SLAUGHTER AND MAY

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Copyright protection for computer software Functionality loses out again

The legal protection afforded to owners of computer programs to prevent unauthorised copying of the functionality of their software applications continues to raise issues and challenges for those advising in the technology sector. The High Court's decision in *SAS Institute Inc. v World Programming Limited* has gone some way to adding practical meat to the bare bones principles of copyright protection given to computer software (*[2010] EWHC 1829 (Ch)*).

However, the court also referred a number of substantive issues to the European Court of Justice, so guidance is still awaited on these issues.

THE DISPUTE

SAS had developed software that allowed its customers to create and run a number of advanced statistical calculations to analyse and manipulate data. Customers did this by writing scripts in a language recognised by and implemented using SAS's software. Because the scripts developed by users relied on the language and functionality of the base SAS software, users had to maintain a licence of the base SAS software in order to continue to perform the analysis and manipulation of data.

WPL sought to develop software that would not only provide the same functionality as the SAS software (in terms of making available the same statistical calculations), but also would do so by recognising user scripts written in the same language, commands and syntax as the SAS software. This was unashamedly with a view to providing existing SAS users with a direct substitute for the SAS software. So, for example, where the SAS software lacked certain functionality or produced error messages, the WPL software replicated these.

It was uncontested that WPL had sought to replicate the functionality of the SAS software and that it had done so by observing the operation of the SAS software and reviewing its user manual.

SAS'S CLAIMS

To prove that WPL had illegitimately copied its software, SAS had to overcome the seminal High Court judgment in *Navitaire Inc v Easyjet Airline Company (1) and Bulletproof Technologies Inc (2) ([2004] EWHC 1725 (Ch); www.practicallaw.com/2-200-2402)*. Navitaire's key finding was that copying the functionality of a computer program, without copying the programming language in which it is written, would not constitute an infringement of the copyright in that program.

SAS advanced a number of arguments that *Navitaire* had been decided incorrectly, many of which were based on the imprecise wording of the Software Directive *(91/250/EEC)* (the Directive) (*see box "Software Directive"*). It emphasised the fact that the Directive states that what is excluded from protection are ideas and principles which underlie elements of a computer program (including interfaces) (*Recital 13, Article 1(2)*), and logic, algorithms and programming languages to the extent that these comprise ideas and principles (*Recital 14*).

SAS submitted that Navitaire was wrong to conclude that a program's non-graphic interface and functionality were wholly excluded, as the wording of the Directive did not support this. The Directive's exclusion of protection for user interfaces was further undermined by the fact that Recital 11 refers to interfaces as the parts of a program that provide interconnection and interaction between elements

SOFTWARE DIRECTIVE

The Software Directive (91/250/EEC) (the Directive) requires EU member states to protect computer programs by copyright as “literary works”. The term “computer programs” includes their preparatory design material (Article 1(1), the Directive). Article 1(2) of the Directive provides that the expression in any form of a computer program is protected by the Directive, but that ideas and principles underlying any element of a computer program, including those underlying its interfaces, are not protected by copyright under the Directive (the ideas/expression dichotomy). This statement has not been expressly transposed into UK law, although it is implicit in UK copyright law generally that copyright does not protect ideas or principles. (A consolidated version of the Software Directive (2009/24/EC) came into force on 25 May 2009; the consolidated Directive replaced, but did not make any substantive legislative change to, the Software Directive (91/250/EEC), as amended by the Copyright Term Directive (93/98/EEC).)

of software and hardware. This would suggest that references in later parts of the Directive to the exclusion of protection for “interfaces” is a reference only to elements of the program which enable the interface between hardware and software. As with most parts of the Directive, the position is further confused by the fact that Recital 12 and certain operative provisions of the Directive appear to use the more industry-standard term of interoperability to refer to this interaction between hardware and software.

This approach was argued to be consistent with the idea/expression dichotomy in the Directive when viewed as requiring the courts to draw a line of generality or abstraction in respect of a work in order to define which parts are protected and which are not (*see box “Software Directive”*).

SAS also argued that its case could be distinguished from *Navitaire* in a number of respects; in particular, because:

- WPL had copied more than was necessary to replicate the functionality of its software.
- Copying the language and key commands recognised by the SAS software was an infringement of its copyright in that software.
- WPL had copied statistical formulae set out in the SAS user manual into the source code of the WPL software and this constituted an infringement of SAS’s copyright.

THE DECISION

In rejecting SAS’s contention that *Navitaire* was wrongly decided, Arnold J agreed with WPL that the idea/expression dichotomy is not (or not merely) a matter of the generality of expression but is a distinction between different kinds of skill and labour (one protected by copyright and the other not).

He emphasised that computer programs are different to other literary works and that, while general principles of copyright law covering other literary works were applicable, it was not always appropriate to apply a doctrine specifically established in relation to those literary works.

While accepting that the Directive could be read in the manner contended by SAS, Arnold J did not think it should be viewed as if it were an operative provision in an English statute. He agreed with Pumprey J in *Navitaire* that both programming languages and interfaces were wholly excluded from protection under the Directive.

Arnold J also agreed that the functionality of a computer program was not protected by the Directive. In doing so, he emphasised that the protection of literary copyright in the code of a computer program extends not only to the text of the code but also to the code's structure, sequence and organisation (which he viewed as the correct analogy with the plot of a novel). It does not, however, extend to the functionality. As in *Navitaire*, the nature of the skill and labour involved was key, and the skill and labour expended on devising the functionality of computer programs was the wrong kind to be protected by copyright.

As to the three key bases mentioned above on which SAS sought to distinguish its case from Navitaire, Arnold J held that:

- The principle that the functionality of a computer program is not protected by copyright is not limited to those parts of a program which it is strictly necessary to produce in order to replicate functionality.
- The language and key commands recognised by the SAS software were programming languages and therefore wholly excluded from protection under the Directive.
- The replication in the code of the WPL software of statistical formulae set out in the SAS user manual was not an infringement of SAS's copyright in that manual because the authors of the manual had simply reproduced the formulae set out in the SAS software, and the collection of formulae was not protected as a compilation under copyright law as it was more a product of accretion than conscious planning and selection.

WIDER IMPLICATIONS

This case and *Navitaire* show that it may not be possible to unite the general authorities on literary copyright and the Directive under a single principle. The idea/expression dichotomy breaks down when applied to computer programs because of the dissociated relationship between functionality of a computer program and the code in which it is written.

Copyright in computer programs protects the skill and labour of the programmer and designer in so much as they concern literary endeavour, but its extension to functionality as an embodiment of that endeavour is made problematic by the fact that that same functionality can be replicated using completely distinct code. The link between the literary work and its protected manifestations is broken.

In the end, it is a policy decision as to what type of endeavour should be protected by copyright. The fact that the wording of the Directive is so imprecise only adds to the starkness of the policy decisions which must be made by the courts. But it should also be remembered that these policy decisions are not unique to copyright law. The exclusion of functionality from protection has previously been considered by the courts in relation to other intellectual property rights, such as design rights and trade marks.

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