*Malaysian Journal of Library & Information Science, Vol.6, no.2, December 2001: 71-81*

# NATIONAL AND INTERNATIONAL DEVELOPMENTS ON COPYRIGHT AND RIGHTS IN DATABASES

**W. K. Khong**
Cyberlaw Centre, Faculty of Management
Multimedia University
63100 Cyberjaya, Malaysia
e-mail: wkkhong@mmu.edu.my

***ABSTRACT***

*Reports on recent changes to the Malaysian Copyright Act in relation to the protection of databases. Also, the development of the law in the European Union and the United States are examined. This article is an expanded version of a paper originally presented at the International Conference and Workshop on Multimedia Digital Library: Global Access & National Identity, 16–18 August 1999, Kuala Lumpur.*

**KEYWORDS:** Databases; Legal issues; Copyright; Intellectual property rights/

## INTRODUCTION

On 27 March 1991, the United States Supreme Court decided in *Feist Publication, Inc. v. Rural Telephone Service Co.*, 499 U.S. 340 (1991) that a white page telephone directory is not copyrightable because it lacks originality. This decision gave rise to widespread ramifications on the protection of databases in the United States and abroad.

Prior to this, it was thought that reference works, including telephone directories, are copyrightable under the sub-category of "tables or compilations". The basis was that substantial labour and investment have been expended in making such works. And, to compensate for the authors' "sweat of the brow" (Genesis 3:19) copyright protection was granted. The "sweat of the brow" principle was widely accepted in the Anglo-American copyright tradition—Malaysia included.

The United States Supreme Court in *Feist* adopted a more stringent criterion instead, that is, the selection or arrangement in the compilation must be original. By original, the United States Supreme Court meant that there is some intellectual creativity in the selection or arrangement of the compilation. It was found in *Feist*, that in a white page telephone directory, the selection is simply all the name and addresses of the subscribers to a telephone network, and the arrangement is the mundane alphabetical order. Hence, there is no originality in either the selection or the arrangement to give rise to copyrightability. The

"sweat of the brow" principle was rejected on the ground that there is no copyright in facts and information (17 U.S.C. 102(b)), and if copyright is conferred based on effort alone, facts and information would be monopolised.

When computer technology became available, computer databases were seen as the electronic equivalent of compilations, and, were similarly subjected to copyright (U.S. Congress, 1978). Though a simplistic view, this analogy serves as a useful platform for the legal protection of computer databases. Technically, computer databases differ from printed compilations in three important aspects, namely (i) indifference to the nature of data, (ii) reconfigurability, and (iii) data efficiency (Phillips and Firth, 1995). Indifference to the nature of data refers to the ability of storing any type of information as long as it can be digitised. Reconfigurability refers to the ability to reorganise the data qualitatively and quantitatively at will; while, data efficiency means that storage and manipulation of large quantities of data which would otherwise be physically impossible or economically impracticable.

After *Feist*, database producers felt that the copyrightability of their databases was threatened. As producing a computer database involves substantial financial and technical investments, computer database producers want some form of legal protection against piracy. The European Commission was the first to come up with a solution for the legal protection of databases.

## EUROPEAN UNION DATABASE DIRECTIVE

Chapter 6 of the European Commission's 1988 "Green Paper on Copyright and the Challenge of Technology: Copyright Issues Requiring Immediate Attention" (hereinafter "Green Paper") identified the need for a legislation to protect computer databases. Subsequent to the *Feist* decision, a proposal for it was made by the European Commission in 1992. This proposal crystallised into law in the form of the European Union's Database Directive (1996), which came into force on 1 January 1998.

The primary objective of the Database Directive is to harmonise the laws on the protection of databases among European Union member states. It is perceived that 'unharmonised' or different standards would restrict the free movement of database services between countries: Recital 4. Prior to the Directive, different countries adopted different standards and treatments of databases: Recital 1. The courts in the United Kingdom have generally adopted the lower threshold of "sweat of the brow", while the majority of European countries followed the higher standard as in the United States (Metaxas, 1990; Schneider, 1998, n. 14). In some Scandanivian countries, since the 1960s, a separate Nordic catalogue

rule protects compilations, which have not fulfilled the requirements of copyright (Karnell, 1993; Lea, 1993).

The initial reaction of the information industry to the Green Paper was that copyright was sufficient to protect databases (Oppenheim, 1990). However, after the *Feist* decision, the European Commission, which was then in charge of drafting the Database Directive, viewed the issue differently. It was of the opinion that the originality standard in the United States, being intellectual creation in the selection or arrangement, is applicable.

In the Draft Directive issued by the European Commission in 1992, databases referred only to electronic databases. Printed compilations were still subject to the same rules under each country's copyright law. However, when the draft was revised, the definition of database was expended to include non-electronic ones. The reason given for such inclusion was to avoid the ironic situation of data in a database being protected, but not the same data in a printed form. As it stands, a database is defined as "a collection of independent works, data or other materials arranged in a systematic or methodical way and individually accessible by electronic or other means": Database Directive, Article 1(2).

The European Union Database Directive offers a two-tier protection. First, databases are protected under copyright law if "the selection or arrangement of their contents constitute the author's own intellectual creation": Database Directive, Article 3(1). Secondly, a database right subsists in databases, which were created as a result of "a substantial investment in either the obtaining, verification or presentation of the contents": Database Directive, Article 7(1).

The first right is actually the reinstatement of the principle in *Feist*. No other criteria is applicable to determine the eligibility of copyright protection: Database Directive, Article 3(1). Copyright provides the rights owner the power to control the reproduction, distribution, creation of derivative works, etc. in a copyrighted work.

The second right is commonly known as the *sui generis* (Latin: one of its kind) right. This *sui generis* right confers upon the maker of a database protection against extraction and re-utilisation of the whole or a substantial part of the contents of a database: Database Directive, Article 7(1). 'Extraction' is defined as "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 any form": Database Directive, Article 7(2)(a); while '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": Database Directive: Article 7(2)(b).

The copyright duration of database follows the Copyright Act of each country which is 70 years, but the database right lasts only 15 years from the date of completion of the making of the database: Database Directive: Article 10. Substantial changes or addition to the database may extend the period of protection under the *sui generis* rights: Database Directive, Article 10(3). It has been suggested that database producers will take advantage of this provision by updating the database excessively in order to perpetuate the duration of protection (Koboldt, 1997).

The Directive allows for reciprocal treatment to non-European Union states provided that these states enact laws of a similar nature.

## OTHER INTERNATIONAL LEGISLATIVE ATTEMPTS

The European Union was not the only body, which attempted to legislate the protection of databases. The World Intellectual Property Organization tried once but failed. Due to overwhelming objections from member countries, a Draft Database Treaty has to be withdrawn (WIPO, 1996; Neal 1997; Kirtley, Daugherty, and Reis, 1997; White, 1997).

Since 1996, the United States Congress has been examining proposals for a similar law. One of the reasons for the insistence of an Act in the United States is to acquire reciprocal protection under the European Union Database Directive of databases produced in the United States.

## DATABASE PROTECTION IN MALAYSIA

Malaysia is a signatory to the World Trade Organization Agreement, which contains Annex 1C titled "Agreement on Trade-Related Aspects of Intellectual Property Rights" or the TRIPS Agreement. Article 10, paragraph 2 of the TRIPS Agreement mandates the copyright protection of "compilations of data or other material, whether in machine readable or other form, which by reason of the selection or arrangement of their contents constitute intellectual creation." It further notes that "such protection … shall not extend to the data or material itself."

Even before the conclusion of the TRIPS Agreement in 1994, Malaysia has tried numerous times to include databases as a protectable subject matter of copyright. The present Copyright Act was passed in 1987 (Act 332). In the original version, literary work, a subject matter of copyright, included "tables or compilations, expressed in words, figures, or symbols *(whether or not in a visible form).*" The phrase "whether or not in a visible form" seems to indicate that literary works cover electronic databases. Probably due to the position of this clause, after the

word 'symbols', which may give rise to doubt whether it is only application to symbols, the legislature amended this clause in 1997 (Act A994). This section then reads "whether or not expressed in words, figures or symbols and whether or not in a visible form."

The original paragraph 8(1)(b) in the 1987 Act makes derivative works protectable if they are "collections of *literary, musical or artistic works* which, by reason of the selection and arrangement of their contents, constitute intellectual creation." An amendment in 1990 (Act A775) changes this clause into "collections of works eligible for copyright …" It is assumed that this change extends protection to multimedia works and databases which are collections of films and sound recordings.

This amendment in 1990 was later thought to be insufficient. Under the recent Copyright (Amendment) Act 2000 (Act A1082), which came into force on 15 August 2000, paragraph 8(1)(b) was again amended to "collections of works or collections of mere data, whether in machine readable or other form, eligible for copyright which, by reason of the selection and arrangement of their contents, constitute intellectual creation." It is understandable that, like other amendments to the intellectual property laws passed in the year 2000, it is to bring the copyright law in conformity with the TRIPS requirements.

Although it is one of the most amended sections in the Copyright Act 1987, paragraph 8(1)(b) makes difficult reading. It is not obvious what the phrase "eligible for copyright" refers to. It could either refer to 'collections' which are "eligible for copyright" or 'works' which are "eligible for copyright". Two reasons suggest that the latter interpretation is to be favoured. First, section 7(1) lists "works eligible for copyright", none of which is a collection. Secondly, by referring to the amendment made in 1990, we find the phrase "works eligible for copyright" as a replacement for the phrase "literary, musical or artistic works", the idea being to extend the category to all those listed in section 7(1).

Thus, if eligibility in paragraph 8(1)(b) refers to works, it follows that in relation to a second subject matter, we have to read it as "mere data … eligible for copyright". This, however, cannot be right, because mere data is not one of the listed works eligible for copyright. If the intention of the 2000 amendment was to clarify that databases, as "collections of mere data" *are* "eligible for copyright," it would be redundant since the amended definition of literary works as explained above would probably be sufficient.

Perhaps, it would be easier to understand this amendment by comparing it with the phrase used in the TRIPS Agreement. Article 10, paragraph 2 states that "compilations of data or other material, whether in machine readable or other

form, which by reason of the selection or arrangement of their contents constitute intellectual creation shall be protected as such." Clearly then, 'material' here may correspond to our "works eligible for copyright." An amendment such as "collections of works eligible for copyright or collections of mere data, whether in machine readable or other form, which …" would be more in line with the TRIPS Agreement.

Unfortunately, the inconsistency of paragraph 8(1)(b) with the TRIPS Agreement does not stop here. The Malaysian Act requires "intellectual creation" in both "selection *and* arrangement" in order to be protected, while TRIPS Agreement only requires either of the criteria to be fulfilled. It can be conceived that the more onerous requirement in Malaysia will make it difficult, if not impossible, for databases to be protected. Often, content of a database may be selected, but the arrangement on a hard disk is dictated by the database management software.

It is hoped that with more cases reported from the European jurisdiction and the rest of the world, concepts such as 'data', 'selection', 'arrangement', and 'intellectual creation' appearing in paragraph 8(1)(b) will in time be sufficiently clarified.

## THE LIBRARY AND INFORMATION COMMUNITY

The European Union Database Directive and its implementation in the United Kingdom in the form of the Copyright and Rights in Database Regulations 1997 raised some serious concerns for the library and information community. The Association for Information Management, Aslib, started the ball rolling by publishing a series of articles authored by its copyright spokesman, Raymond A. Wall, in its *Managing Information* bulletin.

The erosion of database users' rights was focused in the March 1998 issue of *Managing Information*. The editor, Bowes responded to a letter by Minister Ian McCartney, replying to a letter from Aslib outlining Aslib's concerns over the serious damage on the development of United Kingdom's knowledge base and the removal of permissions previously granted by copyright law (Bowes, 1998). A detailed critique of the Database Regulations followed (Wall, 1998a). In the June issue, Wall suggested steps for changing the direction of the Database Directive in the United Kingdom (Wall, 1998b). He urges information professionals to gather data on the utility of traditional copyright permissions, on a group basis, for the review of the Directive in 1999/2000. In the June and July/August issues, Wall attempts to highlight the mess created by the Database Directive (Wall, 1998c). He notes that fair dealing exceptions under copyright

may not be applicable for databases protected under database right (Wall, 1998d).

The International Federation of Library Associations too was not out of the picture. In a joint memorandum by five American library organizations, namely, the American Association of Law Libraries, American Library Association, Association of Research Libraries, Medical Library Association, and the Special Libraries Association (reposted on the Association of Research Libraries' web site), six key concerns relating to the database protection proposals of the European Union and WIPO (Association of Research Libraries, 1998) were raised. These key concerns of librarians are that the protection is for investment and not creativity; the new legal regimes fail to guarantee the balance between the rights of information owners and rights of users; it allows the control over use of the database as opposed to reproduction of it; it defines database too broadly to include print and electronic and covers directories, anthologies, CD-ROMs, online databases, reference works, and more; continuous updating grants perpetual protection; and finally, there is no indication of market failure or lack of incentive to invest in databases without such protection.

## IMPLICATION ON DIGITAL LIBRARY SYSTEMS

The European Union Database Directive was framed with commercial databases in mind. Thus, the application of the database directive to digital library systems was never fully discussed. A few points can be made here. Generally, a digital library system can be viewed as a database. From the definition, a database need not be contained within a single file system. A database, and by extension a digital library, is copyrightable if there is intellectual creation in the selection or arrangement of its data.

As lawyers instead of computer or information professionals drafted the Database Directive, the way to prove selection and arrangement is not clear (see Mahon, 1995). However since databases are constructed differently from a print compilation, it is submitted that use of metadata and subject indexes are proofs that intellectual creativity has been expended in the selection and arrangement of the database.

The *sui generis* right provides an interesting dimension to aggregate databases. As originality is not a criterion for protection, a digital library, which is made of smaller databases may be protected if it can be proved that substantial investment has been expended in the obtaining, verification or presentation of the content. A digital library, which gets its feed from various sources may opt for this protection if, for example, it displays the content in a new way.

Apart from contractual terms and conditions to govern access, the *sui generis* right confers the power to prevent unfair extraction and the commercial re-utilisation of a protected database. Exception such as uses for academic and non-profit research may be made by national legislature. In the United Kingdom, the Copyright and Rights in Databases Regulations 1997 has such an exception: Regulation 20(1).

On the other hand, the Database Directive may raise the cost of developing and maintaining a digital library system, as data and material has to be licensed from legitimate sources. Collection of data for which copyright status were previously uncertain, is now protectable under the *sui generis* right, and thus the right owner can impose a licensing fee for its use and extraction.

One significant implication of digital library systems is the proliferation of pay-per-view licensing schemes. Compared to print based material, where libraries pay for one copy and many users can use it without additional charge, material on digital libraries are charged according to access. In other words, each time a user accesses the same material, a license fee is charged.

On another dimension, commercial digital library systems may prevent material from going into the public domain. Copyright in a book may lapse into public domain when its term expires. But material in a digital library may forever be kept proprietary as long as no users have access to the source code. Licensing agreements may be used to prevent users from downloading excessive amount of data, or that cost will make it unfeasible. Therefore, the wealth of public domain may cease to increase. And the value of public domain may diminish as older material falls out of use.

## MULTIMEDIA LIBRARY SYSTEM

Copyright and rights in a database do not affect the copyrightability of individual data items: Database Directive, Article 3(2). Public domain information and text do not become copyrighted by the inclusion in a copyrighted or *sui generis* protected digital library. Nevertheless, such inclusion may provide a weak form of protection against extraction and re-utilisation under the *sui generis* protection.

Minimalist multimedia items such as graphical icons, cliparts, fonts, and sound clips are most probably to insubstantial to be conferred copyright on an individual basis. Therefore their aggregate in a multimedia digital library system may prove useful.

An analysis of some copyright infringement cases may be indicative of the threshold for protecting minimalist multimedia items. Traditional copyright cases have largely focused on infringement in text, so the analysis should begin here. The smallest element in a text is a character. A character is not a copyrightable element. A few characters form a word. A word, though invented, is also not copyrightable: *Exxon Corporation & Ors. v. Exxon Insurance Consultants International Ltd.* [1982] RPC 69. A phrase is made up of a few words, but not long and as complete as a sentence. A phrase such as a title has been held not to be copyrightable: *Francis Day & Hunter, Ltd. v. Twentieth Century Fox Corp., Ltd.* [1939] 4 All ER 192. But on rare cases, a single sentence, if qualitatively significant, may be subjected to copyright. Thus, the *de minimis* principle works to prevent insubstantial works from claiming copyright. Using the same analysis, we may find that an icon made up of a few pixels might be too insignificant to be copyrightable, especially when the picture is something common. But when the graphic is substantial, and involves use of shadings or colours, elements of copyrightability appear. In conclusion, not all multimedia elements are copyrightable by itself, but the inclusion of them in a database may give rise to some sort of protection against wholesale piracy, or piracy of a substantial amount.

## CONCLUSION

The European Union Database Directive is a controversial piece of legislation. Even during its discussion and draft stages, librarians in the West have raised concerns regarding its impact. By providing further protection to information for periods which are renewable, the balance of copyright and proprietary rights in information tips to the have's, at the expense of the have-not's. Costs for achieving the digital library utopia will rise.

On the other hand, such protection will trigger among database producers a rush to come up with more databases. This will benefit users, and they will have more choices, provided that among the choices there are adequate substitutes. And when there is sufficient competition, price will fall.

How the European Union Database Directive affects the global information marketplace has yet to be seen. Librarians are advised to be well-informed in the development of these areas. Malaysia have yet to reach a stage to consider introducing a *sui generis* database right. On a more general note, librarians in the East should play a more active role, like their counterpart in the West, in formulating national policies relating to information in the digital era.

## REFERENCES

Association of Research Libraries. European Union Database Directive sets dangerous precedent for librarians worldwide. [Cited 21 May 1998]. Available at: http://www.arl.org/info/frn/copy/iff1.htm.

Bowes, Roger. 1998. New copyright law fails to reflect copyright permissions of importance to user community. *Managing Information,* Vol. 5 no. 2: 13.

European Commission. 1988. *Green paper on copyright and the challenge of technology: Copyright issues requiring immediate attention.* COM (88) 172 final.

European Commission. 1992. Commission proposal for a council directive on the legal protection of databases. *Official Journal of the European Communities,* C 156 (1992): 4.

European Union. 1996. Directive 96/9/EC of the European Parliament and of the Council of 11 March 1996 on the legal protection of databases. *Official Journal of the European Communities* L 77: 20.

Karnell, Gunnar W. G. 1991. The Nordic catalogue rule. In *Protecting works of fact: Copyright, freedom of expression, and information law.* Ed. E. J. Dommering and P. Bernt Hugenholz. Boston: Kluwer Law and Taxation Publishers.

Kirtley, Jane E., Rebecca Daugherty, and Leslie Ann Reis. 1997. World Intellectual Property Organization: comments on the basic proposal for the substantive provisions of the treaty on intellectual property in respect of databases. *Journal of Academic Librarianship,* Vol. 23 no. 2 (1997): 134–140, *Government Information Quarterly,* Vol. 14 no. 2: 191–200.

Koboldt, Christian. 1997. The EU-directive on the legal protection of databases and the incentives to update: an economic analysis. *International Review of Law and Economics,* Vol. 17 (March): 127–138.

Lea, G. 1993. Database law—solutions beyond copyright. *Computer Law and Security Report,* Vol. 9: 127.

Mahon, Barry. 1995. The European Union and electronic databases: a lesson in interference? *Bulletin of the American Society for Information Science* (June/July). Available at http://www.asis.org/Bulletin/Jun-95/intnat.html.

Metaxas, George. 1990. Protection of databases: Quietly steering in the wrong direction? *European Intellectual Property Review,* Vol. 12, no. 7: 227–234.

Neal, James. 1997. Copyright & cyberspace: a librarian's view of the WIPO conference. *American Libraries,* Vol. 28, no. 2: 34–35.

Oppenheim, Charles. 1990. Database copyright and the EEC. *Advanced Information Report* (June): 1–5.

Phillips, Jeremy, and Alison Firth. 1995. *Introduction to intellectual property law*. 3d ed. London: Butterworth.

Schneider, Mark. 1998. The European Union Database Directive. *Berkeley Technology Law Journal,* Vol. 13: 551–564.

U.S. Congress. National Commission on New Technological Uses of Copyrighted Works. 1978. *Final report of the National Commission on New Technological Uses of Copyrighted Works (CONTU).*

Wall, Raymond A. 1998a. Comments on SI 1997/3032. *Managing Information,* Vol. 5 no. 2 (March): 14–15.

Wall, Raymond A. 1998b. EC Directives: too late to change direction? *Managing Information* 5, no. 5 (June): 23–25.

Wall, Raymond A 1998c. Mapping it out: further exploration of database right. *Managing Information,* Vol. 5 no. 9 (July/August): 31–33.

Wall, Raymond A 1998d. Database right or wrong? *Managing Information,* Vol. 5 no. 9 (November): 41–43.

White, Robert M. 1997. Taking on the database challenge—and winning. *Technology Review,* Vol. 100, no. 4 (May/June): 65.

World Intellectual Property Organization. 1996. Basic proposal for the substantive provisions of the treaty on intellectual property in respect of databases. Diplomatic Conference on Certain Copyright and Neighbouring Rights Questions, 2–20 December, at Geneva.