Study unit 5
The protection of electronic databases

Overview

In this study unit, we explore the protection of electronic databases. We examine the process of database creation, and the role of electronic databases in the information society. The copyright protection of original electronic databases and the sui generis protection of non-original databases are examined.

Learning outcomes

After completing this study unit, you should be able to explain —

- ❏ the role of electronic databases on the Internet
- ❏ how a database is created
- ❏ the provisions of certain international treaties
- ❏ understand and apply the concept 'originality'
- ❏ the rules relating to the protection of non-original databases in the Europe
- ❏ interpret and evaluate the position in South Africa as compared with that in other countries

Discussion

Why databases?

core of the Internet

Databases form the core of the Internet. The Internet's most powerful feature is its ability to connect individuals with a myriad of sources containing thousands of pages of information (see Daniel J Caffarelli 'Crossing Virtual Lines: Trespass on the Internet' 1999 *Boston Univ J of Science & Technology* 6 para 28). The Internet has been described as offering 'access to information and resources beyond measure, limited only by your ability to find them' (idem para 29). Much of this information is organized in the form of databases. It is obvious that in the information age there is a need for a secure means of protecting databases in cyberspace.

access to information

The role of electronic databases

information retrieval

The Internet has changed from a quiet means of communication in academic and scientific research circles to a major global data pipeline through which large amounts of intellectual property move (see David L Hayes 'Advanced Copyright Issues on the Internet' (1998) 7 *Texas Intellectual Property LJ* 1 at 2–3). Initially, online information retrieval services were expensive, and so were used by a relatively small community of corporate or academic subscribers only. The development of the Internet has changed this situation forever, and has made the term 'online' a household word (Michael A Forhan '*Tasini v New York Times*: The Write Stuff for Copyright Law' (1999) 27 *Capital Univ LR* 863 at 869).

What do electronic databases consist of?

What are 'electronic databases'?

electronic databases

Electronic databases are simply organized collections of recorded data or information in an electronic or digital form, from where such data or information may be accessed, reproduced, or retracted. It has been said that few people have information. Instead, what they actually have is data, in such quantities that it causes information overload or blackout (Michael J Bastian 'Protection of "Noncreative" Databases: Harmonization of United States, Foreign and International Law' (1999) 22 *Boston College Environmental Affairs LR* 425 at 426; see also JH Reichman & Pamela Samuelson 'Intellectual Property Rights in Data?' (1997) 50 *Vanderbilt LR* 51 at 64–65).

building blocks of knowledge

Databases are the tools that provide information about information. They have become the new building blocks of knowledge (Bastian op cit at 426), and are indispensable to e-commerce. The importance of electronic databases should not be underestimated — they form the core of information technology and all information systems (see Lionel M Lavenue 'Database Rights and Technical Data Rights: The Expansion of Intellectual Property for the Protection of Databases' (1997) 38 *Santa Clara LR* 1).

Over the past several years, the market has exploded with new

search engines

tools for searching, matching, collating, updating, replicating, and distributing data. A now familiar example is the category of tools often lumped as 'Internet search engines'. (A 'search engine' is simply a computer program designed to accept inquiries from the user and search large electronic databases for relevant information (Forhan op cit at 877).) In response to simple user requests, search engines can root out digital property, irrespective of geographic location (see Mary Maureen Brown, Robert M Bryan & John M Conley 'Database Protection in a Digital World' (1999) 6 *Richmond J of Law & Technology* 2, text at note 24).

The popular term 'search engine' actually embraces five categories of tools:

- ❏ directories, such as Yahoo
- ❏ Magellan search engines, such as *Lycos*, *Infoseek*, and *Webcrawler*
- ❏ super search engines
- ❏ meta search engines
- ❏ special search engines

super search engines

Super search engines expand on the search-engine concept by searching for key words within the text of web pages, instead of just in page titles, descriptions, and meta tags.

meta search engines

A meta search engine (such as *Metacrawler*, and *Savvy Search*) allows users to employ multiple search engines, or even super search engines, simultaneously (Brown, Bryan & Conley loc cit). Meta search engines typically do not contain a site database of their own: they merely route requests to a variety of different engines, and then compile and return the results to the requesting party.

special search engines

A special search engine targets specific types of information such as *Usenet* newsgroups (*DejaNews*), telephone listings (*Infospace*), and FTP (File Transfer Protocol) archive sites (*FTP Search*). These engines all search by keyword, although the actual search logic depends upon the individual engine. The search engine's algorithm breaks down the question to determine the search criteria and locate relevant responses (see Forhan op cit at 877).

Introduction

variety of entities

The variety of entities grouped together under the heading 'database' comprises a complex array of potential intellectual property. The principal categories include the data itself, the effort used to locate it, the effort and any originality involved in selecting and arranging the available data, and the tools for search and organization, together with all aspects of their creation (Brown, Bryan & Conley *Richmond J of Law & Technology* op cit, text at note 32).

human effort

The process of collecting and organizing information in its most basic form is a matter of raw human effort. Brown et al maintain that the effort involved in the production of an old-fashioned database such as a telephone directory falls into this category. The cliché often used to describe scientific research is quite apt: this type of process is indeed made up of 99 per cent sweat and one percent originality. At the other end of the spectrum we find the development of new software tools to mine existing data resources.

Ease of exploitation

copied quick and inexpensively

Tremendous resources are often invested to assemble large quantities of information in a database. Still, the resulting product is vulnerable to being copied quickly and inexpensively with current digital technology. The ease with which digital property can be located, accessed, copied, modified, and distributed is without precedent. Also, advances in copying and editing capabilities can lead to recompilations and new derivatives beyond the imagination, let alone the knowledge, of the original owner (idem at 2). It has been noted that, from an economic point of view, all electronic databases share two characteristics — 'they are costly to produce, but they are easy to reproduce or copy' (Russell G Nelson 'Recent Development: Seeking Refuge from a Technology Storm: The Current Status of Database Protection Legislation after the Sinking of the Collections of Information Anti-Piracy Act and the Second Circuit Affirmation of *Matthew Bender & Co v West Publishing Co*' (1999) 6 *J of Intellectual Property Law* 453 at 455).

Ease of access

diminishing prospects of commercial success

Moreover, because of widespread access to global information networks, pirated copies of a database can be disseminated in a matter of seconds to millions of recipients across the globe at a fraction of the development costs. So compilers of uncopyrightable databases face diminishing prospects of commercial success unless they obtain international standards of protection to thwart pirating of their products (Bastian op cit at 428–429).

stable legal environment

Like new technologies of the past, databases have caught the world's intellectual property system napping. Computers can, of course, archive, compare, manipulate, and distribute data with astonishing facility. But, in addition, neither the data, nor the labour involved in collecting, recording, and arranging it, has a secure place in the current structure of intellectual property law (Brown, Bryan & Conley op cit at 2). As the database market grows and cross-border information flow increases, the demand for a stable and harmonized legal environment for databases increases (see David Barrett & Chris Coulter 'Proposed Council Directive on the Legal Protection of Databases' (1992) 8 *Computer Law & Practice* 34).

Copyright protection

relationship between copyright and information flow

Copyright law, electronic databases, and the Internet are inextricably linked. There are two main reasons for the close relationship between copyright law and the flow of information on the Internet:

- ❑ Much of the material that is communicated on the Internet constitutes works of authorship, such as literary and musical works, audiovisual works, computer programs, and database information, which fall within the usual subject matter of copyright.

- ❑ Since the very nature of an electronic online medium requires that data be copied or reproduced as it is transmitted through the various nodes of the network, copyright is obviously at issue (Hayes op cit at 3).

Criteria for the subsistence of protection

Selection and arrangement

Article 2(5) of the Berne Convention reads:

Berne Convention

> 'Collections of literary or artistic works . . . which, by reason of the selection or 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.'

Article 10(2) of the TRIPS Agreement, in turn, provides:

TRIPS Agreement

> '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 creations shall be protected as such. Such protection, which shall not extend to the data or material itself, shall be without prejudice to any copyright subsisting in the data or material itself.'

Article 5 of the WCT then reads:

WCT

> 'Compilations of data or other material, in any form, which by reason of the selection or arrangement of their contents constitute intellectual creations, are protected as such. This protection does not extend to the data or the material itself and is without prejudice to any copyright subsisting in the data or material contained in the compilation.'

The Agreed Statement Concerning Article 5 of the WCT reads:

Agreed Statement

> 'The scope of protection for compilations of data (databases) under Article 5 of this Treaty, read with Article 2, is consistent with Article 2 of the Berne Convention and on a par with the relevant provisions of the TRIPS Agreement.'

Finally, article 3 of the EC Directive on the Legal Protection of Databases states:

EC Directive

> '(1) In accordance with this Directive, databases which, by reason of the selection or arrangement of their contents, constitute the author's own intellectual creation shall be protected by such copyright. No other criteria shall be applied to determine their eligibility for that protection.

> '(2) The copyright protection of databases provided for by this Directive shall not extend to their contents and shall be without prejudice to any rights subsisting in those contents themselves.'

Originality

Traditionally, copyright requires a measure of originality or creativity in the selection or arrangement of data in a compilation, or other indications of creative authorship, for the compilation to attract copyright. The requirement of originality for copyright protection of compilations is interpreted differently in various legal systems.

selection and arrangement

Article 2(5) of the Berne Convention for the Protection of Literary and Artistic Works states 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 are protected as such, without prejudice to the copyright in each of the works forming part of such collections. Bare facts cannot be protected by copyright, but compilations of facts are within the subject matter of copyright protection if these compilations constitute original works of authorship.

sweat of the brow

United Kingdom and Commonwealth courts have favoured the 'sweat-of-the-brow' approach to database protection (see *Waterlow Publishers Ltd v Rose* (*The Times*, 8 December 1989; *Waterlow Publishers Ltd v Reed Information Services Ltd* (*The Times*, 11 October 1990)). If an author has expended labour and skill in creating the work, it enjoys copyright protection, despite the bland nature of the work.

know-how

Under traditional German copyright principles, most factual databases do not qualify for copyright protection unless their 'selection, accumulation and organization' has been the subject of know-how beyond that of the average programmer (see *Incassoprogramm* (Federal Supreme Court, 9 May 1985); see also Michael Pattison The European Commission's Proposal on the Protection of Computer Databases' [1992] 4 *EIPR* 113 at 113–114). In terms of French copyright law, which requires original works to reveal something of the author's own personality, and Dutch copyright law, most compilations do not enjoy copyright protection (see *Van Dale v Romme* (4 January 1991); also

author's personality

Pattison op cit at 114n12–13).

Before the United States Supreme Court's decision in *Feist Publications Inc v Rural Telephone Services Co* 499 US 340 (1991) at 344–348), American courts occasionally granted copyright protection for the effort involved in finding and assembling a body of collected data under the 'sweat-of-the-brow' doctrine (see, for example, *Jeweler's Circular Publication Co v Keystone Publication Co* 281 F 83 (2d Cir 1922)*; Leon v Pacific Telephone & Telegraph Co* 91 Fd 484 (9th Cir 1937)).

Feist

In *Feist*, however, the court held that the expenditure of labour and capital (the 'sweat of the brow') on the creation of a compilation, no matter how extensive in nature, in and of itself does not make the compilation copyrightable. (This case involved the most primitive of all forms of databases — a telephone directory.) The court noted that the following three elements form the basis of the copyright protection of a factual compilation of pre-existing facts: the compilation —

- ❏ consists of pre-existing facts or data,
- ❏ is selected, co-ordinated, or arranged by the author, and
- ❏ is an original work of authorship 'by virtue of the particular selection, co-ordination, or arrangement' of the data (at 357).

originality

'Originality' requires only a 'minimal level of creativity', evidenced by the fact that the author worked independently of any pre-existing materials in selecting and arranging the new compilation (at 358). It has been said that the second element is the most important, as it requires a court to evaluate a compilation's originality by examining the author's selection and arrangement of the data (Caffarelli op cit para 30).

raised threshold

It is an open question whether *Feist* sounded the death knell for copyright protection of non-original databases. But it is clear that *Feist* has raised the originality bar. The standard may be minimal, but it is still a standard. Also, courts are no longer free to ignore the originality requirement, or to substitute 'sweat of the brow' (see Brown, Bryan & Conley op cit, text at note 93).

In *Warren Publishing Inc v Microdos Data Corp* 115 F 3d 1509 (11th Cir 1997), the plaintiff published a directory of information about American cable-television systems, called the *Television & Cable Factbook*. The defendant marketed a software package that

contained the same information. Warren asserted that the software package infringed the copyright in its 'factbook'. But the court ruled that the compilation was not entitled to copyright protection, as it lacked sufficient creativity (at 1520). Proponents of database protection legislation often point to *Warren Publishing* to justify their calls for stronger protection (see Nelson op cit at 464).

catalogue protection

A special form of copyright protection, similar to neighbouring rights, can be found in Scandinavia and the Netherlands. In Scandinavia, 'catalogue protection' is afforded to factual compilations; the Dutch extend such protection to 'nonpersonal' writings.

Competition law

In the United States, the Supreme Court expressly stated that protection for the investment of labour and capital in non-original databases 'may in certain circumstances be available under a theory of unfair competition' (*Feist* at 354).

hot news

A few courts have also recognized protection other than by copyright law for facts amounting to 'hot news' under state laws of misappropriation.

In *National Basketball Association v Motorola Inc* 105 F 3d 841 (2d Cir 1997) at 845, the court held that New York common law protects time-sensitive data from 'free-riding' in limited circumstances. In this case, the National Basketball Association brought a copyright infringement action against Motorola, the manufacturer and promoter of hand-held pagers that provided real-time information updates about professional basketball games. The operation of the pagers relied on a data feed from reporters who watch the games on television, or listen to them on the radio. Information concerning the score and time remaining was then relayed by modem to a satellite, which emitted a signal updating each pager. The court held that the information transmitted by Motorola to its pager customers did not constitute 'hot news', and so the National Basketball Association was denied copyright protection.

The Second Circuit explained that a 'hot news' claim is limited to

cases in which —

- ❏ a plaintiff generates or gathers information at a cost;
- ❏ the information is time-sensitive;
- ❏ a defendant's use of the information constitutes 'free riding' on the plaintiff's efforts;
- ❏ the defendant is in direct competition with a product or service offered by the plaintiffs; and
- ❏ the ability of other parties to 'free ride' on the efforts of the plaintiff would so reduce the incentive to produce the product or service that its existence or quality would be substantially threatened.

unfair competition

Unfair competition principles are limited to regulating the behaviour of competitors. Database protection should address not only the 'free rider' but also the 'information Samaritans' (Bastian op cit at 443). Also, private unauthorized use of databases may not be addressed through principles of unfair competition.

Contract law: 'click-on' contracts

click-on licence

The proprietor's options include offering online contracts in terms of which users may assent to a 'click-on licence, with or without user identification, as a condition to access or downloading capability, or both. So the proprietor may seek to regulate use of her database by contract law.

Pro CD

The most recent, and perhaps the most authoritative, case which addressed click-on contracts (*ProCD Inc v Zeidenberg*) was a 'hi-tech' version of *Feist*. The protected work was a CD-ROM version of a national telephone directory with millions of entries, packaged in a shrink-wrap licence. (See the discussion of shrink-wrap and click-wrap agreements in Study Unit 4.) Pro-CD charged a low price to consumers and a much higher one to commercial users of the product. The defendant 'bought' a consumer package and then, in violation of the licence, sold the information over the Internet. The Seventh Circuit held that a shrink-wrap licence is an ordinary contract that is enforceable under the Uniform Commercial Code (UCC).

Contract law

Contract law may in certain instances bolster or complement the copyright protection of databases. But it should be noted that contract law applies only between parties to the contract: it cannot

bind third parties. Also, contract law has not been harmonized, although international legal rules for e-commerce, including aspects of contracting on the Internet, are evolving.

International initiative: The EC Directive

EC Directive

On 11 March 1996, after almost eight years of deliberation, Directive 96/9/EC of the Parliament and of the Council on the Legal Protection of Databases ('the EC Database Directive') was adopted. The primary purpose of the Directive is to stimulate investment in databases, and so to increase the European share of a market which is a 'cornerstone' of the economic development plans of the Union (Bastian op cit at 440).

concept 'databases'

Article 1(2) of the Database Directive gives a broad definition of the concept 'databases': the term connotes 'a collection of independent works, data or other materials arranged in a systematic or methodical way and individually accessible by electronic or other means'. It is not required that the data contained within the database be 'physically stored in an organized manner'. This very broad definition is specifically intended to include non-electronic databases and the materials necessary for the operation or consultation of certain databases, such as thesaurus or indexation systems. So a CD-ROM multimedia package, a World Wide Web site, an electronic or library-card catalogue, all fall within the scope of the Directive.

Article 1(3) excludes from protection any computer programs used in the manufacture or operation of databases. Article 2 states that the Directive does not pre-empt other Community statements on copyright, including the 1992 Council Directive on the Legal Protection of Computer Programs ('the EC Software Directive'). Article 2 appears to be at odds with Recital 20, which states that protection may extend to 'the materials necessary for the operation or consultation of certain databases', such as the 'thesaurus and indexation systems'.

thesaurus or index

Some also argue that a computer program could be seen as a thesaurus or index for operating or consulting a database (see Baker & McKenzie and Robert J Hart *Guide to Intellectual Property in the IT Industry* (1998) 105 para 6.15). We prefer the view that 'thesaurus' and 'index' refer to other collections of data

stored with the database to facilitate access to it. An index may be maintained to increase the speed of access, whereas a thesaurus may be used to define parallel or equivalent meanings of certain items of data.

software

Some databases may contain executable instructions (David Bainbridge *Copyright Law* 3 ed (1997) 171). It is unclear whether the Database Directive or the Software Directive applies to the mechanisms involved in manipulating the contents of a database (see Baker & McKenzie and Hart op cit at 105; Bastian op cit at 441). Pattison's argument (op cit at 115) that the command procedures for accessing databases are included under the 'system for obtaining or presenting information' applies with equal force to 'materials necessary for the operation or consultation of certain databases'. Such command procedures attract copyright protection only if the database with which it is used is copyrightable.

The Software Directive will continue to specify the appropriate level of copyright protection for search engines and related software tools (see Brown, Bryan & Conley op cit, text at note 131; also see recital 23 and article 1). Recital 23 applies to database management systems, such as search engines, used in the making and operation of a database, which fall outside the scope of the Database Directive.

command procedures

Note that recital 20 to the Database Directive is restricted to materials necessary for the operation or consultation of a database. It may be argued that these works, such as command procedures, form part of the structure of the database and that they form an integral part of the arrangement of the material.

personal data

Recital 17 to the Database Directive includes materials such as text, sound, images, numbers, facts, and data. The Directive does not apply to all data. Restrictions are, for example, imposed on the use of personal data.

Copyright protection

originality

The Database Directive extends copyright protection only to databases that by reason of selection or arrangement of the database's contents constitute 'the author's own intellectual

creation' — databases which evidence some measure of 'originality' or 'creativity' on the part of the author (see recital 15 and article 3(1)). Article 5 states that compilations of data or other material, in any form, which by reason of the selection or arrangement of their contents constitute intellectual creations, are protected as such. This protection does not extend to the data or the material itself, and is without prejudice to any copyright subsisting in the data or material contained in the compilation.

Feist-like approach

Article 5 adopts the approach of the American Supreme Court in *Feist*, where it was held that only the selection or arrangement of a compilation of facts, and not the facts themselves, can be protected by copyright. The Directive rejects the approach traditionally followed in the United Kingdom and Ireland, and raises the threshold for copyright protection. As we have noted, this standard is similar to that applied in the United States after *Feist,* with one further limitation — under the Directive, there must be intellectual creation by a human author for copyright protection to exist (article 4(1)). One may question whether it is conceptually correct to restrict the originality requirement to the selection or arrangement of the data, rather than to have it relate to the work as a whole. Barrett and Coulter (op cit at 35) argue that a database is characterized as much by the totality and comprehensiveness of its contents as by its selection and arrangement.

human author

The requirement of a human author raises questions about the extent to which a database can be protected under copyright law if the selection and arrangement of data is done by a computer program with minimal human contribution. A case in point is computer-generated databases.

Definition of 'author'

creator

Article 4(1) provides that the author of a database is a natural person who has created the database, and, if legislation of Member States permits, the legal person designated as rightholder. Pattison (op cit at 119) notes that this begs the question — who is the "creator"? Is it the person who entered the materials into the database, the person who chose the selection and arrangement criteria, or the person who made the arrangements for the making of the work?

moral rights

The Directive provides that moral rights of the author fall beyond its scope (see recital 28). So it would appear that an author may enter into a separate agreement regarding moral rights of a work (Barrett & Coulter op cit at 35). Also, the Directive does not provide clear guidance on where the line should be drawn between an original and a non-original database.

Exclusive rights

exclusive rights

The Directive extends the exclusive right to the author to perform or to authorize certain acts regarding the database. These acts include the following:

- ❏ the temporary or permanent reproduction of the database;
- ❏ the translation, adaptation, arrangement, and any other alteration of the database;
- ❏ any form of distribution to the public;
- ❏ any communication; and
- ❏ any display or performance of the database to the public (article 5).

transmission on demand

The Directive did not concern itself with digital servicing or temporary distribution. Also, the nature of rights in transmission on demand is not addressed, as it is uncertain whether public communication must be for general reception at a given time.

Sui generis protection

Introduction

Article 7 of the Directive reads:

> '(1) Member States shall 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-utilization of the whole or a substantial part, evaluated qualitatively and/or quantitatively, of the contents of that database.
>
> . . .
>
> (4) The right provided for in paragraph 1 shall apply

> 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 by copyright or by other rights. Protection of databases under the right provided for in paragraph 1 shall be without prejudice to rights existing in respect of their contents.'

Substantial investment

substantial investment

The sui generis provisions of the Directive protect the contents of any database not protectable by copyright that is the product of substantial investment in obtaining, verifying, or presenting the database's contents (see recital 39 and art 7(1)). There are no specific standards to determine the substantiality of an investment. The test is quantitative as well as qualitative in nature. The investment may concern the obtaining, verification, or presentation of the content. Not every compilation of information will be considered a 'database' for the purpose of the sui generis right. To qualify for protection, a database must be 'a collection of independent works, data or other materials arranged in a systematic or methodical way, and individually accessible by electronic or other means'.

Scope of protection

extraction
re-utilization

The sui generis right enables the maker of a database 'to prevent extraction and/or re-utilization of the whole or of a substantial part' of the database contents, and the repeated and systematic extraction or re-utilization which unreasonably prejudices the maker's 'legitimate interests' (article 7(1) and (5)).

The term 'extraction' connotes the permanent or temporary transfer of all, or a substantial part of the contents of the database to another medium by any means or in any form. 'Re-utilization', in turn, connotes any form of making available to the public the contents, or a substantial part of it, of the database whether by distributing copies, by renting, by online or some other form of transmission.

Extraction occurs when the contents are transferred from paper to disk; RAM downloads also fall within the restricted acts, as the Directive refers to temporary or permanent transfers (see Stanley

Lui 'Recent Developments in Copyright, Database Protection and (Online) Licensing' (1999) 7 *International J of Law and Information Technology* 73 at 85). So downloading a substantial portion of an electronic database to the memory of a computer constitutes infringement.

resale

The right to control resale is exhausted by the first sale of a copy of a database with the consent of the rightholder (article 7(2)(a)–(b) and recital 44).

scope of protection

The scope of protection is comprehensive. Article 6 expressly states that the repeated and systematic extraction or re-utilization of insubstantial parts of a database may also amount to the extraction or re-utilization of a substantial part. This is an important provision, for the typical use of a database involves this very type of access (see Brown, Bryan & Conley op cit, text at note 159).

Exclusions

exclusions

fair use

Several exceptions are allowed, such as the extraction and/or utilization of insubstantial parts, or the use of the database for any purpose which does not conflict with a normal exploitation of the database or unreasonably prejudices the legitimate interest of the maker (articles 7(2) and 8(1)–(2)). These exceptions are narrower than the similar fair-use (or fair dealing) exceptions under copyright law. For example, the sui generis right has no exceptions regarding to criticism or review, news reporting, or library use.

In addition to these mandatory exceptions, member states may limit the sui generis right in certain ways. They may allow the extraction or re-utilization of a substantial part of the contents of a database without its maker's authorization, provided that such extraction or re-utilization is for non-commercial purposes, when

- ❏ the extraction is from a non-electronic database, for private purposes (article 9(a));
- ❏ the extraction is reasonable and for the purpose of illustration for teaching or scientific research, as long as the source is indicated (article 9(b)); or
- ❏ the extraction and/or re-utilization is for the purpose of public security or an administrative or judicial procedure (article 9(c)).

Duration of right

substantial change

Article 10(1) provides that the sui generis right protects the qualifying database from the moment it is completed; the protection expires 15 years from the first day of January following the date of completion. Perhaps more importantly — if any 'substantial change' is made to the database, or if a series of successive changes, which constitute a 'substantial new investment' in the database, accumulates, a further term of protection of 15 years can be obtained see (article 10(3)). The renewal of protection by way of substantial new investment may perpetuate protection of dynamic databases.

Reciprocity

reciprocity

The principle of reciprocity has been incorporated. The sui generis right does not apply to databases made by persons outside the European Union unless they reside in a jurisdiction which provides comparable protection to European Union citizens (recital 56).

Conclusion

The sui generis right provided by the Directive creates an intellectual property right which goes much further than the copyright law of most countries. This right is not subject to compulsory licensing arrangements, even if the database compiler is the sole source of the database contents.

easy to protect

easy to infringe

In effect, the Directive has created an 'easy-to-protect/easy-to-infringe' system to protect non-original databases (see Bastian op cit at 445). It is 'easy to protect' because the Directive defines a database broadly and provides a sui generis intellectual property right with only a showing of a qualitative or quantitative substantial investment; it is 'easy to infringe' because of the broad protection afforded by the sui generis right.

The Directive has been implemented in many Member States, notably also in the United Kingdom (see Copyright and Rights in

implementation

Databases Regulations). The United Kingdom and Ireland had to raise the originality level for the copyright protection of databases beyond the 'sweat of the brow'. The requirement for database protection has been brought in line with that of the Directive (see regulation 6).

International initiative: the United States of America

copyright

The first failed attempt to address the strengthening of database protection in the United States was HR 2281, which formed part of the Digital Millennium Copyright Bill. This proposal basically followed the approach of the EC Database Directive.

The Collections of Information Anti-piracy Bill (HR 354) has been described as a response to the need to complement copyright law with a federal misappropriation law which imposes liability on any person who extracts, or uses in commerce, all, or a substantial part, of a collection of information gathered, organized, or maintained by another person through the investment of substantial monetary or other resources, in order to cause harm to the actual or potential market of that other person.

hot news

An alternative approach is to codify at federal level the various state misappropriation laws and to limit the cause of action created to competitive misappropriation of time-sensitive (or 'hot news') information. The preference for a misappropriation approach to protection is consistent with *National Basketball Association v Motorola*. Nelson (op cit at 479) notes that adopting legislation which incorporates the 'hot news' test expounded in *Motorola* would be likely to allow significant re-use of information by subsequent compilers.

Position in South Africa

protected as compilations

The copyright requirement of originality is satisfied solely by the fact that the contents of a particular compilation must have been independently collected, and not copied from another. Similarly, under South African copyright law, databases are protected by copyright as compilations, if they were created by the author's own

skill or labour (see, for example, *Fax Directories (Pty) Ltd v SA Fax Listings CC* 1990 (2) SA 164 (D); *Waylite Diary CC v First National Bank Ltd* 1995 (1) SA 398 (A)).

Concluding remarks

The keys to copyright protection of databases are selection and arrangement. But the more comprehensive the database, the less copyright protection may be available.

comprehensive databases

If everything is included, there is no selection. Richard L Stone and John D Pernick ('Protecting Databases: Copyright? We Don't Need no Stinking Copyright' (1999) 16 *The Computer Lawyer* 17) note that a comprehensive database which contains the entire universe of relevant data may be commercially useful, but it cannot be protected by copyright, as 'selection' requires the exercise of creative judgment in culling facts, and not using the relevant universe. This principle may be especially problematic for digital databases such as those accessed through the Internet, since their very appeal lies in their all-inclusiveness (see Brown, Bryan & Conley op cit, text at note 93).

form of protection

But if we conclude that we do want to protect all types of database, what form should the protection take? The form of protection has the following two components:

- ❏ the nature of what is protected, and
- ❏ the prohibited conduct.

substantial investment

Regarding the first component, there seems to be no realistic alternative to the European model of predicating protection on the investment of substantial time or money in the compilation effort ('sweat of the brow', or 'bulge of the purse'). It has never been seriously proposed that information itself should be protected (except by the law regarding trade secrets). The compilations seeking protection are by definition non-original in nature. As Brown, Bryan and Conley (op cit, text at note 205) so eloquently put it, '[s]weat equity is all that is left'.

sui generis or unfair competition

It has been noted that there are primarily two reasons why the European Union adopted a norm based on a sui generis property interest, instead of one based on principles of unfair competition:

- ❑ A sui generis form of protection overcomes the logistical difficulty of harmonization of legal regimes which vary between member states, both in form and degree of development.

- ❑ There was a desire to protect databases from 'information Samaritans' and 'free riders' (see Bastian op cit at 443; Reichman & Samuelson op cit at 81).

Over and above the difficulties inherent in the harmonization of the unfair competition laws of member states, the sui generis form of protection also addresses the prevention of both commercial and non-commercial appropriation of database content.

Also, as unfair competition principles are limited to the regulation of behaviour between competitors, a norm based on a sui generis property interest catches not just the 'free rider', but also the 'information Samaritan' (Bastian op cit at 443).