ShawPittman

ALERT

TECHNOLOGY / LONDON OFFICE

July 2001 Number 2

The Look and Feel of Software: A Copyright Perspective

To what extent are the non–literal aspects of a computer program protected by copyright?

In the UK, the Copyright Designs and Patent Act 1988 provides copyright protection to a computer program.[1] However, the extent to which this copyright protection can be applied to the 'look and feel' of a software program is an area which has provoked great interest both in the US and the UK. This Alert seeks to provide a summary of the status of English law at present and also to provide a comparison with the US, in order to show how this area has been dealt with in the US and how these developments have been interpreted in the UK.

1. *Computer Associates International, Inc. v Altai* [2]

Judge Pratt (sitting in the US District Court for the Eastern District of New York) found that the computer program, OSCAR 3.4, belonging to the defendant, Altai, Inc. ("Altai"), had infringed the plaintiff's, Computer Associ ates ("CA"), copyrighted computer program entitled CA - SCHEDULER but found that Altai's OSCAR 3.5 program was not substantially similar to a portion of CA - SCHEDULER called ADAPTER.

Judge Walker (on appeal in the Federal Circuit Court) upheld Judge Pratt's decision in relation to OSCAR 3.4 and was in substantial agreement with Judge Pratt's careful reasoning regarding OSCAR 3.5.

CA argued that the test of a "substantial amount", applied by the District Court in relation to the infringement of copyright, failed to account sufficiently for a computer program's non-literal elements. The Appeal Court agreed that copyright protection extends beyond a literary work's strictly textual form to its non-literal components. Thus, where "the fundamental essence or structure of one work is duplicated in another", courts in the US have found copyright infringement. Further, the Court said, "If the non-literal structures of literary works are protected by copyright, and if computer programs are literary works, as we are told by the legislature, then the non-literal structures of computer programs are protected by copyright. By analogy to other literary works, it would thus appear that the copyrights of computer programs can be infringed even absent copying of the literal elements of the programs".

The Court inserted as a caveat that "[their] decision...does not control infringement actions regarding categorically distinct works, such as certain types of screen displays. These items represent products of computer programs, rather than the programs themselves, and fall under the copyright rubric of audio visual works".

The Court identified a three-step procedure to determine whether computer program structure was substantially similar: Abstraction - Filtration - Comparison. To ascertain substantial similarity, a court would first need to break down the allegedly infringed program into its constituent structural parts and examine each part for such things as incorporated ideas, incidental expression, elements from the public domain etc. and sift out all the non-protectable mate-

[1] Section 3(b) Copyright, Designs and Patent Act 1988

[2] *Computer Associates International, Inc. v Altai* (2d Cir., 1992) (982 f.2d 693)

rial. The court could then compare this level against the allegedly infringing program.

In summary:

Step One : Abstraction

Separating idea from expression. "The court should dissect the allegedly copied program's structure and isolate each level of abstraction contained within it. This process begins with the code and ends with an articulation of the program's ultimate function".

Step Two : Filtration

Defining the scope of the plaintiff's copyright by separately protectable expression from non-protectable material including:

(a) Elements dictated by efficiency

(b) Elements dictated by external factors

(c) Elements taken from the Public Domain

Step Three : Comparison

Determining whether the defendant copied any aspect of the protected expression, as well as an assessment of the copied portion's relative importance with respect to the plaintiff's overall program.

Even where a substantial amount of code is copied, there is no infringement unless the piece of code copied is important to the performance of the whole.

2. *John Richardson Computers Limited v Flanders and Another (No.2)* [3]

The US interpretation of the law was first considered in detail in the UK by the Chancery Division of the High Court of England.

In this case, Mr Justice Ferris held that a screen display was a product of a program, not the program itself. The fact that two programs produced similar screen displays might or might not be indicative of similarities in the program. The screen display was not itself the literary work which was entitled to copyright protection. A particular screen display might be entitled to separate copyright protection as an artistic work in the form of a photograph, or as a film, or as being a reproduction of a drawing. Accordingly, screen displays were only to be relied upon to the extent that they demonstrated the context of the underlying program in which the relevant copyright subsisted. This judgement upheld *Total Information Processing Systems Ltd v Duncan Limited* [1992] FSR 171 which held that,

(a) where considerable steps are taken to preserve the confidentiality of the source code of an interface, there is considerable doubt that, taken by itself, the interface was the subject of copyright; and

(b) the compilation of several linked programs, which were not themselves original literary or artistic works, could not be regarded as a separate computer program.

The reasoning he gave for following *Computer Associates* was that "there is...nothing in any English decision which conflicts with the general approach adopted in the *Computer Associates* case". He thought that, in preference to seeking the "care of protectable expression" in the plaintiff's program, an English court would first decide whether:

(a) the plaintiff's program as a whole is entitled to copyright; and

(b) whether any similarity attributable to copying, which is to be found in the defendant's program, amounts to the copying of a substantial part of the plaintiff's program.

However, he did agree that it would be right to adopt a similar approach in England to that used in *Computer Associates* when assessing the substantiality of any copying, the originality of the plaintiff's program and the separation of the idea from its expression.

3. *IBCOS Computers Ltd and Another v Barclays Mercantile Highlands Finance Ltd and Others* [4]

Mr Justice Jacob dissented from the view of Mr Justice Ferris in the *John Richardson* case and held that the United States test of abstraction and filtration of the

[3] *John Richardson Computers Limited v Flanders and Another (No.2)* [1993] FSR 497

[4] *IBCOS Computers Ltd and Another v Barclays Mercantile Highlands Finance Ltd and Others* [1994] FSR 275

core of protectable expression is not helpful in English Law. However, he did agree that, when deciding whether a substantial part of the work has been reproduced, consideration is not restricted to the text of the code.

He dissented from Mr Justice Ferris because "United Kingdom copyright cannot prevent the copying of a mere general idea but can protect the copying of a detailed "idea". It is a question of degree where a good guide is the notion of overborrowing of the skill, labour and judgment which went into the copyright work".

He also disapproved *Total Information Processing*, stating that copyright subsisted in the individual programs and also in the whole package of programs (as a compilation). Further, a fresh copyright could be created on each modification of the programs.

However, this case only considered whether copyright subsisted in the underlying code of a program and not the visual product of the compilation.

4. *Cantor Fitzgerald International and Another v Tradition (UK) Limited and Others* [5]

Mr Justice Pumfrey chose to ignore *Computer Associates* and held that Mr Justice Jacobs' test in *IBCOS* regarding copyright infringement was right. A claim in copyright is to be tested as follows:

(a) what are the work or works in which the plaintiff claims copyright?

(b) is each such work "original"?

(c) was there copying from that work?

(d) if there was copying, has a substantial part of that work been reproduced?

He did attempt to explain how an expression of thought in human language differs from a program for a computer written in a programming language. He recognised the risk of making an error if well-known principles which were developed to deal with literary works addressed to humans, were adopted and applied uncritically to literary works whose only purpose is to make a machine operate. He also recognised that: (1) computer programs must not contain syntactical or semantical errors, otherwise compilation of the code may not occur; and (2) the program may choose to give meaning to the code through comments. These comments are purely for the benefit of the human reader and will be ignored (in fact excluded) in the executable code when compiled.

These considerations might suggest that every part of a computer program is essential to its performance, therefore every part is a "substantial part" of the program.

He further suggested that "the choice of module content, if not arbitrary, is based on assessment of considerations which have nothing to do with the computer program as a functional unit but relate to extraneous matters such as availability and skill of programmers, convenience of debugging and maintenance and so on. It is not possible to say that the skill and labour involved in making such a choice could never amount to a substantial part of the copyright subsisting in the various modules, but it seems to me to be unlikely. So in my judgment the substantiality of what is taken has to be judged against the collection of modules viewed as a whole. Substantiality is to be judged in the light of the skill and labour in design and coding which went into the piece of code which is alleged to be copied. It is not determined by whether the system would work without the code; or by the amount of use the system makes of the code".

Again, the arguments given in this case only referred to the copyright infringement of the actual program code and not the screen display produced by the code. However, the visual display was given as evidence of infringement of the code.

It would appear that, since *John Richardson* and *Flanders*, it is extremely difficult to persuade the Courts to afford copyright protection to the user interface of a computer program. This is not to say that it is impossible, but such protection will rely heavily on the facts of each particular instance. In the US, the law has followed a similar direction as illustrated by *Lotus Dev. Corp v Borland Int'l, Inc.*[6]

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[5] *Cantor Fitzgerald International and Another v Tradition (UK) Limited and Others* [2000] R.P.C. 95

[6] *Lotus Dev. Corp v Borland Int'l, Inc* (1998) 49 F.3d 807

Lotus sued Borland for copyright infringement of its computer program Lotus 1-2-3. Borland's accused spreadsheet program bore no expressive similarities to Lotus 1-2-3 except for the use of a "menu command hierarchy" which was nearly identical to that found in Lotus 1-2-3. At the district court level, the menu command hierarchy of Lotus 1-2-3 was found to be separately copyrightable and infringed by Borland's competing spreadsheet program. Having admitted to copying the menu command hierarchy of Lotus 1-2-3, Borland argued on appeal, that the menu command hierarchy was not copyrightable. The appellate court agreed with Borland and held the menu command hierarchy to be a "method of operation", which in the US is not copyrightable as a statutory exclusion to the scope of copyright protection.

The Supreme Court affirmed this decision by default after a 4-4 deadlock.

This issue, in relation to the "look and feel" of websites, has yet to come before the courts in the UK. It is therefore uncertain whether the courts will give copyright protection to an internet display. However, in *Easyjet Airline Co Ltd v Dainby*[7], a case concerning the registration of a domain name with the intention of passing off the applicant's services, the court held that it was clear from the appearance of the website that the defendant had based the site on that operated by the plaintiff. The requirements for passing off were therefore satisfied. Injunctive relief was granted to prohibit the further use of the site but damages were held not to be suitable.

Conclusion

It would appear that the English courts are less ready to attach copyright protection to the 'look and feel' of software programs than the US. However, there are other mechanisms in English law that can provide protection for a company's trade dress and perhaps, given the technical difficulties in analysing the literal and non-literal aspects of a computer program in order to determine whether these elements are copyrightable or not, such mechanisms will remain the primary focus for plaintiffs.

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Tracy Beckett
tracy.beckett@shawpittman.com - 020 7847 9583

Jo Lofts
jo.lofts@shawpittman.com - 020 7847 9581

[7] *Easyjet Airline Co Ltd v Dainby* [2001] WL 272885