ROYAL COURT
(Samedi Division)

25th September, 1995 188.

Before: The Deputy Bailiff and
Jurats Blampied and Gruchy

Between:	John Hyde Oliver	Plaintiff
And:	ABN-AMRO Bank N.V.	Defendant
And:	Victor Hanby Associates Limited	Third Party

John Hyde Oliver represented himself.
Advocate A.D.Robinson for the Defendant.
Advocate J.G.P. Wheeler for the Third Party.

JUDGMENT

THE DEPUTY BAILIFF: On 13th July, 1995 the Court ordered that by consent two issues should be tried before the remainder of the issues in this action. They were (1) the issue as to whether the laws of the island of Jersey make provision for the protection of a computer programmer's proprietary rights, if any, in a computer program written by him by virtue of copyright, and (2) the issue as to whether the plaintiffs alleged cause of action is prescribed by law.

The alleged cause of action originally pleaded in paragraph 12 of the Order of Justice read as follows:-

"Notwithstanding the defendant's knowledge as set out in paragraphs 10 and 11 hereon, the first and/or second defendants have breached the plaintiff's copyright".

That paragraph was later amended and now reads:-

"Notwithstanding the defendant's knowledge as set out in paragraphs 10 and 11 hereon the defendant has breached the plaintiff's copyright".

That was particularised by adding these words:-

"Also during late 1988 and early 1989 the defendant gave copies of the STAMPS source to various parties, namely Victor Hanby and/or Victor Hanby Associates Limited and also to Simon Milner".

Apparently the re-amended Order of Justice has not yet been filed. As Mr. Oliver is presenting his own case, we will merely counsel that it should be.

On the question of the copyright issue, Advocate Robinson, who throughout the hearing has acted very fairly towards Mr. Oliver, who represented himself, set out the background for us in this way.

In September, 1986, Mr. Oliver entered into a form of partnership with Mr. Victor Hanby and on 23rd June, 1987, ABN - AMRO Bank NV ("the Bank") contracted with Victor Hanby Associates Limited, which was an agent for the partnership, to write a system called "STAMPS", (Securities Trading And Management Portfolio System) in order to assist the Bank. On 29th July 1988, the Bank contracted with the company for a licence to use STAMPS and to obtain technical support.

There was in the second agreement a clause that the copyright in STAMPS belonged to the company. In or about August, 1988, Mr. Hanby and Mr. Oliver fell out. There was litigation. It was a partnership dispute and the Bank was not a party to it. The Bank (as we have said) was licensed to use the STAMPS system and had paid for that licence. In January, 1989, the source code in the Bank's computer was utilised by the company to do various things. It used the source code to correct errors. It effected an interface with EXTEL. This interface enables a company to work with another system. By virtue of that work changes were made to the STAMPS system. But it seems clear that at the time the Bank did not know that the company was any other than the principal with which it was dealing.

We were given a useful understanding of the source code and the objects code by reference to a work in the Australian Law Journal (1982) by Mr. Gary M. Cohen, which reads as follows:

"A computer program comprises statements in a computer language designed to carry out one or more processes using computer hardware. Such processes may be either algorithmic - (an algorithmic program comprises a series of steps which if followed lead to a solution, e.g. a sort program. Most programs are of this type) - or if more complex, heuristic - (a heuristic program comprises a good strategy or plan which if followed should lead to the correct solution in most cases, e.g. a chess program. Programs of this type fall within the rapidly developing computer science field of

artificial intelligence.) Computer programs therefore contain the knowledge and know-how of the computer system.

It is important to understand the stages of development of a computer program so as to analyse what exactly requires protection. The first stage will usually comprise the drawing of flow charts which are a primitive schematic representation of the program's logic. From the flow chart the programmer will then write the program's logic in a computer programming language such as FORTRAN or COBOL. (FORTRAN is an anagram from Formula Translating System. It is a data processing language that closely resembles algebraic notation. COBOL is an anagram from Common Business Oriented Language. It is a data processing language that resembles business English). This stage of the computer program is known as the "source code" or "source program". The source program is in a form which may be read and understood by people trained in the art of computer science. The source program may be stored on magnetic discs, tapes or drums or punched on cards or tape.

Generally, the computer program must undergo further transformation before it can be understood by the computer system. This requires the assistance of another computer program known as a "compiler". The compiler, with the assistance of other programs, translates a source program into a machine-readable program or "object code". The object code in machine-readable form represents a series of electro-magnetic impulses which can be understood by the computer hardware. The object code may be stored in magnetic form on a disc or tape, in electro-magnetic form in a computer's memory or in hard-wired form on a silicon chip.

When object code is in machine readable form it cannot, unlike source code, be understood or read by people trained in the art of computer science. Object code may be represented by binary notation, yet, even then it is virtually impossible for even the most highly trained programmer to be able to understand what the object code represents. A program in object code cannot be translated back directly into its source code. As the computer understands object code it is not necessary to supply the source program to the user. Often, a supplier will insert passwords in the object code to prevent unauthorised use and disclosure".

On the point of understanding the objects code it is important for us to know that Mr. Oliver told us that although it might have been a time-consuming exercise, he would have been able, in time, to read the objects code and indeed, anyone well versed in the mysteries of computer programs would also have been able to read the objects code. That statement appeared to take Mr.

Robinson somewhat by surprise for he had told us that the objects code could only be read by machine and not by the human mind.

Alterations were therefore made to the STAMPS system and particularly by way of example, to increase the valuation charge to customers of the Bank from £10 to £25. That required a change in the customers' invoices. Use of the source code was required to bring about the changes and without the source code the changes would not have been possible. Copies were made of the source code. Of that there appears to be little doubt. When Mr. Oliver brought an action by way of an Anton Piller order the Bank had three copies of the code and the company had one. Whoever made these copies has not yet been determined. There are matters put to us by Mr. Oliver which need to be explained. Suffice it to say he has not obtained a satisfactory explanation as to why when Mr. Hanby handed over 19 diskettes, 6 were blank and 13 were the data base of the Bank and not connected with STAMPS.

On 12th December, 1991 there was settlement in the litigation between Mr. Oliver, Mr. Hanby and the company. Copyright in STAMPS vested in Mr. Oliver. Because Mr. Oliver now had title, he apparently began negotiations with the Bank in early 1992 concerning the possibility of the Bank buying the whole system. Much of the main action turns on promises Mr. Oliver says were made, but apparently a price was never agreed upon. Eventually the Bank said that it would not buy the system and on 1st October, 1992 Mr. Oliver served his Order of Justice. So it is that Mr. Oliver claims damages for the breaches of copyright pleaded at paragraph 12 of the Order of Justice. Whether he was, by 1st October, 1992, too late to bring his action is the issue which falls to be decided if he is successful on the first issue.

1. The Copyright Issue.

The question of copyright is governed in Jersey by the Copyright Act 1911.

In their work The Jersey Law of Property the learned authors within the chapter "Intellectual Property" wrote this at paragraphs 4.29 - 4.31:-

> ***"4.29 A problem in having the 1911 Act as the basis for the law of copyright in Jersey is that technology has moved on since that Act was passed. One particular problem, that was only finally settled in the United Kingdom by an amendment to the Copyright Act 1956 made as late as 1985, is the question of copyright in computer software. To what extent does computer software fall within the definition of "literary work" within the Copyright Act 1911? It is clear that under the 1911 Act there was no requirement that work to constitute a "literary work" within the meaning of the Act should be of literary or artistic merit, or should even be comprehensible***

by any person attempting to read it: see e.g. Anderson & Co. Limited v. Lieber Code Co [1917] 2 KB 469, where a book of telegraphic codes making no sense to anyone who did not possess the key was held to be a fit subject for copyright.

4.30 In Northern Office Micro Computers v. Rosenstein [1982] FSR 124 the South African Supreme Court held that a computer program was a literary work within the meaning of the South African Copyright Act 1978 (based on the earlier English copyright legislation). The same result was reached in Canada: see IBM v. Ordinateurs Spirales (1984) 80 CPR (2D) 187. In the United Kingdom there was no clear decision before the 1985 statutory amendment, though in Sega Enterprises v. Richards [1983] FSR 73 Goulding J. decided "provisionally", but also "clearly", that a computer program was a literary work within the 1956 Act, and in Thrustcode Limited v. W W Computing Limited [1983] FSR 502 Megarry V.C. so assumed. however, in Waterlow Publishers v. Rose IPD 13023 the English Court of Appeal held that until the 1985 Act came into effect copyright could not attach to computer programs. By way of comparison it is clear that under French law, for example, a computer program is copyrightable as an intellectual work: see Apple v. Segimex [1985] FSR 608. The same is true in Italian law: Società Italiana Degli Autori ed Editori (S.I.A.E.) v. Pompa [1989] FSR 559. The position is less clear-cut in Australia: Computer Edge v. Apple [1090] FSR 537.

4.31 In the light of these authorities, the matter is regrettably most unclear, but it is submitted that the Jersey courts should hold that a computer program is capable of being a literary work within the meaning of the Copyright Act 1911, and it is so whether it is written on paper, or stored on or in any other medium, including as a series of electrical impulses in a silicon chip. The Jersey courts are not bound to follow the views of the English Court of Appeal in the Waterlow case, but may justifiably look to French law and elsewhere for support, particularly in light of the subsequent legislative change to UK law (cf Re Vibert 1987-88 JLR 96, in the admittedly different context of the law relating to wills).

In order to see whether we can follow the submission of the learned authors we must closely examine the cases (and others) which are in point. Regretfully to some extent some of the cases only make confusion worse.

The Copyright Act applies. It is important for us to note that Jersey has no original law of copyright. Section 37(2) of the Act provides that the statute shall come into force in Jersey at such date as the States may fix. The Loi (1913) au sujet des droits d'auteur fixed the date of registration as 8th March, 1913.

The whole concept of computers was at that time as alien as could be.

"Copyright" is defined in Section 1(2) of the Act as follows:

"(2) For the purposes of this Act, "copyright" means the sole right to produce or reproduce the work or any substantial part thereof in any material form whatsoever, to perform, or in the case of a lecture to deliver, the work or any substantial part thereof in public; if the work is unpublished, to publish the work or any substantial part thereof; and shall include the sole right, -

(a) to produce, reproduce, perform or publish any translation of the work;

(b) in the case of a dramatic work, to convert it into a novel or non-dramatic work;

(c) in the case of a novel or non-dramatic work, or of any artistic work, to convert it into a dramatic work, by way of performance in public or otherwise;

(d) in the case of a literary, dramatic, or musical work, to make any record, perforated roll, cinematograph film, or other contrivance by means of which the work may be mechanically performed or delivered.

and to authorise any such acts as aforesaid."

And at paragraph 4.14 of Matthews and Nicolle is this useful summary of section 2:

"4.14 According to Section 2, copyright is infringed by any person who, without the consent of the owner of the copyright, does anything the sole right to do which is conferred by the Act on the owner of the copyright: thus referring back to Section 1(2). Excluded from the acts which constitute an infringement of copyright are a number of matters, including any fair dealing with the work for the purposes of private study, research, criticism, review or newspaper summary, the publication, subject to certain conditions, of extracts in collections for the use of schools, and the publication, again subject to specified condition, in a newspaper of a report of a public lecture. Sub-sections (2) and (3) specify certain further acts of infringement, including certain public dealing by a person with any work which to his knowledge infringes copyright or would do so if it had been made in the part of the Dominions where the specified act took place, including selling or hiring it, distributing it, exhibiting it, importing it for

trade purposes or permitting it (in the case of a dramatic work) to be performed without consent."

As the learned authors say, technology has moved on. But so has the law in England, leaving Jersey far behind in the wide reaching amendments that have been made. That strikes us as surprising in an island which justifiably prides itself as an international finance centre. The Act of 1911 was repealed and replaced in the United Kingdom by the Copyright Act 1956. The Act was not extended to Jersey but the Copyright Act 1956 (Transitional Extension) Order 1959 extended paragraph 41 of Schedule 7 of the Act as follows:

> "Insofar as the Act of 1911 or any Order in Council made thereunder forms part of the law of any country other than the United Kingdom, at a time after that Act has been wholly or partly repealed in the law of the United Kingdom, or of any other country to which that Act extended or which, by virtue of that Act, was to be treated as a country to which it extended, it shall, so long as it forms part of the law of the country first mentioned, be construed and have effect as if that Act had not been so repealed".

In England, the Copyright, Designs and Patents Act 1988 restated the Law of Copyright with amendments. That has not been extended to Jersey. The Copyright (Computer Software) Amendment Act 1985 (in turn repealed by the 1988 Act) was a necessary extension to the 1956 Act in order that computer programs could be given the same protection as is afforded to literary works given under the 1956 Act. It is interesting at this early stage to note that under the 1985 Act, a version of the computer program which is converted into or out of a computer language or code, or into a different computer language or code, is an "adaptation" of the program. We shall be considering the use of the word "adaptation" in due course.

We must stress an important fact which is self-evident. If software protection applies in Jersey, it must apply under the 1911 Act and it can only apply if it is considered a "literary work".

The definition of "literary work" in the Copyright. Designs and Patents Act 1988 was expressly extended in this way:

> *"literary work" means any work, other than a dramatic or musical work, which is written, spoken or sung and accordingly includes:-*
>
> *(a) a table or compilation and*
> *(b) a computer program".*

That word "accordingly", we find interesting. It is as though it were self-evident that the additional words are harmoniously included as a literary work.

It should also be noted that the Heading to the 1911 Act describes it as *"an Act to amend and consolidate the law relating to copyright"*, whereas the 1956 Act (which does not apply to Jersey) is *"an Act to make new provisions in respect of copyright and related matters, in substitution for the provisions of the Copyright Act 1911 and other enactments relating thereto"*. The 1985 Act (which does not apply to Jersey) is *"an Act to amend the Copyright Act 1956 in its application to computer programs and computer storage."*

It is quite clear that the United Kingdom Parliament has found it necessary specifically to deal with the new concepts by amending legislation.

We need to deal with some aspects of statutory interpretation in order to better comprehend the problem that we face.

In the introduction to his work "Statutory Interpretation", Francis Bennion said this:-

> *"Our Courts have moved on from the old simplistic view. No longer is a problem of statutory interpretation settled by applying some talisman called "the literal rule" or "the golden rule" or "the mischief rule". Nowadays we have purposive construction, coupled with respect for the text and a recognition by judges that interpreting a modern Act is a matter sophisticated and complex. Rules of thumb are out. The only golden rule, as Shaw said, is that there are no golden rules".*

We cannot, however, interpret words like "literary work" in isolation. The important task is to examine the statute as a whole and to look at what the purpose of the statute is. In The New Guarantee Trust Finance Limited v. Terence Victor Birbeck (1980) JJ 117 at 122, the Court cited from A.G. v. Prince Ernest August of Hanover (1957) AC 436 (we need only cite the opening words of the passage cited). *"....words, and particularly general words, cannot be read in isolation, their colour and content are derived from their context. So it is that I conceive it to be my right and duty to examine every word of a statute in its context ...."*.

The Court went on to say this at page 124:

> *"I can find nothing in the Jersey or English cases which precludes me from reading words into the Article which it can be inferred the legislature meant to insert. Although gaps in the Law cannot be filled in, yet as Lord Denning said in Eddis*

> *v. Chichester-Constable [1969] 2 Ch. 235, at page 358: "A Judge must not alter the material of which it is woven, but he can and should iron out the creases". It is put like this on pages 79/80 of Driedger's "The Construction of Statutes": "It is one thing to put in or take out words to express more clearly what the legislature did say, or must from its own words be presumed to have said by implication, it is quite another matter to amend a statute to make it say something it does not say, or to make it say what it is conjectured that the legislature could have said or would have said if a particular situation had been before it."*

The Court cannot amend the wording of a statute to make it say what is only conjectured. To amend a statute is to alter its legal meaning. That is made perfectly clear in the passage which we have cited. The legislature in 1911 (or in 1913) could not possibly have intended to include such words as "computer program" because the words were not then known to the English language. Can we therefore interpret the statute to allow the words to be implied in the light of present-day knowledge and understanding?

In Jersey Maincrop Potato Marketing Board v. Derek J. de Gruchy (1971) JJ 1819 the Court cited with approval an English case at 1830. It said:

> *A further guide to interpretation is to be found in the judgment of Lindley M.R. where he said, in Re Mayfair Property Co. (1898) 2 Ch 28 at 35:*
>
> *"In order properly to interpret any statute it is as necessary now as it was when Lord Cope reported Heydon's case (1854 3 Co. Rep. 7a) to consider how the law stood when the statute to be construed was passed, what the mischief was for which the old law did not provide, and the remedy provided by the statute to cure that mischief".*

We must therefore find the legislative intention. That is the function of the Court and we must make up our minds as to that intention.

We agree with Advocate Robinson that the Law was designed to solve a straightforward mischief. It was to put published and unpublished works on the same footing. The work must, however, for these purposes be a "literary work". A useful guide to that meaning is provided by the case of University of London Press Limited v. University Tutorial Press Limited (1916) 2 Ch 601. Because the case is construing the 1911 Act, we will set out the relevant part of the judgment (at 608) in full:

"The first question that is raised is, Are these examination papers subject of copyright? Sect. 1, sub-s 1, of the Copyright Act of 1911 provides for copyright in "every original literary dramatic musical and artistic work," subject to certain conditions which for this purpose are immaterial, and the question is, therefore, whether these examination papers are, within the meaning of this Act, original literary works. Although a literary work is not defined in the Act, s.35 states what the phrase includes; the definition is not a completely comprehensive one, but the section is intended to show what, amongst other things, is included in the description "literary work" and the words are "'Literary work' includes maps, charts, plans, tables, and compilations." In my view the words "literary work" cover work which is expressed in print or writing, irrespective of the question whether the quality or style is high. The word "literary" seems to be used in a sense somewhat similar to the use of the word "literature" in political or electioneering literature and refers to written or printed matter. Papers set by examiners are, in my opinion, "literary work" within the meaning of the present Act."

So that there are a large number of items that are "literary Works" that have little merit. There is clearly a line that must be drawn. That line is illustrated in Hollinrake v. Truswell (1894) 3 Ch 420 at 428 where Davey L.J. said:

"Now, a literary work is intended to afford either information and instruction, or pleasure, in the form of literary enjoyment. The sleeve chart before us gives no information or instruction. It does not add to the stock of human knowledge or give, and is not designed to give, any instruction by way of description or otherwise; and it certainly is not calculated to afford literary enjoyment or pleasure. It is a representation of the shape of a lady's arm, or more probably of a sleeve designed for a lady's arm, with certain scales for measurement upon it. It is intended, not for the purpose of giving information or pleasure, but for practical use in the art of dressmaking. It is, in fact, a mechanical contrivance, appliance or tool, for the better enabling a dressmaker to make her measurements for the purpose of cutting out the sleeve of a lady's dress, and is intended to be used for that purpose. In my opinion it is no more entitled to copyright as a literary work than the scale attached to the barometer in Davis v. Comitti [(1852) 52LT539].

The number of different items that have been classified as "literary works" is legion. They include works of widely differing character. However much we examine the range of items (which is extensive) we are left with the problem that we have to decide and that

is that the amount of "literary merit, skill or labour required to bring a work within the protection afforded by the Act is a question of fact in each case.

In essence a computer program might be a literary work in isolation but software, unlike a book, means that a program can be held in a different media. Does it matter how a work is held in the context of whether or not there is an infringement of copyright?

The 1956 Act says that

> *"The acts restricted by the copyright in a literary, dramatic or musical work are:*
>
> *.....(c) making any adaptation of the work".*

So, too, in the Copyright Act 1956

> *""writing" includes any form of notation, whether by hand or by printing, typewriting or any similar process."*

That provision is not within the 1911 Act. The Interpretation (Jersey) Law, 1954 defines "writing" in this way:

> *"In this Law and in every other enactment, whether passed before or after the commencement of this Law, expressions referring to writing shall, unless the contrary intention appears, be construed as including references to printing, lithography, photography and other modes of representing or reproducing words in a visible form".*

Does a computer program run *ejusdem generis* with printing, lithography and photography? If it does, then is a computer program "reproducing" (one of the words used in the 1911 statute) in "a visible form"?

The source code was converted into the objects code. It was presumably this effect that Parliament in England had in mind when it passed the stop-gap legislation - the Copyright (Computer Software) (Amendment) Act 1985. Having placed a computer program into the definition of "literary work" the Act says:

> *"(2) For the purposes of the application of the said Act of 1956 in relation to a computer program, a version of the program in which it is converted into or out of a computer*

language or code, or into a different computer language or code, is an adaptation of the program".

The 1911 Act does not speak of "adaptation" - it says "produce" or "reproduce".

We are really being asked to take the 1911 Act (as it applies to Jersey) amend it and apply it to software. The 1988 Act (Copyright Designs and Patents Act 1988) adds "a computer program" to "Literary work" and an infringement is in the adaptation, or translation, of the literary work. In Section 21(4) the Act reads:

"(4) In relation to a computer program a "translation" includes a version of the program in which it is converted into or out of a computer language or code or into a different computer language or code, otherwise than incidentally in the course of running the program".

It seems clear, from what we have examined so far, that the Copyright Law was never intended to protect the expression of the idea. When the European Community produced a Council Directive (14th May, 1991) on the legal protection of computer programs. That directive said, *inter alia*,

"6. Whereas the Community's legal framework on the protection of computer programs can accordingly in the first instance be limited to establishing that member States should accord protection to computer programs under Copyright Law as literary works ..."

In 1992 the English Parliament made regulations known as "The Copyright (Computer Programs) Regulations 1992). It was necessary in order to give proper effect to the directive and to exempt certain activities so that it was not an infringement of copyright for a lawful user of a copy of a computer program to copy or adapt it provided he did it for his necessary legal use. There are other examples. We are not going to deal with the matter here but if the Bank had a licence did it not copy or adapt the source code for its necessary legal use in, for example, the use to increase the valuation charge to customers?

All this legislation in England warns us to be wary.

The function of a computer program is to communicate and work together with other components of a computer system and for this

purpose a logical and perhaps physical interconnection and interaction is required to permit all the elements of software and hardware to work with other elements of software and hardware in harmony.

The parts of the program which provide for such interconnection and interaction between elements of hardware and software are, in general, known as "interfaces". It was just such an interface that the Bank effected with EXTEL.

In an article in the New Law Journal of April 21st 1995 titled "Copyright in computer programs: back to basics?", Mr. Andrew Charlesworth wrote:

> *"Over the last 10 years, it has become increasingly accepted that when countries opt to protect intellectual property rights in computer programs, they almost always do so by way of copyright. However, what has become equally clear is that the decision to adopt this method of protection has almost always been based more on the legal expediency afforded by the existence of the enforcement mechanisms of the Berne Convention, than on a sound jurisprudential rationale.*
>
> *In the U.K. the problems this approach has caused are evidenced by the struggles of the courts to provide a workable test to ascertain whether a breach of copyright in a computer program has occurred, in circumstances where wholesale piracy, or other clear evidence of direct disc-to-disc copying, is absent. Given that allegedly infringing computer programs may be written in different programming languages for use on a variety of computer platforms which in turn run different operating systems, the tests which may be used to determine breach in other literary works are simply unworkable."*

Many of the amendments to the law in England came about as a result of the report of the Whitford Committee (1977) (Cmmd 6732). There is however an interesting comment on their findings in Gavin McFarlane's work "A Practical Introduction to Copyright" which reads, dealing with the storage of programs:

> *"They can, for instance, be punches on paper tapes or cards in the form of holes, or recorded on magnetic tapes, discs and cards. It is theoretically possible for a very experienced programmer to read the symbols or indentations made on these media, but it is hardly an easy task. The hope was that the existing provisions of the Copyright Act 1956 could be used to include, preferably under the heading of literary works, the material coming under the general heading of software.*

It was suggested to the Whitford Committee that programs should be covered in any new copyright legislation by treating them as a separate category of work, with its own definitions. The members were urged that the definition of 'literary work' should be extended to include 'any written computer program' and the definition of 'writing' to include 'notation expressed in the form of punched holes or of magnetic signs or symbols'. This would require consequential definitions for the expressions 'computer' and 'computer program'.

In its Report the Committee rejected these proposals, although without giving any very extensive explanation of why it had done so. It took the view that copyright should exist in any original work which is fixed in such a way that the recorded information can be reproduced, and that therefore there is no requirement for a special provision.

We feel the existing categories of literary and (where appropriate) artistic works are sufficiently wide to cover computer programs already, and that the only amendment necessary is to make it clear that copyright subsists in any work recorded in such a way that it can be reproduced; in saying this we would emphasise that, in our view, it is quite immaterial that a program may not be visible to or readable by the human eye or be directly understandable by the human brain. <u>There can be no doubt that a literary work is protectable notwithstanding that it is in code".</u> (our underlining).

The commentary continues:

"With respect to the members of the Committee, this may not eventually prove to be as helpful to the computer interests as it was at first thought. The law of the United Kingdom is based on legislation and case law, and where legislation is unclear, it is open to interpretation by the courts through the decisions of the judges. The views expressed by the members of a committee, or for that matter a Royal Commission, are not law. At best they are a persuasive expression of opinion."

The problem is to interpret a 1911 Statute which was designed for an age when computers were as alien a concept as space travel. Again McFarlane is helpful when he says:

"Once it is established that copyright protection, either express or implicit, attaches to computer programs, it must be thereafter decided how far such protection is to extend. If it is accepted without more that they are protected as literary works under the existing legislation, then the acts restricted by copyright in a literary work would apply. Thus publication and reproduction would certainly be protected, together with making any adaptation of the work, and doing in relation to an adaptation of the work, any of the acts specified. But unless the various problems are confronted and dealt with in legislation, it is likely that a number of practical problems will speedily arise.

Thus it is clear that if a computer program is reproduced in material form without authority, this will constitute an infringement of copyright, but whether the same will apply to storage of a program, or to merely running it through the computer is less clear. The Whitford Committee took the view that any use of a program in a computer of necessity involved the reproduction of some or all of the program in a store, from which the instructions are extracted for interpretation and execution. Despite the reservations expressed, in this area the Committee felt that the question should be put beyond doubt in any new legislation, which contrasts rather strangely with its view that no alteration is required to cover the topic of software protection."

As it happens, legislation did, quite speedily, follow the recommendation of the Whitford Committee.

In order to understand the problem, we will need to examine some of the authorities cited by Matthews and Nicolle which led the learned authors to state that the matter was regrettably most unclear but to recommend that we should follow not the English Court of Appeal in the Waterlow judgment (which held that effective copyright could not attach to computer programs) but look to French law "and elsewhere" for support.

All the cases are from the Fleet Street Reports which are reports of industrial property cases from the Commonwealth and Europe.

The case of Sega Enterprises Ltd. v. Richards (1983) FSR 73 involved the alleged infringement of an adaptation of an original work which was a computer program for an electronic game. It was an interlocutory application. The arguments raised were that the adaptation had been considerable and that copyright in computer

programs per se was not known to English law. In his judgment (at page 75) Goulding J said this:-

> *"On the evidence before me in this case I am clearly of the opinion that copyright under the provisions relating to literary works in the Copyright Act 1956 subsists in the assembly code program of the game "Frogger". The machine code program derived from it by the operation of part of the system of the computer called the assembler is to be regarded, I think, as either a reproduction or an adaptation of the assembly code program, and accordingly for the purposes of deciding this motion I find that copyright does subsist in the program".*

The judgment picks up two words in the 1956 Act which defines the acts restricted by copyright as "reproducing the work in any material form" or "making an adaptation of the work". While the 1911 Act makes no mention of "adaptation", it does define "copyright" as the "sole right to produce or reproduce the work or any substantial part thereof in any material form whatsoever". That was an interlocutory judgment.

In the same year and only weeks later Megarry V.C. was able to comment on this case, again on an interlocutory application, in Thrustcode Ltd. v. W.W. Computing Ltd. (1983) FSR 502 and 505:

> *"From the report it appears that despite a contention that there was no such thing as copyright in a computer program, Goulding J. came to the clear conclusion that under the provisions of the Copyright Act 1956 which relate to literary works, copyright can exist in such a program. Though his conclusion was clear, the judge was careful to say that he was expressing only a provisional opinion. Before I saw the report I had reached the tentative conclusion that the point was at least arguable, though I felt some difficulty about the method of establishing that there had been a breach. On this the report provides little help; but at least it supports my view that on this motion I should proceed on the footing that literary copyright is capable of subsisting in a computer program."*

If we may respectfully say so, Megarry V.C. while prepared to follow the Sega judgment was not apparently filled with enthusiasm.

By 1989 matters on this point has resolved themselves. In Waterlow Publishers Ltd. v. Rose (27th October, 1989) Unreported Judgment of the Court of Appeal of England, the Court of Appeal said:

"....until the Copyright (Computer Software) Amendment Act 1985 came into force on 16th September 1985, the application of copyright law did not extend to computer programs and storage. The coming into force of that Act would not have effected the copyright position as at the date when the present action was instituted in October 1984: (see section 4(4)(A) of the Act.) At that date copyright existed only in the relevant compilation as written down in conventional form".

The Court of Appeal went on to say:

As Mr. Pirie (Counsel for the respondents) conceded the claim of infringement made in paragraph 7 of the Statement of Claim is unsustainable in so far as it relates to the defendant's database, since the Copyright (Computer Software) Amendment Act 1985 was not yet law when the action was begun."

English law appears to have turned against the interpretation suggested by Mr. Oliver, but the authors of The Jersey Law of Property suggest we look to three cases, in France, Italy and Australia for guidance. We have also looked to Canada.

The French judgment Apple Computer Inc. v. Segimex S.A.R.L. and others (1985) FSR 608 we find unhelpful. The Court appears to be interpreting the "Copyright Act 1957". We assume that this is the Copyright Act 1956. The judgment in a summarised form reads:

"Copyright. Computer programs. Protection. Computer programs, whether software or firmware, are intellectual works and are therefore copyrightable. The same applies to application programs which are not normally accessible to the senses but can be made so through a process of retracing".

Although the Court was interpreting sections 2575 et seq of the Civil Code and Act 633 of 22nd April, 1941, the judgment of the Italian Supreme Court is still helpful. Società Italiana Degli Autori Ed Edition (S.I.A.E.) v. Domenico Pompa (1989) 1 FSR 559, the Court held:

"Copyright Protection. Computer Software. There is no doubt that Computer Software is a work of the intelligence, since it is the product of a special effort of a precisely trained intellect which is directed in particular towards information science. Once it is on disc, it is released from the power of

its creator, and is a completed work ready to be used by members of the public. The requirement of creativity is satisfied by the newness and originality of the work and works of computer science must be protectable under the law relating to authors. Thus, computer software is protectable by the law of copyright."

The Court also found that *"software was clearly intelligible to whoever possesses the necessary knowledge, in the same way that a musician understands a musical score."*

The Australian High Court Judgment, Computer Edge Proprietary Ltd. v. Apple Computer Inc. (1985/1986) 161 CLR 171 is less clear.

The facts of the case are set out in the Headnote:

"An American corporation manufactured "Apple" computers and marketed them in Australia. Fitted into the computer was an object program, which consisted of a sequence of electrical impulses stored in a silicon chip containing thousands of connected electrical circuits. When electrical power was applied to the computer, the electrical impulses caused it to take the action that the program was designed to achieve. The pattern of the circuits was not discernible to the naked eye. The object program was derived from a source program, which consisted of a set of written instructions for the computer expressed in a code. The source program could not be used directly in the computer but was converted into an object program by another computer. An Australian company imported "Wombat" computers from Taiwan which contained object programs that had been copied from the Apple object program. The making of the Wombat object programs did not necessarily involve converting the object code back to source code, i.e. it did not necessarily involve the use of any writing in source code."

The 1911 Act talks of producing or reproducing the work or any substantial part thereof "in any material form whatsoever."

The explanation of what comprises a computer program is lucidly set out in the beginning of the judgment. We found it clear and understandable. We respectfully set it out here as a form of illustrative guidance:

"Computer science makes much use of jargon and metaphor and to enable the matters in issue to be understood it seems desirable to attempt a brief explanation of the meaning of some of the expressions used in that science and to describe the manner in which a computer program is developed. A computer program is a set of instructions designed to cause a computer to perform a particular function or to produce a particular result. A program is usually developed in a number of stages. Firs,t the sequence of operations which the computer will be required to perform is commonly written out in ordinary language, with the help, if necessary, of mathematical formulae and of a flow chart and diagram representing the procedure. In the present case if any writing in ordinary language (other than the comments and labels mentioned below) was produced in the production of Applesoft and Autostart, no question now arises concerning it. Next there is prepared what is called a source program. The instructions are now expressed in a computer language - either in a source code (which is not far removed from ordinary language, and is hence called a high level language) or in an assembly code (a low level language, which is further removed from ordinary language than a source code) or successively in both. Sometimes the expression source code seems to be used to include both high level and low level language. In the present case, the source programs were written in an assembly code, comprising four elements, viz. - (a) labels identifying particular parts of the program; (b) mnemonics each consisting of three letters of the alphabet and corresponding to a particular operation expressed in 6502 Assembly Code (the code used); (c) mnemonics identifying the register in the micro-processor and/or the number of instructions in the program to which the operation referred to in (b) related; and (d) comments intended to explain the function of the particular part of the program for the benefit of a human reader of the program. The writing has been destroyed, although it is possible to reconstruct the mnemonics, but not the labels and comments, which were comprised in it.

The source code or assembly code cannot be used directly in the computer, and must be converted into an object code, which is "machine readable", i.e. which can be directly used in the computer. The conversion is effected by a computer, itself properly programmed. The program in object code, the object program, in the first instance consists of a sequence of electrical impulses which are often first stored on a magnetic disc or tape, and which may be stored permanently in a ROM ("read only memory"), a silicon chip which contains thousands of connected electrical circuits. The object code is embodied in the ROM in such a way that when the ROM is installed in the computer and electrical power is applied, there is generated the sequence of electrical impulses which cause the computer

to take the action which the program is designed to achieve. The pattern of the circuits in the ROM may possibly be discerned with the aid of an electron microscope but it cannot be seen by the naked eye. Obviously, the electrical impulses themselves cannot be perceived. However the sequence of electrical impulses may be described either in binary notation (using the symbols 0 and 1) or in hexadecimal notation (using the numbers 0-9 and the letters A-F) and it is possible to display the description on the visual display unit of the computer, and to print it out on paper. And, as has been said, it is also possible to reconstruct the mnemonics in the source code. It will have been seen from this account that a program exists successively in source code and in object code, but the object code need not be written out in binary or hexadecimal notation in the process of producing and storing the program".

The words "material form" occur in the Australian Copyright Act 1968 as follows:

"A reference in this Act to the time when, or the period during which, a literary dramatic or musical work was made shall be read as a reference to the time when, or the period during which, as the case may be, the work was first reduced to writing or to some other material form".

There is a wide definition of "writing" in the Act, wide enough it would appear to cover letters on stone and the printing of Braille but the Court was quite unable to deal with the ROM - or silicone chip - in this way. At page 184 of the judgment the Court said:

"It seems to me to be a complete distortion of meaning to describe electrical impulses in a silicone chip, which cannot be perceived by the senses, and are not intended to convey any message to a human being, and which do not represent words, letters, figures or symbols, as a literary work; still less can a pattern of circuits be so described."

The Court went on to say at 187:

"I have not found anything in these authorities that has persuaded me that a sequel of electrical impulses in a silicon chip, not capable itself of communicating anything directly to a human recipient, and designed only to operate a computer, is itself a literary work, or is the translation of a literary work, within the Copyright Act."

Again, we are in some difficulty. Mr. Oliver is an undoubted computer expert; the Court has very little knowledge of the science. Mr. Oliver, who conducted his case with great clarity, told us there was in his system no silicone chip creating electrical impulses; what

he had created was a code. It was for this reason that his "object code" was not similar to the one in the Australian case. A great deal of original thought and effort had gone into producing it. He asked whether the 1911 Act would cover typing a book onto a computer and then copying it. The normally accepted method (IBM can alter the objects code) of altering the objects code is to alter the source code and use that to alter the objects code.

Because we find the matter difficult, we feel that the dissenting judgments (as we are in no way bound by the decision of the Australian Supreme Court) are worth considering.

At page 193, the Court said this:

> *"We have no hesitation in coming to the conclusion that each of the source programs was an original literary work. Whether or not a literary work must be in writing, these programs were written. Although the substance of the program in each case was expressed in 6502 Assembly Code, this is a language which was readily intelligible to anyone versed in computer science. Each program was the product of skill, time and effort. It was a particular kind of vehicle for the communication of useful information to persons who may desire it. The fact that its creation was a step towards the goal of facilitating the operation of a computer does not warrant its dismissal by the appellants as no more than a mere adjunct to the operation of a mechanical device, by analogy with the sleeve which was the subject of the decision in Hollinrake v. Truswell. On any view, in the form in which it was created and before it was transformed into another medium, each source program had an existence which was entirely independent of the machine. It was capable of conveying meaning as to the arrangement and ordering of instructions for the storage and reproduction of knowledge. In that form it was entitled to copyright protection."*

And at page 195, the Court said this:

> *"But it is argued for the appellants that that is not so in the present case because a literary work must be in writing. Ordinarily and traditionally it is no doubt that a literary work would take a written form. But the Act does not require it to be so. Indeed, s.22(1) of the Act identifies the time when a work is made as the time when "the work was first reduced to writing or to some other material form" (our emphasis): see also s.21 of the Act. There seems to be no reason to doubt that a literary work is made and entitled to copyright protection from the time it is first recorded on tape, if that be the first material form that the work takes:*

In our opinion, an object code, although brought into existence by mechanical means, takes on the same literary character as is possessed by the source code from which it is derived. This conclusion seems necessarily to follow, if the protection secured by the Act to the source programs as original literary works is to be effective. If there is no copyright in the object programs which are a natural and necessary derivative of the source programs then there is no point in protecting the source programs."

We always come back to the question of the meaning of writing (a word which is not used materially in the 1911 Act.) We have seen the concept of copyright expressed twice in England in identical form. Both University of London Press -v- Tutorial Press, Ltd. (1916) 2 Ch. 601, at 608 and Ladbroke (Football) Ltd. v. William Hill (Football) Ltd. (1964) 1 WLR 273 AT 287 said in almost identical terms:

"Copyright Acts are not concerned with the originality of ideas, but with the expression of thought, and in the case of literary works with the expression of thought in print or writing. The originality which is required relates to the expression of the thought."

But what is meant by "in any material form whatsoever". It does seem to us that a "material form" is not some esoteric form of art. It means a form that can be perceived by the senses. Perhaps that explains why a Braille book has been considered to be a literary work.

In International Business Machines Corp et al v. Ordinateurs Spirales Inc. (a Canadian case) (1984) 12 DLR 351 (again, an interlocutory application) the Court took the opposite view to the Australian Court. But at page 361 the Court said:

"Does the fact that it (the program) cannot be read by the human eye in its reproduced state matter? I think not."

In a South African case, Northern Office Micro Computers (Pty) Ltd. et al v. Rosenstein (1982) FSR 124 at 134 the Court said:

"As for the floppy discs, once the instructions to the computer have been recorded upon them. I think one can say rightly that the instructions have been reduced to material form".

Advocate Robinson argued strongly that yet again, in the Canadia case, "writing" was defined in the Statute as *"any form of notatic whether by hand or by printing, typewriting or any similar process."*

Mr. Robinson says that a decision on this limited aspect coul have very wide repercussions if a precedent is set and that in itsel. should be enough to warn this Court away from extending an old law int a new field. It may be a matter for the States of Jersey to decide anc not the Royal Court. It does seem to us at this stage dangerous tc extend the somewhat difficult decision in *In Re Vibert (1987-88) JLR 9* into the field of copyright. We decline to do so.

The English decisions were only decided upon amendments to the 1956 Law which repealed the 1911 Law. It does not seem to us inappropriate to recall that in The Jersey Maincrop Potato Marketing Board v. Mr. Derek J. de Gruchy *op. cit.* the Court at page 11824 cited with approval this passage from Maxwell on Interpretation of Statutes:

> *"Granted that a document which is presented to it as a statute is an authentic expression of the legislative will, the function of a Court is to interpret that document 'according to the intent of them that made it'. From that function the Court may not resile: however ambiguous or difficult of application the words of an Act of Parliament may be, the Court is bound to endeavour to place some meaning upon them. In so doing it gives effect, as the judges have repeatedly declared, to the intention of Parliament, but it may only elicit that intention from the actual words of the statute ....If language is clear and explicit, the Court must give effect to it, 'for in that case the words of the statute speak the intention of the legislature'. And in so doing it must bear in mind that its function is 'jus dicere' not 'jus dare'; the words of a statute must not be overruled by the judges, but reform of the law must be left in the hands of Parliament".*

We have listened most carefully to the formidable case prepared by Advocates Robinson and Wheeler, but we have found nothing to persuade us that the computer program written by Mr. Oliver and reproduced into a code stored in a computer is not a literary work reproduced in a material form and we find, accordingly, that STAMPS is entitled to copyright protection. This judgment is in no way intended to take any view whatsoever on whether or not the Bank or Mr. Hanby have breached that copyright.

2. **LIMITATION**

In the original Order of Justice, the plaintiff particularised the breach of copyright in this way.

> *"In or about January 1989 the First Defendant and/or the Second Defendant altered or caused to be altered the STAMPS source and the STAMPS system programs."*

The Order of Justice is dated 29th September 1992.

A considerable time later an amendment was sought. The particulars now read:

> *"Also during late 1988 and early 1989 the defendant gave copies of the STAMPS source to various parties, namely Victor Hanby and/or Victor Hanby Associates Limited and also to Simon Milner."*

The Order of Justice was served on the Bank on 1st October 1992 with appearance ordered in Court on 9th October, 1992.

The plaintiff makes two points in his answer against what is, on the face of it a clear breach of section 10 of the 1911 Act:

> ***"An action in respect of infringement of copyright shall not be commenced after the expiration of three years next after the infringement."***

He says:

(1) That the action is not time barred as the plaintiff was not aware of the infringements carried out by the Defendant

(2) The Defendant is estopped by virtue that it told the Plaintiff that it would buy the STAMPS source.

Mr. Oliver told us that of all the discs that he obtained many were blank (they had apparently been wiped clean) and the others gave no indication of what the alterations to his program were. There was a "history log" but that, he claimed, had been destroyed (he implied deliberately) by the Bank. That implication was most strenuously denied by the Bank. We looked at affidavits and at candid replies voluntarily given by various employees of the bank to questions posed by a private investigator employed by the plaintiff. We have no doubt that, on the documentation that we have examined there is nothing of a "latent

physical defect" which the Court spoke of in Maynard v. Public Service Committee (17th March, 1995) Jersey Unreported.

> ***"If there is a latent physical defect of which the claimant is ignorant without negligence on his part, the maxim will apply and prescription will be suspended until his ignorance ceases, or at any rate ought to cease."***

It does seem to us clear that the plaintiff had sufficient knowledge of the breach of copyright when he saw the affidavit of his former partner Mr. Hanby. It is dated 5th September, 1989. It is very clear. Everything that the plaintiff needed to know as to the breach is there, albeit in the version understood by Mr. Hanby.

In Mr. Hanby's affidavit of 5th September 1989 there is this statement:

> *" 12. Following the break up of the partnership between Mr. Oliver and myself it was necessary, in order to meet the requirements of ABN, to effect some alterations and enhancements to the Stamps System as provided to ABN. Accordingly, during the first part of 1989 the following alterations and enhancements were made:-*
>
> *a) Detailed changes to programs;*
>
> *b) amendments to certain parameters;*
>
> *c) changes and modifications to certain contract notes and computer printed;*
>
> *d) the development, building and implementation of an EXTEL price-feed mechanism.*
>
> *As a consequence, the Stamps System now contains an integral price-feed system which makes it significantly different from the original System produced by Mr. Oliver."*

There is also in paragraph 18-21 of that affidavit an explanation but an absolute statement the STAMPS product had been continuously developed over a period. To take just one example, at paragraph 22 Mr. Hanby says:

> *"Over the period November 1988 to the present, as indicated, Victor Hanby Associate Limited's staff, without Mr. Oliver's help or involvement in any way, modified STAMPS and added considerably to it."*

We believe that Mr. Oliver's knowledge was clear. Mr. Oliver said as much to us. He was, he said aware, but not clear exactly as to what was going on.

In November 1989 he believed that he had a cause of action but his lawyer at the time advised that it would not be in his best interests to commence the action. He was in some financial difficulty. He had not yet established to his satisfaction ownership of the STAMPS system. That is not, in our view, sufficient reason to delay action. Nor is the allegation that the bank encouraged him not to sue.

In Further and Better Particulars filed by the plaintiff on 21st August, 1995 he says:

(1) That he only became aware of the infringements in November 1989.

(2) The *"Plaintiff avers that the issue of bringing an action against the defendant did not arise at the meeting with the defendant in January, 1992 and that there was no express estoppel regarding presciption."*

He goes on to say that there was an implied estoppel based on meetings held in 1992 with bank officials. This case can be distinguished, in our view, from the decision in Kaliszewska v. John Claque and Partners (1984) 5 Com LR 62 where, on the facts, the plaintiff was materially prejudiced by positive advice that her bungalow was not defective, when in fact it was. In the present case an alleged promise (which is denied) to buy the STAMPS system has nothing to do with the plaintiff's awareness. On the facts he has known since June or September 1989. The copyright was, on the face of it, being infringed (we say "on the face of it" because we do not know enough about the licence). The doctrine of equitable estoppel is expressed in Snell's Equity (1990) like this at page 571:

> *"(a) The rule. Where by his words or conduct one party to a transaction freely makes to the other an unambiguous promise or assurance which is intended to affect the legal relations between them (whether contractual or otherwise), and, before it is withdrawn, the other party acts upon it, altering his position to his detriment. The party making the promise or assurance will not be permitted to act inconsistently with it. It is essential that the representor knows that the other party will act on his statement. Yet the conduct of the other party need not derive its origin only from the encouragement or representation of the first: the question is whether it was influenced by such encouragement or representation."*

If the gift of the equity is *"altering his position"*, we cannot see that he altered his position, because he was not aware of the limitation period and he was legally advised to hold his position hard.

The position in the United Kingdom appears to be as set out in Limitation of Actions (1992) by Ruth Redmond Cooper who says at page 22:

> *"The running of time will be postponed where the defendant or his agent has deliberately concealed any fact relevant to the plaintiff's cause of action. The concept of "deliberate concealment" is further defined in section 32(2) which provide that "deliberate commission of a breach of duty in circumstances in which it is unlikely to be discovered for some time amounts to deliberate concealment of the facts involved in that breach of duty". Under the precursor to section 32(1)(b), section 26(b) of the Limitation Act 1939, the running of time would be postponed where "the right of action is concealed by the fraud" of the defendant. This provision was extremely widely interpreted, and it would seem that the wording inserted into the 1980 legislation was intended to reflect this generous interpretation. In order to rely on this provision it is now necessary for the plaintiff to show only that the cause of action has been "deliberately" concealed from him by the defendant or his agent. It would seem that those cases decided under the former provision, "fraudulent concealment", will continue to apply in respect of "deliberate concealment".*

and again at page 24:

> *"As stated above, section 32 will apply only to postpone the commencement of the running of time: where time has already started to run, a subsequent act of concealment will not come within the provision. However, it may in some cases be possible for the plaintiff to rely on the doctrine of estoppel in order to avoid the harsh consequences of the operation of the limitation period. In Kaliszewska v. John Clague & Partners the defendant architect has been engaged to design a building for the plaintiff. The building was completed in 1970; when cracks began to appear in 1974, the defendant returned and assured the plaintiff that these were trivial, as a result of which they were filled in and no further investigation was undertaken. However, in 1978, following further cracking and subsidence, the plaintiff took independent advice which revealed that the foundations were inadequate. Proceedings were commenced in 1982; the defendant*

argued that the action was time-barred on the ground that the cause of action had accrued in 1974 at the latest. The plaintiff did not seek to rely on section 32, presumably because the principle in Tito v. Waddell was tacitly accepted, but asserted instead that the defendant was estopped from relying on the limitation period by virtue of his conduct in 1974. The conditions required for the operation of estoppel were satisfied since the plaintiff, following the representation of the defendant, had acted to his detriment by relying on the representation and failing to bring an action within the remainder of the limitation period. It was held that, whilst the cause of action had prima facie accrued in 1970, when the building was completed, the effect of the estoppel would be to grant a further six-year limitation period running from the date when the truth was discovered in 1978."

We have not heard evidence but Mr. Oliver states that the whole matter of proof is, and always will be, difficult. Nevertheless on the documentary evidence before us (which includes the pleadings) we have no hesitation in saying that the plaintiff is time-barred by the three year limitation period in Section 10 of the 1911 Law.

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