Total Information Processing Systems Limited v DMN Limited - A Case Study

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This article forms a report of the decision of Judge Paul Baker QC handed down on 25 June 1991 in the Chancery Division of the High Court in London. The case is an interesting one since it dealt with copyright in a suite or package of computer programmes[1], and of the uncertainty surrounding the EC Directive on the Legal Protection of Computer Programmes ('the Software Directive'). This article examines the case as it was decided, and then speculates as to how it may be decided once the Software Directive is implemented.

The Facts

The dispute arose in relation to the rights in three 'application software' computer programmes sold mainly as a package to the construction industry by a company called AMT.

The first of these programmes, the Contract Costing Programme, was specifically designed to perform calculations using raw material fed into it from other programmes. One of these programmes, the Payroll Programme, was owned by the defendant (Daman) and licensed by AMT as Daman's agent.

AMT went into liquidation and Daman out-bid the Plaintiff (TIPS) for AMT's rights in the software and its list of customers.

Despite the success of Daman's bid, TIPS had already devised a payroll programme similar to that of Daman. In order for TIPS' Payroll Programme to operate in conjunc-

tion with AMT's Contract Costing Programme (now belonging to Daman), TIPS wrote some new code to link the two programmes. In order to link with the Contract Costing Programme, TIPS' Payroll Programme had to include a small part of the Contract Costing Programme's interface file so that information fed to the Contract Costing Programme from TIPS' Payroll Programme would be directed to the data files of the Contract Costing Programme.[2]

TIPS wrote to AMT's former customers, offering to provide the maintenance and support services previously supplied by AMT, but replacing Daman's Payroll Programme with its own "adapted" payroll programme. Daman wrote to those customers who took up this offer, making representations against TIPS.

TIPS commenced proceedings alleging, *inter alia*, misrepresentation by Daman. Daman counterclaimed alleging copyright infringement by TIPS. Both parties agreed that the central issue was whether what TIPS had done constituted an infringement of Daman's copyright in the Contract Costing Programme which it had purchased from AMT.

Daman's Counterclaim

Copyright in the Computer Programmes as a Compilation

Daman claimed that packaging the three original application programmes constituted a compilation

attracting copyright and that TIPS, by detaching one of the components of the compilation[3] and replacing it with its own, had infringed Daman's copyright in the compilation. Daman drew the analogy of an encyclopaedic work, the copyright in which would indisputably be infringed if one of the volumes were to be substituted by another and the cross-referencing system adapted.

Infringement of Copyright in the Contract Costing Programme

Alternatively, Daman claimed that by copying parts of the interface file, the specification of the files and records, TIPS had infringed the copyright in the Contract Costing Programme. Daman claimed that the interface file was an integral part of the Contract Costing Programme and that to copy it was to copy a substantial part of the whole.

Judgment

The Computer Programmes as a Compilation

Judge Baker QC rejected Daman's contention that there was copyright in the three application programmes as a compilation. The Judge recognised the analogy of an anthology of poetry or other literary work where undoubtedly copyright can exist in the collection, in addition to the copyright in the individual works of some of them. The Judge rejected this analogy, saying:

"The mere linking of several programmes is not, in my judgement, itself an original, literary or artistic work in the way that the collective presentation of literary works by diverse authors is. Nor could the compilation be regarded as a computer programme separate from and in addition to the individual programmes."

The Judge based his decision on the concern that to accord copyright protection to linked computer programmes would lead to great inconvenience. It would mean that the copyright owners of one of the components could not interface with another similar programme to that of the other components without the licence of the compiler. The scenario which the Judge sought to avoid was that the Payroll Programme, licensed to AMT by Daman, could not have been linked to another Contract Costing Programme without AMT's licence as the owner of the copyright in the alleged compilation.

Infringement of Copyright in the Contract Costing Programme

The Judge considered whether by copying the interface file, a very small but vital part of the Contract Costing Programme, TIPS had copied a substantial part of the work and had thereby breached Daman's copyright in the programme.

While bearing in mind that substantiality depends on quality and quantity, the Judge decided in favour of TIPS, saying:

"This is not a case where TIPS is seeking to copy the AMT programme at all: it is seeking to use it. The part copied can be likened to a table of contents. It would be very unusual that that part of a book could be described as a substantial part of it. The specification in high-level language of fields and

records in the data division tells one little or nothing about the Costing Programme and so, in my judgment, cannot be regarded as a substantial part of it within the meaning of s.16(3)" [of the Copyright, Designs & Patents Act 1988].

The Judge also considered the possibility of the existence of copyright in the interface file itself, but rejected this, saying:

"First, many programmes are written with the intention that they be interfaced with other programmes; secondly stemming from the prin-

> **"It is possible to identify two distinct situations in which the Courts have accorded copyright protection to compilations"**

ciple that copyright does not exist in ideas but in the expression of them, is the line of authorities commencing with Denrick & Co. v. Lawrence & Co. (1890) 25 QBD 99, that if there is only one way of expressing an idea, that way is not the subject of copyright......Thirdly, considerable steps are frequently taken to preserve confidentiality of the source code. This suggests a doubt that taken by itself it is the subject of copyright."

Commentary

There are three findings which require examination:

1. That the linking/packaging of several computer programmes

does not create either a new computer programme or a compilation of computer programmes for the purposes of establishing copyright in a new work.

2. That the copying of the interface file was not a substantial reproduction of the whole of the Contract Costing Programme.

3. That there was no copyright in the interface file in itself.

Compilation

In a number of cases compilations or arrangements of material have been protected as original literary works, even though the source materials themselves have not been protected by copyright. Thus, in *British Broadcasting Corporation -v- The Wireless League Publishing Co. Limited*,[4] protection was given to a compilation of advance daily radio programmes for the ensuing week published each week in the BBC's Radio Times. Similar protection has been extended to compilations of public documents. On the other had, such works (i.e. compilations) must demonstrate a sufficient degree of labour and skill on the part of the compiler. Where the source material is commonplace and readily available protection will be denied.

It is possible to identify two distinct situations in which the Courts have accorded copyright protection to compilations:

1. if the selection and arrangement of the compiled materials involved a sufficient degree of labour and skill; or

2. where the incorporation/addition of introductory notes and other textual notations or commentaries evidences such labour and skill.

An example of the first form of compilation is the old Indian case of *Macmillan -v- Suresh Chunder Der*,[5] where the plaintiff's work was a selection of an anthology of poems arranged, not in simple chronological order, but "in graduation of feeling or subject". Such a work qualified for copyright protection as a compilation because the selection and arrangement by the compiler obviously required extensive reading, careful study and comparison and the exercise of taste and judgment.

Examples of the second form of compilation are the several cases involving annotated editions of Shakespeare's plays. The editions were copyright although the actual texts of the plays were not subject to copyright protection. A recent example is *Warwick Film Productions Limited -v- Eisinger.*[6] In that case the plaintiff's book consisted of large extracts from Court transcripts, the copyright in which was not owned by the Plaintiff, together with a lengthy introduction and series of appendices. The plaintiff had also carried out certain editorial work, adding and omitting material, correcting spelling, rearranging, transposing and abbreviating material, as well as adding certain sections written by himself. Because of these additional elements, the Court took the view that the work as a whole was entitled to copyright, despite the fact that much of it consisted of unoriginal material. Such material was thus protected, not in itself, but by virtue of its collocation as part of the whole book.

Having regard to these two established forms of compilation, it is respectfully submitted that the Judge in this case was correct in finding that the mere linking of three computer programmes did not create either a new computer programme or a copyright compilation of computer programmes. The selection and arrangement of the programmes was purely functional and there was no evidence of additional skill and labour, apart from the mere linking of the programmes.

Substantial Reproduction

The phrase 'substantial part' has always been held to refer to the quality of what is taken rather than the quantity. Accordingly, Courts have always refused to prescribe any particular proportion as amounting to a substantial part. Lord Cottenham L.C. said:

> # "...the work as a whole was entitled to copyright..."

"When it comes to a question of quantity, it must be very vague. One writer might take all the vital part of another's book, although it might be but a small proportion of the book in quantity. It is not only quantity, but value that is always looked to. It is useless to refer to any particular cases as to the quantity."[7]

In determining whether the quality of what is taken makes it a 'substantial part,' a number of factors appear relevant. The most important is a general enquiry into the importance which the part bears in relation to the work as a whole: is it an 'essential' or 'vital' or 'material' part? It is clear that the quality of any given part of a work will depend very much on the nature of the particular work or subject matter. In this case, the Court was considering whether the interface file of the costing programme constituted a substantial part of the whole. The Judge acknowledged that the specification in the data division was fundamental to the costing programme as a whole because, without it, the pro-

gramme could not fetch instructions or put them out. Hence, says the copyright owner, there cannot be anything more substantial than that which makes the whole system work.

The Judge, however, directed himself by looking to see what percentage or proportion of the copied part gave expression to the programme, being the series of commands to the computer. The decision thus turned on the finding of fact that the copied part told one little or nothing about the costing programme as a whole. The interface file was thus likened to a book's bare table of contents, and held not to be a substantial part of the costing programme.

It should be noted that the full extent of the copying had not been agreed by the parties. The Judge's decision therefore only relates to that part of the interface file which the plaintiff admitted to having copied. The plaintiff admitted copying the address for specific kinds of information in the interface file which consisted of a dozen entries in the data division of the programme. It is thus somewhat difficult to discern precisely what general statement that copying an interface file can **never** amount to a substantial reproduction of the whole programme. The Judge clearly states that: "the part copied [not the interface file as a whole] can be likened to a table of contents". (Author's words in square brackets.)

However, the judgment does not confine itself to this finding of fact and it would appear that the Judge finds considerable comfort in the fact that the part copied: "tells one little or nothing about the costing programme ..." There is no authority for the proposition that the question as to whether a substantial part of the quality has been taken depends on whether the part taken "tells one" anything about the re-

mainder. Indeed, such a test may positively discriminate against interface files which are deliberately written to conceal the structure and organisation of the programme as a whole. The Judge, later in his judgment, recognises that many programmes are written with the intention that they are to be interfaced with other programmes. That is, that they are to be written with the intention that they are to be interoperable. Authors of interoperable programmes often write their interface file in such a manner that the other programme authors cannot necessarily derive information about the programme as a whole by reference to the interface programme.

The author therefore respectfully submits that this aspect of the decision must be read in the light of the finding of fact and that it must still be open to argument that an interface file may, of itself, constitute a substantial part of the computer programme. This submission stands, notwithstanding that the interface file may give no indication about the structure or organisation of the remainder of the computer programme.

The interface file as a computer programme in itself

A table of contents may or may not amount to a separate original literary work, apart from the text to which it relates. The Copyright, Designs and Patents Act 1988 in Section 3(1)(a) specifically includes 'a table' in the definition of 'literary work'. Literary works consisting of pure information often possess little or no merit in the sense of grammatical compositional style. They consist frequently of what Upjohn J. described as "merely quasi-statistical reference matter",[8] such as railway timetables, horse-breeding material, catalogues, solar and lunar

calendar events and so on. A bare table of contents may therefore fall into the category of "merely quasi-statistical reference matter." On the other hand, quite considerable skill, work and labour is expended in putting together a table of cases and/or a table of statutes which appear at the front of legal text books. In the same way, an interface file may or may not be characterised as "merely quasi-statistical reference matter." It is respectfully submitted, this judgment must be restricted to the particular finding of fact that the part copied in this case was merely quasi-statistical.

"Maintaining the confidentiality of the source code is therefore consistent with expressly withholding or negating that implied copyright licence"

Thus, provided that the interface file is a product of sufficient skill, work and labour, then, consistent with the Judge's own analogy, it may qualify for copyright protection as 'a table.'

This conclusion was rejected by the Judge in this case because the specification of fields and records in the the part copied was the only one way of expressing the idea and therefore cannot be the subject of copyright protection. Again, the author respectfully submits that this decision is to be read in the light of the finding of fact that the part copied is in essence to be characterised as "merely quasi-statistical reference

matter". There will be many instances where the interface file cannot be so characterised and will be the product of considerable skill, work and labour. For example, some interface files may carry out relatively sophisticated operations such as calculations or conversions upon the date before feeding it to the correct register of the programme.

A further objection which is not considered in detail in the judgment, is based on the proposition that taking steps to preserve the confidentiality of source code shows doubt in the programme owner that the code is copyright. With respect, this proposition must be wrong. The fact that developers of software preserve the confidentiality of their source code cannot lead to the implication of an admission of lack of copyright. It is trite to state that copyright only protects the expression of an idea and, in this country, the Courts have not extended that protection to the so-called "look and feel" or structure, sequence and organisation of a computer programme. Furthermore, as a result of decisions such as *BL -v- Armstrong*,[9] and *Saphena Computing -v- Allied Collection Agencies*,[10] it is arguable that, by giving users access to the source code the users are thereby given an implied copyright licence to modify or adapt the source code for maintenance purposes. Maintaining the confidentiality of the source code is therefore consistent with expressly withholding or negating that implied copyright licence.

More recently, it has become the practice of software developers to allow their users to have access to the source code[11] simply because it is so complicated that no ordinary user could practicably use it in a manner inconsistent with the developer's copyright. It is important, however, for software developers to

satisfy the concern of their users that, should the developer cease trading, the user will have access to the source code to employ a third party to correct any bugs and, if appropriate, to adapt or enhance the programme.

Accordingly, the author respectfully submits that no conclusion as to whether copyright subsists in a computer programme can be drawn from the fact that the software developer either does or does not seek to preserve confidentiality. This decision is almost invariably based on purely commercial considerations.

The Software Directive

It is interesting to speculate how easily courts may decide similar cases once the Software Directive is implemented in the United Kingdom. The Software Directive does not address the issues of what constitutes either a "compilation" or a "substantial reproduction." However, it may well be relevant to the third issue in this case: whether the interface file was a literary work in its own right and whether TIPS was entitled to copy it to make-its payroll programme interoperable with Daman's Costing Programme.

The Software Directive[12] makes it clear that there is no justification under copyright law for excluding parts of programmes from protection. The Commission has adopted the policy that interfaces[13] should be treated exactly like any other sections of the programme. This means that the normal rules of copyright apply to those parts of the programme which can be called interfaces, in exactly the same way as to the rest of the programme. Interfaces are therefore not to be treated differently from other literary works.

On the facts of this case the interface file was, in effect, characterised as mere quasi-statistical reference material. The Software Directive

confirms that ideas and principles which underlie any element of a programme, including those which underlie its interfaces, are not protected by copyright. However, as already stated, if sufficient skill, work and labour has been expended in developing the interface file it may be protected like any other 'table' as a literary work.

If Daman had been able to cross this threshold then one would have to examine its exclusive rights conferred by the Software Directive to-

"The Software Directive confirms that ideas and principles which underlie any element of a programme ... are not protected by copyright"

gether with the specific limited exceptions to those rights. These exceptions allow authorised users to reverse engineer or decompile a computer programme. The exclusive rights and the exceptions are set out in detail below.

The exclusive rights and exceptions

Article 4 of the Software Directive sets out what are to be restricted acts. It is clear that all kinds of reproduction, translation and adaptation will be within the copyright owner's control. Therefore, the question is whether TIPS would have a defence under Articles 5 and/or 6.

Article 5 sets out certain exceptions to the restricted acts. Article 5(1) sanctions those acts which are necessary for the normal use of the computer programme in accordance with its intended purpose. Thus, one can load, display, run, transmit, store, and correct errors in the programme provided that such acts are in accordance with the programme's intended use and subject to any specific contractual provisions to the contrary. Each of these exceptions, however, only applies to the lawful acquirer of the computer programme. It is not clear whether TIPS was a 'lawful acquirer' of Daman's Costing Programme but, in any case, it is clear that TIPS copying parts of the interface file went well beyond what was the intended purpose of the Costing Programme. On the contrary, TIPS' conduct was to enable it to use its payroll programme rather than the Costing Programme. Hence, TIPS would not be able to rely on a defence under Article 5(1).

Article 5(3) sanctions the authorised user of a programme to observe, study or test the functioning of the programme in order to determine the ideas and principles which underlie any element of the programme, provided that this is done while exercising his right to load, display, run, transmit or store the programme. Once again, one must question whether TIPS had any authority to load, display, run, transmit or store Daman's Costing Programme in the first place. In any case, it is submitted that Article 5(3) will not justify an authorised user to simply make a slavish copy of an interface file which enjoys copyright protection. Permitting the identification of ideas and principles is not a licence to copy and therefore TIPS would not be able to rely on a defence under Article 5(3). We therefore need to look to Article 6.

Article 6, for the first time in any legislation proposed throughout the world, sets out the conditions for "reverse engineering" or decompilation. Article 6 consists of two limbs:

1. the first limb[14] describes the circumstances in which reverse engineering may take place; and

2. the second limb[15] describes what may be done with the results of reverse engineering.

The purpose of the Article is to permit conduct which would otherwise be a restricted act where such conduct is **indispensable** to obtain the information necessary to achieve the **interoperability** of an **independently** created programme with another programme. The following "first limb" provisos, however, must be met:

1. the reverse engineering must be performed by the licensee or other authorised person;

2. the information necessary to achieve interoperability must not be readily available; and

3. the reverse engineering must be confined to the parts of the original programme which are necessary to achieve interoperability with the independent programme.

Furthermore, the second limb stipulates that reverse engineering may not be used to obtain information:

1. for goals other than to achieve the interoperability of the independently created programme;

2. which is to be given to third parties; or

3. which is to be used for the development, production or marketing of a substantially similar computer programme.

On the facts set out in the judgment it would appear that TIPS falls at the first hurdle of the first limb because it was not a licensee of the Costing Programme. This is a problem which TIPS could have overcome; it would still be able to comply with this requirement if it were merely acting on behalf of a licensee. In all other respects TIPS would appear to have complied with the other requirements of Article 6. TIPS was not reverse engineering the interface file for the purpose of developing a substantially similar computer programme. Rather it sought to operate and market its payroll programme in conjunction with the Costing Programme.

"The Judge held, on the facts, that copyright did not subsist in the interface file and thus there was no infringement"

The only other relevant concern is the rather vague wording of Article 6(3) which states that Article 6 may not be interpreted in such a way as to allow its application to be used in a manner which: "unreasonably prejudices the rightholder's **legitimate interests** or conflicts with a **normal exploitation** of the computer programme." It remains to be seen whether Article 6(3) will be interpreted in such a way that it strangles the operation of Article 6 as a whole. The author submits, as a matter of statutory interpretation, that the Commission and the European Court of Justice will not allow this to happen. Therefore, on the facts of this case, TIPS' conduct would not be held unreasonably to preju-

dice Daman's interests nor conflict with the normal exploitation of the Costing Programme.

The Judge held, on the facts, that copyright did not subsist in the interface file and thus there was no infringement. The same result may obtain under the Software Directive, not through lack of subsistence, but because TIPS[16] could legitimately reverse engineer/decompile the interface file to achieve interoperability between its payroll programme and Daman's Costing Programme. *£*

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Footnotes

[1]   The author is English, and his spelling is retained throughout *[Ed.]*

[2]   The interface file consists of the field and record specifications of the Contract Costing Programme arranged in the nature of a table of contents as part of the source code.

[3]   Daman's Payroll Programme

[4]   [1926] 1 Ch 433

[5]   (1890) 17 ILR 951

[6]   [1969] Ch 508

[7]   *Bramwell* -v- *Halcomber* [1936] 3 My & Cr 737 at 738, 40 ER 1110.

[8]   *Football League Limited* -v- *Littlewoods Pools Limited* [1959] 1 Ch 637 at 650-651

[9]   [1986] FSR 221

[10]   Unreported, Official Referees Court, 25th April 1988

[11]   Including access pursuant to an Escrow Agreement

[12]   91/250/EEC. Adopted on 14 May 1991. The United Kingdom must implement the Directive no later than 1 January 1993.

[13]   Defined as the parts of the programme which provide for interconnection and interaction

[14]   Article 6(1)

[15]   Article 6(2)

[16]   Provided tips was acting with the authority of a licensee