

Section 101 Series: Patent Prosecution Strategies (Status of *Alice* at USPTO and Other Courts)

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Three-Part Webinar on Section 101

TOP SECRET

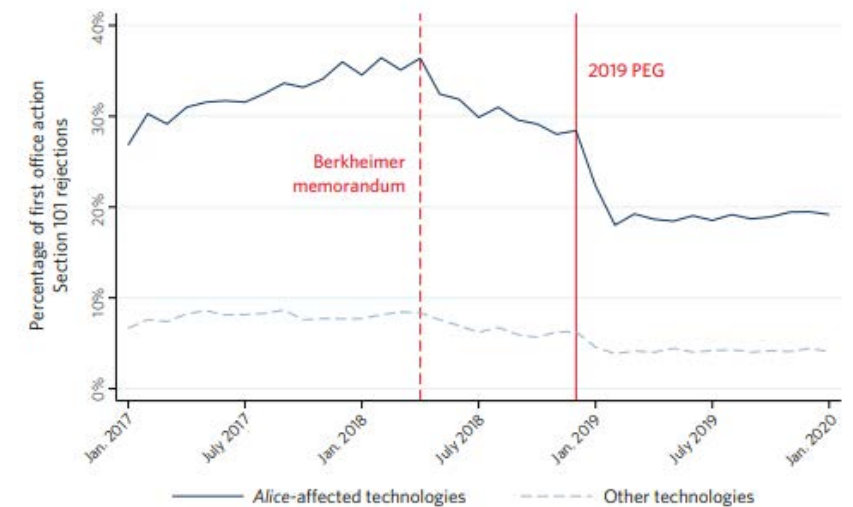
- Part 1 – Where We Stand
 - Positions of the USPTO and the Courts
 - The Common Thread that Ties those Positions Together
 - Requiring a technical problem, a technical solution, and a technical benefit
 - **The Secret Ingredient for Overcoming Alice**
 - Ensuring that the Common Thread is in the Specification *AND* the claims
- Part 2 – How to Apply these Principles In Current Applications
- Part 3 – How to Ensure Draft Applications with these Principles in Mind

BREAKING NEWS – ALICE NO LONGER AN ISSUE!!!

- In April, the USPTO released the “Adjusting to *Alice*” report
- Key Findings
 - § 101 rejections increased by 31% in the 18 months following *Alice*
 - One year after 2019 PEG, § 101 rejections dropped 25%

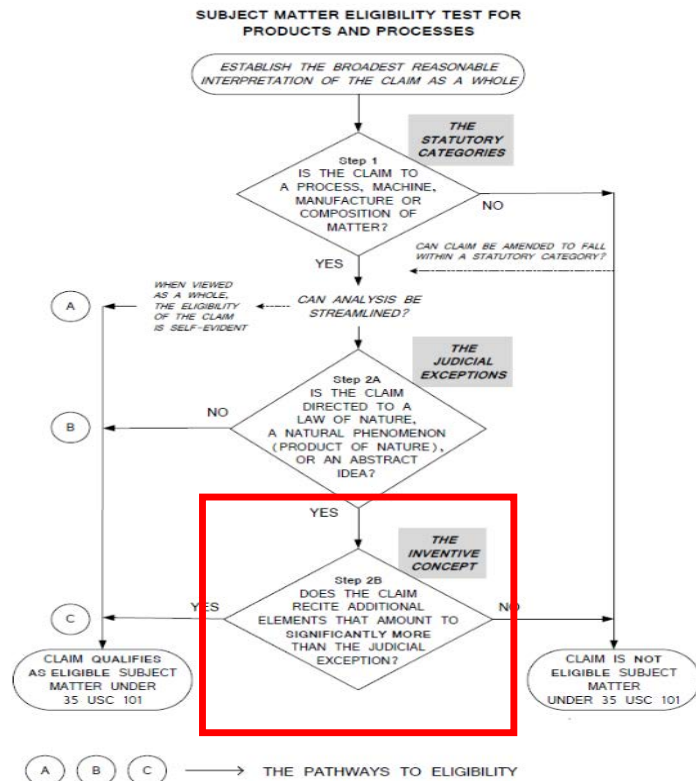
Source: USPTO, “Adjusting to Alice: USPTO patent examination outcomes after *Alice Corp v. CLS Bank International*” (2020) available at https://www.uspto.gov/sites/default/files/documents/OCE-DH_AdjustingtoAlice.pdf

Figure 3: The probability of receiving a first office action with a Section 101 rejection in *Alice*-affected technologies and in other technologies, Jan. 2017 – Jan. 2020.



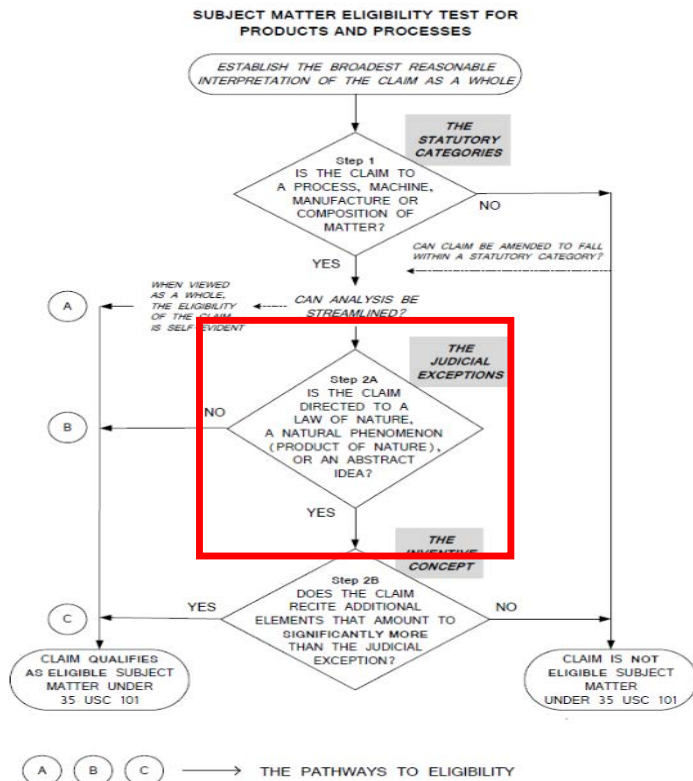
Note: Patent applications included in this figure are restricted to those filed before January 2019 to minimize any influence of applicant drafting and filing decisions in response to the 2019 PEG.

Berkheimer Memo



- Response to Federal Circuit Decision in *Berkheimer v. HP Inc.*
- Set evidentiary standard for supporting Step 2B
 - To prove element is “conventional,” Examiner must show:
 - Express statement in specification
 - Citation in court decision
 - A “well-known” publication
 - A single reference in a patent application is not enough
 - Take Official Notice
- Available at (along with other materials):
 - <https://www.uspto.gov/patent/laws-and-regulations/examination-policy/subject-matter-eligibility>

2019 PEG (and the October 2019 Update)



- Key Points

- Limits categories of ineligible subject matter
- Provides examples of eligible subject matter
- Key Quotable Language
 - “In the *rare* circumstance in which an examiner believes a claim limitation that does not fall within the enumerated groupings of abstract ideas...”
 - “not all methods of organizing human activity are abstract ideas”

- Conceptualizes “the Prongs” of Step 2A

- Step 2A Prong I: Claim recite an abstract idea, a law of nature, or a natural phenomenon?
- Step 2A Prong II: Claim integrated into a practical application?

Hypothetical § 101 USPTO Argument

The claims stand rejected under 35 U.S.C. § 101 as allegedly directed to unpatentable subject matter. The Examiner alleges that the claims are directed to an abstract idea because they are [e.g., “certain methods of organizing human activity,” etc.]. Applicant notes that the claims are not one of the [e.g., “certain methods of organizing human activity listed”] listed in 2019 PEG.

The claims are tied to the practical application of [INSERT] through the components [INSERT]. These components demonstrated integration into a practical application Example [INSERT] of 2019 PEG.

The claims include “additional elements that are sufficient to amount to significantly more.” For example, as stated above, the claims relate to [INSERT]. As stated in para. [XXXX] of the originally-filed specification, the claims overcome a problem of [INSERT]. To overcome these problems, the claims recite [INSERT]. These unconventional, technical features have not been “proven by clear and convincing evidence”, Berkheimer Memo at page 12, as no evidence of these features has been provided and the rejection has not been expressly supported in writing with evidence. Berkheimer Memo at pages 3-4.

In conclusion, as the claims are tied to a practical application and not an abstract idea, the claims are patentable subject matter under prong I/II of Step 2A. Additionally, as the computer system use unconventional technical features, the claim is patentable subject matter under Step 2B.

Hypothetical § 101 USPTO Argument – Step 2A, Prong I

The claims stand rejected under 35 U.S.C. § 101 as allegedly directed to unpatentable subject matter. **The Examiner alleges that the claims are directed to an abstract idea because they are [e.g., “certain methods of organizing human activity,” etc.]. Applicant notes that the claims are not one of the [e.g., “certain methods of organizing human activity listed”] listed in 2019 PEG.**

The claims are tied to the practical application of [INSERT] through the components [INSERT]. These components demonstrated integration into a practical application similar to [INSERT 2019 PEG Example].

The claims include “additional elements that are sufficient to amount to significantly more.” For example, as stated above, the claims relate to [INSERT]. As stated in para. [XXXX] of the originally-filed specification, the claims overcome a problem of [INSERT]. To overcome these problems, the claims recite [INSERT]. These unconventional, technical features have not been “proven by clear and convincing evidence”, Berkheimer Memo at page 12, as no evidence of these features has been provided and the rejection has not been expressly supported in writing with evidence. Berkheimer Memo at pages 3-4.

In conclusion, as the claims are tied to a practical application and not an abstract idea, the claims are patentable subject matter under prong I/II of Step 2A. Additionally, as the computer system use unconventional technical features, the claim is patentable subject matter under Step 2B.

Hypothetical § 101 USPTO Argument – Step 2A, Prong II

The claims stand rejected under 35 U.S.C. § 101 as allegedly directed to unpatentable subject matter. The Examiner alleges that the claims are directed to an abstract idea because they are [e.g., “certain methods of organizing human activity,” etc.]. Applicant notes that the claims are not one of the [e.g., “certain methods of organizing human activity listed”] listed in 2019 PEG.

The claims are tied to the practical application of [INSERT] through the components [INSERT]. These components demonstrated integration into a practical application similar to [INSERT 2019 PEG Example].

The claims include “additional elements that are sufficient to amount to significantly more.” For example, as stated above, the claims relate to [INSERT]. As stated in para. [XXXX] of the originally-filed specification, the claims overcome a problem of [INSERT]. To overcome these problems, the claims recite [INSERT]. These unconventional, technical features have not been “proven by clear and convincing evidence”, Berkheimer Memo at page 12, as no evidence of these features has been provided and the rejection has not been expressly supported in writing with evidence. Berkheimer Memo at pages 3-4.

In conclusion, as the claims are tied to a practical application and not an abstract idea, the claims are patentable subject matter under prong I/II of Step 2A. Additionally, as the computer system use unconventional technical features, the claim is patentable subject matter under Step 2B.

Hypothetical § 101 USPTO Argument – Step 2B

The claims stand rejected under 35 U.S.C. § 101 as allegedly directed to unpatentable subject matter. The Examiner alleges that the claims are directed to an abstract idea because they are [e.g., “certain methods of organizing human activity,” etc.]. Applicant notes that the claims are not one of the [e.g., “certain methods of organizing human activity listed”] listed in 2019 PEG.

The claims are tied to the practical application of [INSERT] through the components [INSERT]. These components demonstrated integration into a practical application similar to [INSERT 2019 PEG Example].

The claims include “additional elements that are sufficient to amount to significantly more.” For example, as stated above, the claims relate to [INSERT]. As stated in para. [XXXX] of the originally-filed specification, the claims overcome a problem of [INSERT]. To overcome these problems, the claims recite [INSERT]. These unconventional, technical features have not been “proven by clear and convincing evidence”, Berkheimer Memo at page 12, as no evidence of these features has been provided and the rejection has not been expressly supported in writing with evidence. Berkheimer Memo at pages 3-4.

In conclusion, as the claims are tied to a practical application and not an abstract idea, the claims are patentable subject matter under prong I/II of Step 2A. Additionally, as the computer system use unconventional technical features, the claim is patentable subject matter under Step 2B.

BUT ... It Might Not Matter

- Courts Not Bound By USPTO Guidance
 - “While we greatly respect the PTO’s expertise on all matters relating to patentability, including patent eligibility, we are not bound by its guidance.” *Cleveland Clinic Found. v. True Health Diagnostics LLC*, 2018-1218 (Fed. Cir. Apr. 1, 2019) (nonprecedential)
- Patent Eligibility Can be Determined at Rule 12(b)(6) stage
 - Patent eligibility can be determined at the Rule 12(b)(6) stage when there are no factual allegations that, taken as true, prevent resolving the eligibility as a matter of law. *Aatrix Software, Inc. v. Greenshades Software, Inc.*, 882 F.3d 1121 (2018)

So Where Do We Stand?

- USPTO
 - Declining § 101 rejections
 - Berkheimer Memo
 - Shifts burden to Examiner, creates evidentiary standard
 - 2019 PEG and October 2019 Update
 - Categorizes ineligible subject matter
 - Provides examples of eligible subject matter
- Courts
 - Analogize to the winners/distinguish from the losers
 - Make sure it is in your complaint



A Pattern Emerging?

“Whether something is well-understood, routine, and conventional to a skilled artisan at the time of the patent is a factual determination. . . . Mr. Berkheimer argues that the claimed combination improves computer functionality through The specification of the '713 patent discusses the state of the art at the time the patent was filed and the purported improvements of the invention. . . . The improvements in the specification, to the extent they are captured in the claims, create a factual dispute regarding whether the invention describes well-understood, routine, and conventional activities. . . .” *Berkheimer v. HP Inc.*, 2881 F.3d 1360 (2018).

Case Name	Technical Problem	Technical Solution	Technical Benefit
<i>Core Wireless Licensing v. LG Elecs. Inc.</i>	Prior art interfaces required users to scroll around and switch applications to find the right data	An interface that displays common data or functions of interest in a summary window	Interface displays the most relevant data without opening different applications
<i>Finjan, Inc. v. Blue Coat Systems, Inc.</i>	Traditional "code-matching" virus scans are limited to recognizing previously-identified viruses	A downloadable security profile that includes information about potentially hostile operations produced by a "behavior based" virus scan	Behavior-based scans can identify unknown and camouflaged viruses
<i>McRO, Inc. v. Bandai Namco Games America Inc.</i>	Preexisting facial animation technique required an animator to subjectively identify problematic sequences and manually fix	Rendering rules for facial animations based on a relationship between subsequences of phonemes, timing, and a weight to which each phoneme is expressed	Improved animations without manual editing
<i>Bascom Global Internet Services, Inc. v. AT&T Mobility LLC</i>	Traditional filtering techniques are too rigid are and susceptible to modification by end users	ISP server with a resident filtering scheme that is selected based on the network account	Filtering schemes can be customized for an end user and are less susceptible to modification by the end user
<i>Enfish LLC v. Microsoft Corp.</i>	Current databases require a predefined structure and subsequent data entry must conform to that structure	A "self-referential" database that stores all entity types in a single table and defines the table's columns by rows in that same table	Self-referential databases can be launched without extensive modeling and can be configured on the fly
<i>Visual Memory LLC v. Nvidia Corp.</i>	Prior art memory systems could only be designed for specific types of processors without diminishing performance	Caches with programmable operational characteristics based on the type of processor connected to the memory system	The operational characteristics create a bias for specific types of data for specific processors, resulting in increased performance for all types of processors
<i>Thales Visionix Inc. v. U.S.</i>	Conventional tracking of an object's inertial motion in a vehicle relied on detecting changes relative to Earth and resulted in errors when the vehicle accelerated or turned	Inertial sensors that calculate position by directly measuring the gravitational field in the vehicle	Position tracking is more accurate when vehicle is accelerating or turning and easier to maintain
<i>Amdocs (Israel) Ltd. v. Openet Telecom, Inc.</i>	Previous network systems have all information flowing to one location, creating bottlenecks and requiring	A system architecture with distributed data gathering, filtering, and enhancements	Data resides in the peripheries of the system close to the information sources to reduce bottlenecks
<i>DDR Holdings, LLC v. Hotels.com, L.P.</i>	Conventional hyperlinking fails to retain visitors because it transports users away from a host's website after activating a hyperlink	A web server that directs users to a hybrid web page with elements from the host website and product information from the third-party merchant's website	Host websites retain visitors and "look and feel" of their websites while providing purchasing opportunities from the third-party's website

The Solution – Get Technical in the Spec!

Cite how your specification:

- Describes the technical problem
- Describes the technical solution (i.e., the technical feature that fixes the problem)
- Describes the technical benefit in the specification created by the technical solution

US 2015/0154171 A1 Jun. 4, 2015

METHOD AND APPARATUS FOR CREATING AND FILING FORMS

CROSS-REFERENCE TO RELATED APPLICATION

[0001] The present application is a continuation of and claims priority to U.S. patent application Ser. No. 10/108,955, filed Mar. 26, 2002, the content of which is hereby incorporated by reference in its entirety.

BACKGROUND OF THE INVENTION

[0002] The present patent application relates to a tool which has been developed to facilitate the rapid production of "on screen" computer forms, which allow users to print out the forms for physical filing or electronically file the information. In this application the tool shall be called "Aatrix Forms Designer" or "AFD".

[0003] Aatrix Forms Technology Prior to AFD

[0004] Earlier software has had "on screen" fill in forms since 1990, at the time limited to the United States Federal Forms W-2, 1099 and 941. Early versions of these forms were implemented by displaying a graphic image of the form, and then overlaying text entry boxes that the user could fill in.

[0005] This early method required a fairly time-consuming process by which the programmer would have to write the underlying code for all of the toolboxes, including the dimension of where they physically laid on the graphic.

[0006] Another version of the software, produced in April, 1995, was predominantly a programming tool that generated "C" or "Pascal" source code for use within the company's Payroll Series of products. The product consisted of a graphical user interface that required the user to manually create the source code required to produce the forms. The source code was then generated into the payroll projects and compiled to produce object code for handling on-screen fill-in forms.

[0007] Further enhancements were added to the early product to allow it to generate HTML code for support of clickable graphics on the web, the ability to save and open existing AFD documents, and the addition of "Properties" for each text field that would allow the source code to perform rudimentary checking and formatting of the text data (skipping something in a "mystery" field versus "not", for example, would only allow numbers to be typed in, and the field would be right aligned).

[0008] The final major enhancement to be added was the ability for the form designer to add graphical elements such as boxes, lines and text to the form. This allowed the form to function "on its own," without any underlying graphical field. Because the graphical data was stored in a "pure format," the resulting form files were considerably smaller and more accurate, being able to take advantage of the computer's graphics processing capabilities for display and printing.

[0009] Other typical solutions involve the use of either graphics or Adobe's Portable Document Format (PDF) both of which generate significantly larger files. A typical form which may be 100 kilobytes when stored as a GIF (Graphics Interchange Format) or up to a megabyte as a PDF can be stored in as little as 25 kilobytes with the above described format.

[0010] The critical piece of early AFD development was the creation of an interpreter, which was a small piece of source code that could be implemented in a program and which would automatically read, present on screen, and process an AFD file. This changed the focus of the tool from one which still required a bit of programmer effort (merging the source code into the project and recompiling to one in which forms could be developed completely independent of programmers. At the time, the company included a "federal forms set" which consisted of the US forms 941, 943 and several others.

[0011] Subsequent to this, the company began its "State Forms" project, by which wage withholding and unemployment forms for all fifty states would be created with the AFD tool by non-programmers and could be implemented without any additional effort by codes. Major enhancements to both the forms tool itself and the runtime module were required as issues were uncovered during the implementation of the state forms project, but these proved minor and by the end of 1995, Aatrix had available for sale forms for all fifty states.

[0012] A version of the AFD Runtime Module was created which was a stand-alone application – it did not need to be included with any other program. The means by which other accounting applications could support the forms was through a published standard called "Universal Reef Under Format" in a document released to the public in October 1995.

[0013] In September of 1996, Aatrix Development began a project to bring the state forms processing to the Microsoft Windows platform and for use via the Internet. The first step was agreeing to a file format, as binary data (which the forms were stored in on the Macintosh) wouldn't be cross platform. Once that was established, another application was created on the Mac, which would read AFD form files and convert them to plain text for transfer to the Windows computer. This led to the creation of the current software and accompanying system, which is usable on all platforms.

SUMMARY OF THE INVENTION

[0014] A data processing system for designing, creating, and importing data into, a viewable form viewable by the user of the data processing system, comprising:

[0015] (a) a form file that models the physical representation of an original paper form and establishes the calculations and rule conditions required to fill in the viewable form;

[0016] (b) a data file containing data for populating the viewable form; and

[0017] (c) a form viewer program operating on the form file and the data file to perform calculations, allow the user of the data processing system to review and change the data, and create viewable forms and reports.

[0018] A principal object and advantage of the present invention is that it creates a viewable electronic form that exactly mirrors the physical representation of an original paper form.

[0019] Another principal object and advantage of the present invention is that it allows the user to create and print viewable electronic form from outside applications.

[0020] Another principal object and advantage of the present invention is that it performs calculations on the imported data and allows the user to review and change the data and create viewable forms and reports.

[0021] Another object and advantage of the present invention is that it allows the creation of an electronically fileable form from the viewable form, based on a template.

[0022] Another object and advantage of the present invention is that it allows the electronically fileable form to be electronically filed in a variety of formats.

The Solution – Get Technical in the Claims!

Ensure that your claim recites the technical solution (i.e., the *technical* feature that overcomes the *technical* problem) **not** just the benefit

THIS:

1. A method for [INSERT YOUR TECHNICAL BENEFIT], the method comprising:
 - [.....]
 - [INSERT TECHNICAL FEATURE 1]
 - [INSERT TECHNICAL FEATURE 2]
 - [.....]

NOT THIS:

1. A method, the method comprising:
 - [.....]
 - [.....]
 - [INSERT YOUR TECHNICAL BENEFIT]

Hypothetical § 101 USPTO Argument (Revised)

The claims stand rejected under 35 U.S.C. § 101 as allegedly directed to unpatentable subject matter. The Examiner alleges that the claims are directed to an abstract idea because they are [e.g., “certain methods of organizing human activity,” etc.]. Applicant notes that the claims are not one of the [e.g., “certain methods of organizing human activity listed”] listed in 2019 PEG.

The claims are tied to the practical application of **[INSERT DEVICE RECEIVING TECHNICAL BENEFIT]** through the components **[INSERT TECHNICAL FEATURES]**. These components demonstrated integration into a practical application similar to [INSERT 2019 PEG Example].

The claims include “additional elements that are sufficient to amount to significantly more.” For example, as stated above, the claims relate to **[INSERT TECHNICAL FEATURES]**. As stated in para. [XXXX] of the originally-filed specification, the claims overcome **[INSERT TECHNICAL PROBLEM]**. To overcome these problems, the claims recite **[INSERT TECHNICAL FEATURES]**. These unconventional, technical features have not been “proven by clear and convincing evidence”, Berkheimer Memo at page 12, as no evidence of these features has been provided and the rejection has not been expressly supported in writing with evidence. Berkheimer Memo at pages 3-4.

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Next Webinar

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- Part 2 – How to Apply these Principles In Current Applications
 - Finding the technical problem, the technical solution, and the technical benefit
 - What if the specification does not state a problem?
 - How to use these principles
 - When drafting replies to office actions
 - When conducting Examiner Interviews
- Part 3 – How to Ensure Draft Applications with these Principles in Mind

Questions?



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