Itself