

# INTERNATIONAL TRADE AND THE RULE OF LAW: THE CASE OF EUROPEAN PROTECTION OF COMPUTER PROGRAMMES AND DATABASES

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*Uluslararası Ticaret ve Hukuk Kuralları: Bilgisayar Programlarının ve  
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## **Özet**

Tek pazar ve politik bütünlüğü amaçlayan bir Avrupa Birliği'nin kurulması çerçevesinde geleneksel ticari engeller olan tarifeler ve sermayenin serbestçe dolaşımına ilişkin önlemlerin ortadan kaldırılması uygulamasına gidilmiş, bunun üzerine serbest ticareti engellemek isteyenlerin başka araçlara yöneldikleri gözlenmiştir. Bu yeni yollardan en önde geleni fikri haklar yoluyla getirilen sınırlandırmalardır. Avrupa Birliği içinde yaşanan hızlı teknolojik gelişmeler, yeni teknoloji ürünü olan eserlerin ne şekilde korunması gerektiği konusunun önem kazanmasına yol açmıştır. Duyulan ihtiyaç üzerine önce bazı üye devletler ve nihayetinde Avrupa Birliği bilgisayar programları ve veri tabanlarının Avrupa çapında korunması konusunda düzenlemeler yapma yoluna gitmiştir. Yapılan değerlendirmeler üzerine, söz konusu korumanın fikri mülkiyet hakları çerçevesinde telif hakları yolu ile sağlanması konusunda fikir birliğine ulaşılmıştır. Bilgisayar programlarının ve veri tabanlarının korunması için eser sahipliğinden başlayarak koruma sürelerine varan bir yelpaze içerisinde, telif hakları bakımından temel konuların ele alındığı görülmektedir. Söz konusu prensiplerin üye devletlerin, milli mevzuatlarına aktarması ile, ticaretin engellenmesine engel teşkil eden bir konu daha çözüme kavuşmuştur.

## **Abstract**

In Europe there has been a deliberate movement internationalise trade by the creation of the European Community with its objective of a single market and ever increasing political union. In order to achieve this goal, the political barriers to freedom of trade represented by tariffs and restrictions on the flow of capital have been reduced. However, new barriers have arrived to increase the profits and to restrict competition and full free flow of goods. The leading of them were thought to be intellectual property rights which are deemed to be the essential ingredient for the goods and services to be traded. The computer revolution, which has been encountered in Europe, brought the pressing need to protect computer programmes and databases in European level.

Having determined that computer programmes and databases should be protected by means of intellectual property rights, namely the copyright law, the question arose as to what form of right should be used. The issued Directives on the protection of computer programmes and the databases are pointing on a wide range of subjects to be placed in the national legislation of the member states.

## International Trade and the Rule of Law: the Case of European Protection of Computer Programmes and Databases

The world has changed radically over the last hundred years, and is set to change even faster in the next millenium. This century has been a century of internationalisation, and the pressures for further internationalisation, both social and economic, are so great that it seems improbable that the theme of the next hundred years will differ from that of the last hundred. The only difference is that it is likely to get faster. The basis of internationalisation has been communication. Starting with improved transport and the telegraph, film radio, television, the aeroplane and the internet have all made international communication both faster and more comprehensive, breaking down cultural barriers and underpinning fast social change. If speed and ease of communication has had a fundamental impact upon the world in which we live, it has also transformed its economy. With improved communication goes the possibility of international trade and finance, and the movement of people and capital that this requires. In Europe there has been a deliberate movement to internationalise trade by the creation of the European Community with its objective of a single market and ever increasing political union. At full international level there have been attempts to internationalise trade and finance, two principal examples of which contributed to the general economic boom which characterise the years immediately following World War II, the Bretton - Woods Agreement on Finance and the General Agreement on Tariffs and Trade now<sup>1</sup> largely replaced by the World Trade Organisation. However,

1 For accounts of the TRIPS agreement and the negotiation which led to it see *inter alia*, STEWARD, Terence P. (ed.) (1993), *The GATT Uruguay Round: A Negotiating History (1986-1992) vols I-III* (Boston: Kluwer, Devanter); BLAKENEY, Michael (1996) *Trade Related Aspects of Intellectual Property Rights: A Concise Guide to the TRIPS Agreement* (London: Sweet & Maxwell); GERVAIS, Daniel (1998), *The TRIPS Agreement - Drafting History and Analysis* (London: Sweet & Maxwell).

in relation to both full international and regional trading organisations an interesting phenomenon has been discovered. To quote the introduction to my book on European Intellectual Property law "as traditional political barriers to freedom of trade represented by tariffs and restrictions on the flow of capital have been reduced, it has thrown into sharp relief the way in which intellectual property rights, being essentially national in character, can be the instrument by which intellectual property right owners can control markets to increase their profits and restrict competition and the full free flow of goods. This has confronted mankind with an undoubted problem. On the one hand, there has been the need to protect intellectual property rights, .... these have been an essential ingredient adding to the increase of goods and services to be traded. On the other hand there is the need to prevent these rights being used in anti-competitive ways since these created barriers to the increase in trade which is sought." (PRIME, To be published shortly).

On the international scale this has, indeed, evidenced itself quite clearly with the insistence by the United States that those aspects of intellectual property rights that are trade related be included in the Uruguay round of negotiations of the General Agreement on Tariffs and Trade leading to the TRIPS agreement. Central to that agreement is not merely a simple insistence that all countries properly protect intellectual property rights, but also clear provisions to allow national governments to take steps to prevent intellectual property right owners from so using their rights as to be guilty of unfair competition and restrictive practices.<sup>2</sup> The conclusion that uncontrolled intellectual property rights exploited by rightholders without hindrance represents an unacceptable restriction on freedom of trade and a proper competitive environment is thus the basis of the whole TRIPS agreement.

This compete between essential principles of modern commercial life has also had to be met by the European Community confronted with national rights which clearly restricted the creation of the competitive free trade area on which the economic and political union on which the new Europe was to be based, European institutions were obliged to meet the challenge head on.

This has involved efforts by the European Court of Justice to evolve a jurisprudence to reconcile apparently conflicting provisions of the Treaty of Rome, efforts throughout the whole area of intellectual property rights to harmonise national rights and remove those disparities within them which impact upon commercial activity and distort trade. In parallel but more recently there have been efforts to create intellectual property rights which are

2 Section 8 of the Agreement (Art 40).

pan-European, such as the European trade mark, rather than the merely traditional national rights. The tensions necessarily thus evidenced between international trade and intellectual property rules which distorted are, therefore, entirely legitimate areas of study within the theme of a project dedicated to privatisation, international trade, and the rule of law, since intellectual property, perhaps more than any other area shows complex issues of conflicting international trade and competition requirements which may be seen as the rule of law striving to prevent the internationalisation of trade degenerating into a jungle of national preferences and trade distortions.

There also can be little doubt that at the heart of international economic activity in the coming millenium will be the computer. Sophisticated computer programs will enable ever more complex economic activity to be undertaken more speedily and more cheaply, whilst the use and provision of databases will be an essential economic pillar in the new information age. I therefore regard the invitation extended to me to talk to the topic of European initiatives to protect computer programs and databases as particularly well chosen.

## Background

Electronic computers have been in existence since the second world war (1939-45) and at first sight it may seem strange that the issue of using intellectual property rights, such as copyright to protect computer programs and databases should only have become an issue over the last twenty or so years. Why was this form of protection not needed earlier? The answer as always is that the law was forced to develop by the development of the technology. The immediate forerunners of the small modern computer were invented during the second world war as code breaking machines with the electronics which were then available. As a result the machines were large, and expensive both to build and operate. They were capable of filling whole rooms or, indeed, even buildings specifically built for them. After the war, larger companies and businesses saw the possibilities of the new technologies and began to use large computers to crunch numbers and figures thereby reducing the numbers of junior clerks needed for the purpose. Only the larger companies and organisations could afford to use such large and expensive equipment since only they could afford the technology and produce the volume of work to make its use worthwhile. The programs which did the work were contained in the machine, and were essentially mechanical requiring a great deal of effort to change. The computers of this era were marketed as a single large product to large-scale commercial, educational and government users with the program inbuilt into it. This continued even after the invention of the independent computer program. Still the hardware and the program were sold as a single product to a relatively small

number of very large bodies that could afford to use them. As a result the relations between the suppliers and users could be regulated reasonably effectively by the simple use of extensive contracts between suppliers and purchasers governing the use of the technology purchased. There was no need to rely on intellectual property rights. As I have argued elsewhere:

"Program developers could establish direct relations with business users and would regulate that relationship as programs were supplied, by appropriate contractual cover. Intellectual property was not felt to be the chief means by which software should be protected". (PRIME, 1992: 225)

In the 70's a second computer revolution arrived the consequences of which only came to be resolved slowly. This was the revolution of the invention of the integrated circuit (chip) which enabled small machines to be capable of inexpensive mass production, whilst at the same time allowing them to be reduced to a size which could be fitted as simply as a television into the average home. Computers had become a tool for everyone and a simple consumers accessory. Indeed the early computers were primarily sold as a means of playing electronic games. However, manufacturers were quickly able to improve the technology so that home computers became much more powerful, and thus capable of performing complex works, and also of accessing databases held on other computers. As a result there suddenly came to be a pressing need to protect both computer programs, which were now being marketed separately for use in the home computers, and databases, which the home computers could access and copy, by intellectual property rights given the fragmentation permitted by the new technology.

Having determined that computer programs and software should be protected by means of intellectual property rights the question arose as to what form of right should be used. Three possibilities have been considered, namely (1) patents, (2) the creation of a sui generis right for the purpose, and (3) copyright. In the early years of computers, insofar as the issue was important, it looked as though it might well be patent protection which would be chosen for this purpose by the western world which was the leader in the particular technology. In the event it was soon obvious that if adopted as the Wests solution to the problem the solution would be less than practical.



This produced some expensive and inconclusive litigation<sup>3</sup>. In any event it was soon obvious that, if adopted as the Wests solution to the problem, the solution would be less than practical. Patents require the considerable expense of both time and effort to seek registration. Registration is not easily obtained because of the high standards required for patentability, and the process is slow and cumbersome. One of the major shortcomings from the point of view of the individual was the loss of the element of surprise. The consequences of the lack of practicability was soon evident for all to see;

'In the United States in the mid-1960s the courts had come down in favours of patent protection for computer software. And yet out of 10,000 patent applications in 1965, only 450 were in respect of computer programs. The reasons for the reluctance of industry to claim patent protection may be as a result of the increased risk of infringement due to mandatory disclosure (CORR/ARNOLD, 1992: para 8) consequent upon the patent application. Indeed such is the practical inconvenience of patent protection for this purpose that it is probable that it was only because computer software was marketed as simply a component of the computer as such that led to patent being considered as a possible appropriate form of protection.

Certainly the marketing of computer programs as independent items in their own right, proved to be a decisive factor in the search for an appropriate form of intellectual property right. First, it made the resolution of the issue a matter of far greater urgency than it had been up to that time, and second, it meant that for the first time the computer program was considered in isolation from the machinery with which it had to be connected to operate. In 1970, the United Nations requested the WIPO to advise and report on acceptable forms of intellectual property protection for computer software. Having deliberated for six years WIPO proposed its Model Provision on the Protection of Computer Program<sup>4</sup>, advising a sui generis form of protection. In fact the WIPO report put together the protection of computer programs with the protection of the layout of the integrated circuit topography (CHIPS) which enabled the program to

3 In the UK, for example, *Slee and Harris's Application* (1966) RPC 195, *Burroughs Corporation (Perkins) Application* [1974] 147; in the US. *In re Mellroy* (1971) 422 F.2d 1397, *Gottschalk v Benson* (1972) 4 D9 US 63.

4 (1977) 16 Industrial Property 256.

function seeming the two matters as so related that a simple form of sui generis protection should cover both. In respect of CHIPS this has been accepted, as the appropriate form of protection, initially in the US<sup>5</sup> and subsequently on a wide basis<sup>6</sup>. In respect of computer programs the solution favoured and adopted has been that of the use of copyright again initially in the US<sup>7</sup> and subsequently on a wider basis. Five reasons can be advanced to explain the choice of copyright for the purpose:

(i) When a client produced a representation of a program to court it looked like a literary work ( a trap by appearance);

(ii) If copyright were adopted as the means of protection for computer software it would be not necessary to draft and pass new legislation;

(iii) Of greatest importance the adoption of copyright would produce an international framework for problem under the Berne and Universal Copyright Conventions;

(iv) Manufacturers and their advisers were familiar with the workings of copyright law, with which they at least had some experience of working;

(v) The adoption of copyright protection meant that a form of protection was favoured which did not require the expense or cause the delays endemic in a form which required registration such as patents.

Whatever the advantages of the use of copyright for the purpose there is a great objection to the selection of the form in one particular, but central respect. It is obvious that computer software simply does not have the fundamental characteristics of traditional copyright works. The characteristics of literary, dramatic, musical and artistic works are that they are intended to provide information and instruction, or pleasure to humans<sup>8</sup>, where computer programs are written in object form which carries no meaning to the human eyes. Equally, the primary reason for the creation of computer softwares is to control a machine and to instruct and inform its operation, which is hardly a characteristic of traditional copyright materials.

Further if a computer program is a literary copyright the amount of

5 Semi Conductor Chip Protection Act 1984 17 USC 901.

6 In Europe Directive on Semi-Conductor Topographies (December 16, 1986) Directive 87/54; [1987] OJ L24/36.

7 Computer Software Copyright Act 1980. This was the result of the National Commission on New Technological Uses of Copyrighted Works, known colloquially as CONTU, which held hearings and deliberated for several years. For a history of US developments see Anthony Lawrence Clapes 'Software, Copyright and Competition, the 'Look and feel' of the law Quorum Books 1989.

8 *Holnrake v Truswell* [1894] 3 Ch 420; *Exxon Corp v Exxon Insurance Co* [1981] 3 All ER 241; *Apple Computer v Computer Edge Pty Ltd* [1986] FSR 437 (Aus).

protection may well be far too great and it does not take into account its temporary marketable life span. A computer programmer aged 21 could write a program and if he/she lived to be 71 then traditional computations of human created work involving effort and imagination the program would have 120 years copyright protection (BAINBRIDGE, 1994: 17). By this time the chances are that computers would no longer resemble current computers, nor indeed the programs which might operate them. Equally, there are apparent problems which on traditional copyright models will arise during the duration of ownership when activities vital to the upkeep or operation of the program may constitute infringement of the protected copyright. These acts may include loading the program into RAM, partial print out structure, recompilation, translation, or adaptation (PRIME, 1992: Chapter 15). All these considerations made the selection of copyright a far from obvious choice for the purpose.

## THE EUROPEAN RESPONSE

Two areas of copyright law have been particularly affected by European Community intervention due to the ever growing technical and economic dimensions of the computer industry. Copyright has been chosen as the means of protection for both computer programs and computer databases.<sup>9</sup> In both cases intervention has been by means of Directives<sup>10</sup>. These will be considered in turn.

## PROTECTION OF COMPUTER PROGRAMS

The Directive recognises that computer programs were not previously clearly protected in all Member States by existing legislation, and that such protection as existed in those countries which extended protection to computer programs had different attributes.<sup>11</sup> It further recognised that on the one hand

- 9 The implementation in the UK of the database directive is discussed by Simon Chalton 'The Effect of the EC Database Directive on UK Copyright Law in Relation to Databases: A Comparison of Features [1997] 19 EIPR 27.
- 10 Computer programs are protected by Council Directive 91/250 of 14 May 1991 on the legal protection of computer programs [1991] OJ L 122/42 and databases by Council Directive in the Legal Protection of Databases 96/9 [1996] OJ L 77/20.
- 11 Recitals para 1. The range of approaches of the national law of Member States was thus wide. The UK, Germany and France had specific statutory provisions to protect software. The Netherlands, Denmark and Ireland had no specific legislation, but took the view that it was protected under their existing law. In other Member States it was uncertain as to whether software was protected. Even in those countries according specific statutory protection there were wide variations. In Germany the duration of protection was, in principle, the life of the author plus 70 years, in the UK the life of the author plus 50 years and in Finland a straight twenty-five years. Germany also accorded moral rights to the author which France and the UK did not. On the other hand the



the development of computer programs requires the investment of considerable human, technical and financial resources, while on the other computer programs can be copied at the fraction of the cost needed to develop them independently. The economic consequence of this represents a clear disincentive to development in this particular technological area.

Clearly these consequences are undesirable and unfortunate. However, the major justification for Community intervention in this area is undoubtedly the impact on trade within its boundaries. The Directive recognises that some of the differences in the legal protection of computer programs offered by the laws of Member States have direct and negative effects on the function of the common market with respect to computer programs, and that such differences could well become greater as Member States introduce new legislation on the subject.

### Object of protection

Under the Directive member states are required to protect computer programs by copyright as literary works within the meaning of the Berne Convention for the Protection of Literary and Artistic Works. For the purpose of the Directive the term computer programs includes their preparatory design material.<sup>12</sup> However, it should be noted that, whilst preparatory design work is included, it is only that design work that leads to the development of a computer program which is covered provided that the nature of the preparatory work is such that a computer program can result from it at a later stage.<sup>13</sup> Thus, the preparatory design work must be linked to an ultimate practical result in the creation of a computer program.

The protection given by the Directive applies to the expression in any form of a computer program.<sup>14</sup> Thus, the term includes programs in any form, including those which are incorporated into hardware.<sup>15</sup> On the other hand, ideas and principles which underlie any element of a computer program, including those which underlie its interfaces, are not protected by copyright under the Directive.<sup>16</sup>

standard of originality required under German law for protection to arise is considerably higher than under UK law - Linda Macpherson, "The UK Directive on the Legal Protection of computer Software; its effect on UK Copyright Law" (1993)61 Scottish Law Gazette Pt 2 pp 44-50.

12 Article 1 (1)

13 Recitals para 7

14 Article 1(2)

15 Recitals para 7

16 Article 1(2)

The Directive has a requirement of originality, which must be present if copyright to arise pursuant to its provisions. A computer program is protected if it is original in the sense that it is the author's own intellectual creation.<sup>17</sup> No other criteria may be applied to determine its eligibility for protection,<sup>18</sup> thus no tests as to the qualitative or aesthetic merits of the program may be applied.<sup>19</sup>

### Authorship of computer programs

Under the Directive, the author of a computer program is the natural person, or group of natural persons, who has created the program, or, where the legislation of the Member States permits, the legal person designated as the rightholder by that legislation. Thus, the status of author is accorded to the creator(s) of the program, unless the legislation of the particular member state designates some other legal person as the holder of the right. However, where collective works are recognised by the legislation of the Member State, the person considered by the legislation of the Member State to have created the work shall be deemed to be its author.<sup>20</sup> Where the computer program is the result of the creation of a group of natural persons jointly, who are the authors under the provisions previously discussed, the exclusive rights are owned jointly.<sup>21</sup>

Most systems of law recognise that a copyright work can be put together by groups of people working for an employer, and make the resultant work the property of the employer. The Directive adopts this principle, and provides that where a computer program is created by an employee in the execution of his duties or following the instructions given by his employer, the employer exclusively is entitled to exercise all economic rights in the program thus created, unless there is a contractual provision to the contrary on which the employee can rely.<sup>22</sup>

17 Article 1(3)

18 Ibid

19 Recitals para 8

20 Article 2(1)

21 Article 2(2)

22 Article 2(3). It should be noted that the Article is limited to the ownership of economic rights and no provision is made regarding the moral rights of the employee as specified under the Berne Convention. It would follow that there will be no necessity to amend the present UK law, which provides that moral rights have no application in relation to computer programs and computer-generated work- Copyright Designs and Patents Act 1998 ss 29(2) and 81(2).

## Restricted acts

Copyright protection is given by the Directive by conferring certain rights in relation to the copyright material exclusively on the rightholder. These exclusive rights are called "restrictive acts", and these include the right to do or to authorise:

(i) the permanent or temporary reproduction of a computer program by any means and in any form, in part or in whole. Insofar as loading, displaying, running, transmission or storage of the computer program necessitates such reproduction, such acts are to be subject to authorization by the rightholder;

(ii) the translation, adaptation, arrangement and any other alteration of a computer program and the reproduction of the results thereof, without prejudice to the rights of the person who alters the program; and

(iii) any form of distribution to the public, including the rental, of the original computer program or of copies thereof. The first sale in the Community of a copy of a program by the rightholder, or with his consent, will exhaust the distribution right within the Community of that copy, with the exception of the right to control further rental of the program or copy thereof.<sup>23</sup>

The effect of (iii) is to create a rental right in respect of computer programs. The person with the right to the program can control the renting out of the program even after the program has been sold. For the purposes of the Directive, the term "rental" means the making available for use, for a limited period of time, and for profit making purposes, of a computer program or a copy thereof. The term does not include public lending, which, accordingly, remains outside the Directive's scope.<sup>24</sup>

## Exceptions to the restricted acts

The restricted acts which are the exclusive preserve of the copyright owner are thus extremely extensive. Left in their existing form and without modification, they are so extensive that they would prevent the purchaser of a particular computer program for using it for the purposes for which it was sold to him. This is recognised by the Directive, which seeks to create exceptions to the restricted acts of an extent sufficient to allow such legitimate use. The Directive expressly recognises the need for such provision, reciting that "the exclusive rights of the author to prevent the unauthorised reproduction of his

<sup>23</sup> Article 4

<sup>24</sup> Recitals 16

work have to be subject to a limited exception in the case of a computer program to allow the reproduction technically necessary for the use of that program by the lawful acquirer."<sup>25</sup>

To achieve these aims a number of exceptions to the restricted acts are created. First, in the absence of specific contractual provisions to the contrary, the activities referred to in (ii) and (iii) above do not require authorization by the rightholder where they are necessary for the use of the computer program by the lawful acquirer in accordance with its intended purpose, including for error correction. This is a wide provision, and covers, *inter alia*, acts of loading and running necessary for the use of a copy of the program which has been lawfully acquired,<sup>26</sup> and, as the provision expressly recognises, the correction of errors in the program itself. Second, the making of a back-up copy by a person having the right to use the computer program may not be prevented by contract insofar as it is necessary for use of the computer program in accordance with its intended purpose. Third, the person having the right to use a copy of the computer program is entitled, without the authorization of the rightholder, to observe, study or test the function of the program in order to determine the ideas and principles which underlie any element of the program if he does so while performing any of the acts of loading, displaying, running, transmitting or storing the program which he is entitled to do.<sup>27</sup>

### Decompilation

The Directive recognises that the function of a computer program is to communicate and work together with other components of a computer system and with its users and, for this purpose, a logical, and where appropriate, physical interconnection and interaction is required to permit all elements of software and hardware to work with other software and hardware and with its users in all the ways in which they are intended to function. The point is that in order to get the maximum out of his hardware and software a computer user may need to link up other elements of software and hardware to the system that he has bought. It is only by interoperability of various systems that computer users can optimise their equipment, possibly by devising their own software packages linking in to pre-bought packages. The parts of the program which provide for such interconnection and interaction between elements of software and hardware are referred to as interfaces. Interoperability is defined as the

25 Recitals para 17

26 Recitals para 18

27 Article 5

ability to exchange information, and mutually to use the information which has been exchanged.<sup>28</sup>

In the event the Directive seeks to achieve a compromise or middle way by allowing decompilation and analysis of interfaces for this purpose subject to very stringent conditions which allow the activity in the precise circumstances in which the public will be benefited, and furthermore, the resultant developments will themselves come into the public domain, thereby themselves adding to the possibility of further technological development.

This is effected by article 6 which provides that the authorization of the right holder is not required where reproduction of the code and translation of its form within the meaning of (i) and (ii) above are indispensable to obtain the information necessary to achieve the interoperability of an independently created computer program with other programs. However three conditions have to be met. First, the activities must be performed by the licensee or by another person having a right to use a copy of the program, or on their behalf by a person authorised to do so. Second, the information necessary to achieve interoperability must not previously have been readily available to those persons. Third, the activities must be confined to those parts of the original program necessary to achieve interoperability. If these three conditions are satisfied the person undertaking the activities, and anyone who has authorised him to do so, has a defence to a claim of infringement.

Observance of the three conditions enables the information to be obtained from the program under scrutiny. The Directive protects the interests of the right owner by restricting the manner in which the information obtained can be used. The information obtained may not (i) be used for goals other than to achieve the interoperability of the independently created computer program, (ii) be given to others except where necessary for the interoperability of the independently operated computer program, or (iii) be used for the development, production or marketing of a computer program substantially similar in its expression, or for any other act which infringes copyright.<sup>29</sup>

### **Special measures of protection**

Activities undertaken which are the exclusive rights of the rightholder, being one of his restricted acts, constitute an automatic infringement of his right unless carried out with his authority and permission. This of course allows him to exploit his right by licensing if he chooses. In principle, infringement is a

28 Recitals paras 11 and 12

29 Article 6(2)



trespass upon his property right, and arises automatically and regardless of whether the infringer is acting innocently or in full knowledge that his activities constitute an infringement. This may be referred to as primary infringement.

The Directive requires that its provisions for primary infringement should be supported by special measures of protection, which are more extensive than primary infringement itself. These will constitute secondary infringement, and require a mens rea on the part of the actor. To achieve this article 7 requires that Member States must provide, in accordance with their national legislation, appropriate remedies against a person committing any of the acts listed below:

1 any act of putting into circulation a copy of a computer program knowing, or having reason to believe, that it is an infringing copy;

2 the possession, for commercial purposes, of a copy of a computer program, knowing, or having reason to believe that it is an infringing copy;

3 any act of putting into circulation, or the possession for commercial purposes, of any means, the sole intended purpose of which is to facilitate the unauthorised removal or circumvention of any technical device, which may have been applied to protect a computer program.

### **Continued application of other legal provisions**

The provisions of the Directive are expressly stated to be without prejudice to any other legal provisions such as those concerning patent rights, trade marks, unfair competition, trade secrets, protection of semi-conductor products or the law of contract. Any contractual provisions contrary to article 6 negating the exceptions provided in article 5(2) and (3) are null and void.<sup>30</sup>

### **PROTECTION OF DATABASES**

The second area of major European innovation in the field of copyright has been the proposals of the Commission for the protection of electronic

30 Article 9. The Directive is also expressly stated to be without prejudice to the application of the competition rules applicable under articles 85 and 86 of the Treaty of Rome if a dominant supplier refuses to make information available which is necessary for interoperability within the terms of the Directive. Also, the provisions of the Directive are in addition to, and without prejudice to, specific requirements of community law already enacted respecting the publication of interfaces in the telecommunications sector or Council Decisions relating to standardisation in the field of information technology and telecommunication (recitals paras 28 and 29). Further, protection of computer programs under copyright laws complying with the Directive is without prejudice to the application, in appropriate cases, of other forms of protection where these exist under the laws of Member States (recitals par 26).

databases, now adopted as a Directive.<sup>31</sup> The issues were first considered by the Commission in a Green Paper in 1988. A proposal for a Council Directive was adopted by the Commission on 29 January 1992. Unfortunately, however, the Commissions Proposals proved to be extremely controversial, and met a great deal of opposition, particularly from the United Kingdom, which has the largest database industry within the Community. At the heart of the controversy were the different levels of originality required for copyright protection to attach, which exist within the Community. In the UK, and common law countries generally, the test of originality has traditionally been the "sweat of brow" test, which has required effort on the part of the author of the work, but not necessarily a great deal of difference in the result from work already in existence. By contrast other systems within the Community have placed much greater emphasis on originality of the result of the effort. It was perceived that the adoption of the higher standard of originality of the civil law system would lead to a reduction in protection for many factual and numerical databases.

### REASONS FOR THE DIRECTIVE

The underlying reasons for the Directive may be said to be the lack of uniform protection given to databases by the different legal systems of the Member States of the Community, and the impact that that has on the workings of the internal market and the establishment of an internationally competitive industry within the Community. As the amended proposal notes, databases are at present not clearly protected in all Member States by existing legislation, and protection, where it exists, has different attributes.

The differences in the legal protection offered by the legislation of the Member States have direct and negative effects on the establishment and functioning of the internal market in relation to databases, and in particular on the freedom of individuals and companies to provide on-line database goods and services on an equal legal basis throughout the Community. Further, such differences may well become pronounced as Member States introduce new legislation in the area which is now taking on an increasingly international dimension. In particular, since copyright protection of databases exists in varying forms in the Member States according to its legislation or case law, the national rights being territorial in nature, can have the effect of preventing the free movement of goods or services within the Community where differences in the scope, conditions, derogations or term of protection remain between the

31 As with the protection of computer programs it is probable that literary copyright is neither a natural or effective vehicle to protect technological development of the electronic database by type - see the arguments of Christina Garrigues [1997] EIPR 3.

individual national legislation of the Member States. It also has to grapple with the Community need to develop a strong database industry capable of competing internationally. Databases are a vital tool in the development of an information market within the Community, which will be of use to a large variety of other activities and industries. The exponential growth, both within the Community and world wide, of the amount of information generated and processed annually in all sectors of commerce and industry requires investment in all the Member States in advanced information management systems.

Further, there is a consumer interest. A correspondingly high rate of increase in publications of literary, artistic, musical and other works necessitates the creation of modern archiving, bibliographic, and accessing techniques to enable consumers to have at their disposal the most comprehensive collection of the Community's heritage.

### THE PROTECTION GIVEN

Member States are required to protect database by copyright as collections within the meaning of article 2(5) of the Berne Convention for the Protection of Literary and Artistic Works.<sup>32</sup> Indeed, this provision may be said to have largely dictated much of the protection which the Directive conferred, for all Member States are also signatories to the Convention. Article 2(5) provides that collections of literary or artistic works such as encyclopaedias and anthologies which, by reason of the selection and arrangement of their contents, constitute intellectual creations shall be protected as such, without prejudice to the copyright in each of the works forming part of such collections. In discussions on the proposed Protocol to Berne there has been a consistent approach that databases fall within Article 2(5), and merit its protection, and for participants to the Agreement on Trade Related Aspects of International Trade (TRIPS) such protection is mandatory under Article 10. The Community was thus effectively forced to adopt both the copyright route to protection of databases, and the shape prescribed by Article 2(5) with its distinction between the copyright in the collection or database itself and any pre-existing copyrights in materials selected for inclusion within it. For the purposes of the Directive a "database" means a collection of independent works, data or other materials arranged in systematic or methodical way and individually accessible by electronic or other means, such as its thesaurus, index or system for presenting information. The term does not apply to any computer program used in the making, or operation, of the database by electronic means.<sup>33</sup>

<sup>32</sup> Text of Paris Act 1971

<sup>33</sup> Arts. 1(2) and (3)

However to achieve copyright protection the database must satisfy the requirement of originality. The database is protected by copyright if it is original in the sense that it is a collection of works or materials, which, by reason of their selection or their arrangement, constitute the author's own intellectual creation. No other criteria may be applied to determine the eligibility of the database for protection.<sup>34</sup>

This standard of originality adopted is thus higher than the traditional sweat of brow standard of the common law at least as applied in the UK. It is, however, the standard adopted in the US where the Supreme Court in Feist Publications Inc v Rural Telephone Service Company Inc<sup>35</sup> reversed a line of lower court decision to move the requirement of originality demanded of a database for copyright protection away from the traditional sweat of brow standard to originality of selection and arrangement.

The implications of this for databases are considerable. To secure protection the database must have been subjected to a process of selection or arrangement by the author of the database so that it can be fairly described as his intellectual creation. It would follow that if the selection or arrangement were done purely mechanically, as by electronic rearrangement of names into alphabetical order, the requirement would not be satisfied and no copyright would arise.

## AUTHORSHIP

The significance of the concept of authorship in copyright has already been considered.<sup>60</sup> The identification of the author of the copyright work is of fundamental importance to the working of copyright law. The provisions with regard to authorship in the amended proposal are directly parallel to those set out in the Directive on the protection of computer software.<sup>36</sup>

### Incorporation of works or materials into a database

The general principle is that the incorporation into a database of any works or materials shall remain subject to the authorisation of the owner of any copyright, and to any other rights acquired or obligations incurred therein.<sup>37</sup>

34 Article 3

35 499 US-133 Led 2<sup>nd</sup> 385, 11 S. Ge-(1991)

36 Ante p.

37 Art. 13

## THE EXTENT OF THE PROTECTION

The copyright protection of the database is conferred on the author, who is given exclusive rights in the database, which are referred to as 'restricted acts' in the amended proposal.<sup>38</sup> These rights, corresponding to the familiar exclusive rights under traditional copyright law, are the exclusive rights to do or authorise the following:

(1) the temporary or permanent reproduction of the database by any means and in any form, in whole or in part;

(2) the translation, adaption, arrangement and any other alteration of the database;

(3) the reproduction, distribution, communication, display or performance of the results of any of the acts listed in (2);

(4) any form of distribution to the public, including the rental of the database, or of copies thereof. The first sale in the Community of a copy of the database by the rightholder, or with his consent, will exhaust the distribution right within the Community of that copy, with the exception of the right to control further rental of the database or a copy of it;

(5) any communication, display or performance of the database to the public.<sup>39</sup>

As with the software Directive, exceptions are created to the restrictive acts operating in certain circumstances to prevent activities, which would otherwise constitute an infringement, from giving rise to liability. In creating the exceptions the amended proposal recognises that there are two separate copyrights involved, namely the copyright in the database itself and copyright in the material and works included within the database. Therefore it creates two separate sets of exceptions, the first applicable to the copyright in the database, and the second applicable to the materials and works included therein.

### Exceptions to the copyright in the database itself

The Directive recognises that the author's exclusive rights should include the right to determine the way in which his work is exploited and by whom, and in particular to control the availability of his work to unauthorised persons. Nevertheless, it is also recognised that once the rightholder has chosen to make available a copy of the database to a user, whether by an on-line service or by

38 For the parallel situation under the Software Directive see ante.

39 Article 5. As with the Software Directive, there is a provision to create a rental right see p. ante



other means of distribution, that lawful user must be able to access and use the database for the purposes and in the way set out in the agreement with the rightholder, even though such access and use necessitate performance of otherwise restricted acts. Often the rights of the user will be defined by contract with the copyright owner, but where no contract exists the user will be unable to make effective use unless those basic rights are presumed to have arisen in his favour which are necessary for his access to and use of the database<sup>40</sup> Accordingly the Directive provides that the performance by the lawful user of a database or of a copy thereof of any of the acts listed in Article 5, which is necessary for the purposes of access to the contents of the databases and normal use of the contents by the lawful user shall not require the authorisation of the author of the database. Where the lawful user is authorised to use part only of the database this provision shall apply only to that part.<sup>41</sup>

In addition, Member States have the option of providing for limitations on the rights set out in Article 5 in the following cases:

(1) in the case of reproduction for private purposes of a non-electronic database;

(2) where there is use for the sole purpose of illustration for teaching or scientific research, as long as the source is indicated and to the extent justified by the non-commercial purpose to be achieved;

(3) where there is use for the purposes of public security or for the purposes of an administrative or judicial procedure;

(4) where other exceptions to copyright which are traditionally authorised under national law are involved, without prejudice to points (1), (2) and (3).<sup>42</sup>

However, in accordance with the Berne Convention for the protection of Literary and Artistic Works, this Article may not be interpreted in such a way as to allow its application to be used in a manner which unreasonably prejudices the rightholders legitimate interests or conflicts with normal exploitation of the database.<sup>43</sup>

## TERM OF COPYRIGHT PROTECTION

The Directive provides for a general period of copyright protection of databases as the same as that provided for literary works, ie, 70 years.

40 Recitals paras. 23 to 25

41 Article 6(1)

42 Article 6(2)

43 Article 6(3)

## SUI GENERIS RIGHT

The Commission took the view that copyright alone would not be sufficient to give all the protection which is necessary to achieve its objectives for database protection. It also felt the need to propose a sui generis right to work alongside copyright to provide the necessary overall protection - the extraction right. As a sui generis right it would exist alongside, but independently of, the copyright protection required by Article 2(5) of the Berne Convention.

Thus the protection of the data content of the database is achieved by the creation of a special sui generis right, by which the maker of a database can prevent the unauthorised extraction or re-utilisation of the contents of that database for commercial purposes. The right is therefore defined in terms of the activity which is being undertaken with regard to the database, namely the unauthorised extraction or re-utilisation of its contents for commercial purposes.<sup>44</sup>

### The right itself

Member States must provide for a right for the maker of a database which shows that there has been qualitatively and/or quantitatively a substantial investment in either the obtaining, verification or presentation of the contents to prevent extraction and/or re-utilisation of the whole or of a substantial part, evaluated qualitatively and or quantitatively, of the contents of that database.

For this purpose extraction means the permanent or temporary transfer of all or a substantial part of the contents of a database to another medium by any means or in a form. Re-utilisation means any form of making available to the public all or a substantial part of the contents of a database by the distribution of copies, by renting, by on-line or other forms of transmission. The first sale of a copy of a database within the Community by the rightholder or with his consent exhausts the right to control resale of that copy within the Community. However, public lending is not an act of extraction or re-utilisation. The sui generis right may be transferred assigned or granted under contractual licence. It applies irrespective of the eligibility of that database for protection by copyright or by other rights. Moreover, it shall apply irrespective of eligibility of the contents of that database for protection by copyright or by other rights. Protection of databases under the right without prejudice to rights existing in respect of their contents. The repeated and systematic extraction and/or

44 Recitals paras 38-41

re-utilisation of insubstantial parts of the contents of the database implying acts which conflict with a normal exploitation of that database or which unreasonably prejudice the legitimate interests of the maker of the database are not be permitted.<sup>45</sup>

While protection is given to the right holder by the sui generis right, rights are also conferred on users of databases since it is assumed that databases are created for use. The maker of a database which is made available to the public in whatever manner may not prevent a lawful user of the database from extracting and/or re-utilising insubstantial parts of its contents, evaluated qualitatively and/or quantitatively, for any purposes whatsoever. Where the lawful user is authorised to extract and/or re-utilise only part of the database, this applies only to that part. A lawful user of a database which is made available to the public in whatever manner may not perform acts which conflict with normal exploitation of the database or unreasonably prejudice the legitimate interests of the maker of the database. A lawful user of a database which is made available to the public in any manner may not cause prejudice to the holder of a copyright or related right in respect of the works or subject matter contained in the database.<sup>46</sup>

Further, Member States may create exceptions to the sui generis right by stipulating that lawful users of a database which is made available to the public in whatever manner may, without the authorisation of its maker, extract or re-utilise a substantial part of its contents:

(1) in the case of extraction for private purposes of the contents of a non-electronic database;

(2) in the case of extraction for the purposes of illustration for teaching or scientific research, as long as the source is indicated and to the extent justified by the non-commercial purpose to be achieved;

(3) in the case of extraction and/or re-utilisation for the purposes of public security or an administrative or judicial procedure.

### Term of protection

Unlike the copyright protection which runs for 70 years the sui generis right runs for 15 years from the 1st January of the year following the completion of the database. However, if at any time prior to the expiry of that date the database is made available to the public a new period of 15 years arises running

45 Article 7(3)

46 Article 8

from 1 January of the year following the date of the database was first made available to the public.

Nevertheless, databases are the subject of constant updating, which is necessary if the database is not to become outdated. The updating will either be done within the existing arrangement, or a new one will be created which will attract the copyright protection. The copyright protection will, therefore, look after itself on first principles, but the *sui generis* right would expire after 15 years despite updates since it is a *sui generis* right. Special provision is therefore made to cover the situation.

Any substantial change, evaluated qualitatively or quantitatively, to the contents of a database, including any substantial change resulting from the accumulation of successive additions, deletions or alterations, which would result in the database being considered to be a substantial new investment, evaluated qualitatively or quantitatively, shall qualify the database resulting from that investment for its own term of protection.<sup>47</sup> This is likely to be a very difficult test to apply in practice - especially to databases which are constantly updated, for instance the much used legal databases such as LEXIS.

### **Who may obtain the *sui generis* right?**

For the *sui generis* right to arise there must be a connection between the potential rightholder and the Community. It applies to a database whose makers or rightholders are nationals of a Member State or who have their habitual residence in the territory of the Community. It also applies to companies and firms formed in accordance with the law of a Member State and having their registered office, central administration or principal place of business within the Community. Nevertheless, where such a company or firm has only its registered office in the territory of the Community, its operations must be genuinely linked on an ongoing basis with the economy of a Member State.

The Directive recognises that countries outside the Community may wish to secure the protection of databases connected with them, and that it may be in the interests of the Community to extend such protection, either on the basis of reciprocity, or because there are economic interests of the Community to be served in the extension of the protection against unauthorised extraction. Accordingly the Council is empowered, acting on a proposal from the Commission, to extend the right to databases produced in third countries, provided that the term of any protection extended may not exceed that provided for under the terms of the amended proposal itself.<sup>48</sup>

47 Article 9

48 Article 11(3)

## COMMON PROVISIONS

### Remedies

The amended proposal does not set out the remedies which are to be applicable in respect either of the infringement of the copyright, or of the sui generis separate right. Instead it merely requires that Member States must provide appropriate remedies in respect of infringements.<sup>49</sup> Presumably it is intended that the remedies, which Member States shall provide, will be those generally available for infringement of intellectual property rights within its borders.

### Continued application of other legal provisions

The protection available under the amended proposal is intended to be additional to any other protection given by the laws of Member States. It therefore expressly provides that its provisions are without prejudice to copyright or any other right subsisting in the works or materials incorporated into the database, as well as to other legal provisions such as patent rights, trade marks, design rights, unfair competition, trade secrets, confidentiality, data protection and privacy, and the law of contract applicable to the database itself or its contents.

## References

- BLAKENEY, Michael (1996), *Trade Related Aspects of Intellectual Property Rights: A Concise Guide to the TRIPS Agreement* (London: Sweet & Maxwell).
- CORR, Henry/ARNOLD, Richard (1992), *Computer Software: Legal Protection in the United Kingdom* (London: Sweet & Maxwell).
- GERVAIS, Daniel (1998), *The TRIPS Agreement - Drafting History and Analysis* (London: Sweet & Maxwell).
- PRIME, Terence (To be published shortly), *European Intellectual Property Law* (Dartmouth Press).
- PRIME, Terence (1992), *The Law of Copyright* (Format Press).
- STEWART, Terence (ed.) (1993), *The GATT Uruguay Round: A Negotiating History (1986-1992) vol. III* (Boston: Kluwer, Deventer).