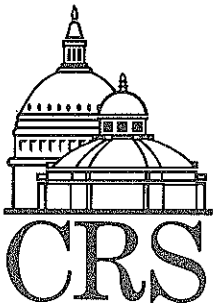
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Intellectual Property Protection for Databases at the International Level: Copyright and Sui Generis Forms of Protection

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ABSTRACT

Copyright law protects both traditional print and computer-automated databases that exhibit original, creative expression through the selection, arrangement, or coordination of their component elements. Noncreative databases are not subject to protection against copying under the copyright laws of most countries. Since database products have great economic significance and electronic versions are frequently transmitted across national borders, appropriate international standards for the protection of databases have assumed great importance and have received attention in several venues in recent years. This report reviews and analyzes recent international developments relating to the protection of both creative and noncreative databases, including issuance of a Directive on the Legal Protection of Databases by the European Union; development of minimum standards of protection for creative databases under both the Agreement on Trade-Related Intellectual Property Standards through the World Trade Organization and the World Intellectual Property Organization Copyright Treaty; and consideration of a possible new treaty on the protection of noncreative databases.

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Intellectual Property Protection for Databases at the International Level: Copyright and Sui Generis Forms of Protection

Summary

To qualify as copyrightable subject matter under the laws of most countries, databases must exhibit original, creative expression or otherwise constitute intellectual creations through the selection, arrangement, or overall coordination of their component works or data elements. However, until overturned by a court decision in the United States [*Feist Publications v. Rural Telephone Service Co.*, 499 U.S. 340 (1991)] and implementation in the United Kingdom of a European Union Directive on the Legal Protection of Databases, both countries protected certain databases under a lesser standard than creativity. This standard, which has now been rejected under the copyright laws of the United States and the United Kingdom, was known as the "sweat-of-the-brow" or "industrious effort" test for database protection.

Database producers have become concerned about the lack of adequate protection against copying of their products that are developed through industrious effort but lack the creativity required to sustain copyright protection under national copyright laws and under the Berne Convention, the major international copyright treaty. Proposals have been made at the national level in the United States and at the international level to create a new form of intellectual property protection for databases. The European Union Directive on Legal Protection of Databases, effective January 1, 1998, requires implementation by its member States of a *sui generis* form of protection for noncreative databases based on industrious effort.

As a result of proposals by the European Union and the United States for a new treaty on database protection, the World Intellectual Property Organization ("WIPO") prepared a draft Database Treaty in August 1996, which was included in the deliberations of the 1996 Diplomatic Conference convened at Geneva, Switzerland from December 2-20, 1996. While approving two other new treaties, the 1996 Diplomatic Conference postponed to a future diplomatic conference the consideration of a new database treaty.

International attention has also focused on harmonization of standards for copyright protection of databases. These efforts resulted in the establishment of minimum standards for creative databases under the World Trade Organization in the form of the Agreement on Trade-Related Intellectual Property Standards ("TRIPS") and through the new WIPO Copyright Treaty.

This report reviews and analyzes recent international developments relating to the protection of both creative and noncreative databases.

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Intellectual Property Protection for Databases at the International Level: Copyright and Sui Generis Forms of Protection

Under existing United States copyright law,[1] databases and other collections of information qualify as copyright subject matter if they constitute "works of authorship" within the meaning of 17 U.S. C. §102. To qualify as a work of authorship, the database or other collection must exhibit at least a modest amount of original creative expression on the basis of the selection, organization, or overall coordination of the data elements. The data elements may themselves be original works of authorship or may be uncopyrightable facts or similar items.

Before 1991, the lower federal appellate courts had sometimes protected certain databases (especially telephone directories) not on the basis of original creative expression, but on the basis of investment of resources or effort in developing the collection of information. Then, in *Feist Publications v. Rural Telephone Service Co.*,[2] the Supreme Court rejected this so-called "sweat of the brow" or industrious effort standard as a basis for protection of databases and collections of information.

In the aftermath of the *Feist* decision, database producers have become concerned about the lack of adequate protection against copying of databases that are developed through industrious effort but lack the creativity required to sustain copyright protection. Legislative proposals have been made to create a new form of intellectual property protection for databases in the United States.[3]

The issues relating to copyright or other forms of protection for databases have also arisen and been discussed at the international level. Database products have great economic significance and are frequently transported across national borders by electronic transmission through the Internet and other computer networks. Appropriate international standards for protection assume as much importance as national standards of protection.

In recent years, international developments relating to database protection have included the following: issuance of a new Directive by the European Commission mandating a uniform copyright standard for protection of creative databases and

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[1] Title 17 of the United States Code, §§101 et seq.

[2] 499 U.S. 340 (1991).

[3] For an analysis and overview of database proposals pending in the 106th Congress, *see* D. Schrader, *Intellectual Property Protection for Noncreative Databases,* CRS Report 98-902 A. H.R. 354, which is now pending in the 106th Congress, is similar to the final version of H.R. 2652 in the 105th Congress.

creation of *sui generis* protection for rights of database extraction and re-utilization within the European Union; establishment of minimum standards of copyright protection for creative databases under the auspices of the World Trade Organization in the form of the Agreement on Trade-Related Intellectual Property Standards ("TRIPS"); inclusion of minimum standards of copyright protection for databases in the new World Intellectual Property Organization ("WIPO") Copyright Treaty; and postponement of consideration of a proposed draft Database Treaty by the same 1996 Diplomatic Conference that approved the new WIPO Copyright Treaty and the WIPO Performances and Phonograms Treaty.

This report reviews and analyzes recent international developments relating to the protection of both creative and noncreative databases, including the European Union Directive, the TRIPS Agreement, the WIPO Copyright Treaty, and consideration of proposals for a new international treaty in the field of database protection.

Background

International protection for databases and other collections of information engenders essentially the same issues relating to standards, scope, conditions, and duration of protection as those raised at the national level. The threshold issue is the standard of creativity required to justify protection under existing copyright laws and copyright treaties.

The Berne Convention for the Protection of Literary and Artistic Works (hereafter: "Berne Convention")[4] is the preeminent treaty in the field of copyright protection. Countries bound by the 1948 Brussels text (and subsequent versions) of the Berne Convention are obligated to protect "[c]ollections of literary and artistic works such as encyclopedias and anthologies which, by reason of the selection or arrangement of their contents, constitute intellectual creations."[5]

The references to "literary and artistic works" and "intellectual creations" mean that the Berne Convention may protect certain creative databases but presumably does not extend to protection for noncreative databases. Moreover, the specific reference to "collections of literary and artistic works" may call into question copyright protection for databases that consist of noncopyrightable data elements. The specific examples of protected collections — encyclopedias and anthologies, which consist of individual copyrightable contributions — confirm the doubt about protection for collections of noncopyrightable material. In fact, however, the most valuable databases frequently comprise noncopyrightable data elements that are selected, arranged, or organized in a way that creates economic value.

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[4] The Berne Convention, which was first developed in 1886, has been revised several times in its long history. The most recent revision is the Paris Act of 1971. Different countries may be bound be earlier versions of the Berne Convention. The United States, which has been a member only since March 1, 1989, is bound by the 1971 Paris Act.

[5] Article 2(5) of the Berne Convention.

As a consequence of the perceived deficiencies of the Berne Convention in the protection of databases, several avenues for additional protection for databases have been explored in recent years. Some of these efforts have led to new international agreements that clarify protection for databases under copyright laws. The possibility of another new treaty, primarily directed at protection of noncreative databases, remains under consideration.

These recent multilateral and regional efforts to clarify Berne Convention copyright standards or fashion new international protection for databases include:

1) the creation of minimum standards of intellectual property protection under the auspices of the 1994 General Agreement on Tariffs and Trade ("GATT") (which became the World Trade Organization);

2) the creation of a new copyright treaty — the WIPO Copyright Treaty — which has links with the Berne Convention and essentially serves to update the Berne Convention with respect to the use of copyrighted works on the Internet and in digital, electronic environments in general;

3) the issuance of a Directive on Databases by the European Community, which both harmonizes copyright protection for databases within the Community and creates a new sui generis form of protection against the unlawful extraction or re-utilization of the contents of databases; and

4) further consideration of proposals to create a new multilateral database treaty under the auspices of WIPO.

Database Protection under the Trips Agreement

The first success in clarification of international database protection came in the form of the intellectual property standards forged by the 1994 Uruguay Round Agreements under the GATT.

The issue of intellectual property ("IP") standards was placed on the agenda of the Uruguay Round largely at the insistence of the United States. Prior to the Uruguay Round negotiations, the GATT, which of course deals with obligations related to trade in goods and to some extent trade in services, had not encompassed obligations related to intellectual property, whose rights are intangible in nature.[6] The inclusion of IP standards on the GATT agenda recognizes the increased importance of intellectual property protection to the well-being of any modern economy in this

[6] Efforts to include trademark protection standards in the earlier Tokyo Round of the GATT were not successful. By the time of the Uruguay Round, the United States, with the support of the European Union, was able to make the case for inclusion of intellectual property standards because intellectual property has become a major part of modern, highly developed economies. Computer software and databases comprise essential components of modern economic systems.

digital, information age world. Effective and adequate IP standards translate into profits and growth for national and global enterprises.

Ultimately, the Ministerial Conference of the Uruguay Round reached an agreement after more than seven years of negotiation on minimum intellectual property standards and on enforcement of those standards. The Agreement, known as the TRIPS Agreement, was included in the 1994 Uruguay Round Agreements accepted by the governmental representatives at Marrakesh on April 15, 1994.[7]

The 1994 GATT Agreements were submitted to the Congress, along with proposed implementing legislation, for acceptance or rejection of the entire package, under the fast-track trade negotiations procedure. The Congress agreed to the 1994 GATT Agreements, including the TRIPS Agreement, and enacted implementing legislation on December 8, 1994, known as the Uruguay Round Agreements Act of 1994 (URAA).[8]

The TRIPS Agreement established minimum standards of protection in virtually all fields of intellectual property. With respect to databases, the TRIPS Agreement explicitly requires that "compilations of data or other material" must be protected against unauthorized copying if the selection or arrangement of the data or other material constitutes an "intellectual creation." [9]

The reference to "compilations of data or other material" improves the level of protection for databases under the TRIPS Agreement in comparison with the existing Berne Convention. The literal text of the Berne Convention protects only compilations of "works" — that is, material that is independently copyrightable, unlike data elements, which are frequently not independently copyrightable. This is a critical clarification of the obligation to protect databases since a high percentage of databases are not compilations of "works." If the obligation to protect databases extends only to those databases that constitute compilations of works, the protection accorded databases is seriously eroded from the viewpoint of producers and owners of databases.[10]

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[7] The TRIPS Agreement constitutes Annex 1C of the Marrakesh Agreement, which also established the World Trade Organization (WTO). The basic Agreements entered into force on January 1, 1995, but the TRIPS Agreement generally entered into force one year later on January 1, 1996. All members of the WTO are bound by the obligations of the TRIPS Agreement. The Agreement contains special exceptions for developing countries and for the former socialist countries, however, including the privilege of delayed implementation.

[8] P.L. 103-465, 108 Stat. 4809, Act of December 8, 1994. The United States did not have to make any changes in its copyright law concerning protection of databases, however, since the law was consistent with the TRIPS database obligations.

[9] The full sentence of the primary obligation of the TRIPS Agreement concerning databases reads: "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." Article 10(2) of the TRIPS Agreement.

[10] Some experts may argue that the existing Berne Convention can be interpreted to protect against copying of databases consisting of uncopyrightable data elements,

(continued...)

Copyright protection for compilations under the TRIPS Agreement does not extend to the data or other material itself,[11] nor does protection extend to "ideas, procedures, methods of operation or mathematical concepts as such."[12]

WIPO Copyright Treaty

The WIPO Copyright Treaty originated in a WIPO work program to update the Berne Convention. This work program, which began in 1989, was known as the "Berne Protocol" process, since it was conceived as a mechanism to modernize the Berne Convention through a "protocol" without engaging in a full revision of the Convention.[13] The original purposes were to make explicit in the Berne Convention that computer programs and databases must be protected as copyright subject matter, and generally to update the Convention with respect to use of copyrighted works in digital, electronic environments.

The United States later sought to have updated protection for sound recordings included in the "Berne Protocol" process. In this attempt, the United States was opposed by the European Union and other countries who do not protect sound recordings under copyright law.

Ultimately, a decision was taken in 1992 to split the "Berne Protocol" process into two phases: an update of copyright protection, and preparation of a possible "new instrument" (i.e. treaty) concerning protection of the rights of performers and producers of phonograms (i.e., sound recordings).

This dual copyright and "new instrument" work program culminated in the adoption of two new intellectual property treaties at a WIPO Diplomatic Conference which met in Geneva, Switzerland, from December 2-20, 1996.

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[10](...continued)
notwithstanding the literal text of Article 2(5) of Berne. A 1982 Committee of Governmental Experts did conclude at an international meeting convened jointly by WIPO and UNESCO that "collections and compilations of information" could qualify for copyright protection. *Second Committee of Governmental Experts on Copyright Problems Arising from the Use of Computers for Access to or the Creation of Works* (June 7-11, 1982), *reprinted in* 18 COPYRIGHT 239, 245 (1982). For those countries bound by the TRIPS Agreement, any doubt about the obligation to protect original, creative compilations of data has been settled.

[11] TRIPS, Article 10(2).

[12] TRIPS, Article 9)2).

[13] Implicit in the idea of a protocol was the likelihood that the Convention could be upgraded for some countries and not for others. While that option theoretically exists when the Convention is revised, the protocol device might have made it more feasible for a smaller number of countries to agree on the upgrade of the Convention. The Berne Convention was last revised at Paris in 1971.

The WIPO Copyright Treaty is both a special copyright agreement updating the Berne Convention for those Berne members who ratify or accede to the agreement[14] and a separate treaty, which must be ratified or acceded to in accordance with the treaty approval procedures of the respective countries. The Senate gave its assent to United States ratification of the WIPO Copyright Treaty on October 21, 1998.[15] The Congress passed the Digital Millennium Copyright Act of 1998 ("DMCA")[16] to implement the changes in United States copyright law required by ratification of the WIPO Copyright Treaty and for other purposes, including clarification of United States copyright law in digital, electronic environments.

With respect to database protection, Article 5 of the WIPO Copyright Treaty essentially tracks the language of the TRIPS Agreement concerning creative databases. This new intellectual property treaty establishes an obligation to protect compilations of data that result from the application of intellectual effort. Copyright protection does not extend to the content itself unless the content is independently a work of the intellect, in which case the content enjoys a separate copyright.

The 1996 Geneva Diplomatic Conference also adopted an "agreed statement," whose purpose is to encourage consistent interpretation of the database protection obligations under Berne, the TRIPS Agreement, and the WIPO Copyright Treaty. The statement reads as follows:

> "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."

European Union Database Directive

Background

As part of its program for harmonizing the laws of the members of the European Union, the European Community began a program of review, discussion, and proposals relating to database protection by issuing a Green Paper in 1988 on "Copyright and the Challenge of Technology."[17] After examining database issues in more detail in a 1991 "Follow-up to the Green Paper,"[18] the European Commission proposed issuance of a specific Directive on Database Protection in 1992.

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[14] Article 20 of the Berne Convention permits such special agreements involving Berne members, but only if the agreement improves the level of copyright protection for authors.

[15] The Senate also gave its assent to ratification of the second treaty, the WIPO Performances and Phonograms Treaty. Since that treaty has no relevance to database protection, it is not discussed further in this report.

[16] P.L. 105- 304, October 28, 1998.

[17] Doc. COM (88) 172 final, 7 June 1988.

[18] Doc. COM (90) 584 final, 17 January 1991.

The purpose of the Directive was both to harmonize the protection of databases within the European Union and also to create an additional, sui generis form of protection to exceed the protection available under copyright laws. The effect of the Directive was to narrow slightly the protection available for the structure of the database under the copyright laws of certain countries (especially, the United Kingdom and Ireland, and to a lesser degree, the Netherlands) and at the same time to create new protection for the rights to extract and re-utilize the contents of the database.

Harmonization of copyright protection for databases was identified as a major barrier to full development of an information market within the European Union. The United Kingdom and Ireland extended copyright protection to databases in general under the "sweat of the brow" or industrious effort standard applied to directories by lower appellate courts in the United States before the Supreme Court decision in the *Feist* case. The Netherlands applied a similar standard to directories. The remaining members of the EU apparently applied a higher standard of originality that required an "intellectual creation" to justify copyright protection. At least one EU member -- Germany — may have been inclined to apply an even higher standard of originality than that ultimately adopted under the Database Directive.

The European Commission's review of database protection also led to the conclusion that copyright law alone was not an adequate vehicle for database protection since protection frequently does not extend to the contents of the database (where the contents consist of uncopyrightable data elements). Moreover, the amount of copying of the database's structural elements (selection or arrangement of the data elements) required to prove infringement might be too burdensome under ordinary copyright principles.

The difficulty of proof seems compounded in the case of computerized databases. "Selection" may be arguably lacking since automated databases tend to be comprehensive in scope. "Arrangement" may not be a copyrightable feature of computerized databases since any arrangement or coordination is provided by search engine software systems, which are typically supplied by outside vendors to the database producer.[19]

Unfair competition law might have filled in some of the gaps in copyright protection for databases, but the Commission opted to propose a *sui generis* right to extract and re-utilize the elements of a database.

The final Database Directive was issued by the European Union in March 1996, with a required implementation date of January 1, 1998.[20]

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[19] Statement of Michael Kirk, Executive Director of the American Intellectual Property Law Association, *Hearing on H.R. 2652, the Collections of Information Antipiracy Act and H.R. 2696, the Vessel Hull Design Protection Act Before the house Subcommittee on Courts and intellectual property,* 105th Cong. 1st Sess. --- (October 23, 1997) (Unpublished statement at 3).

[20] "Directive 96/9/EC of the European Parliament and of the Council on the Legal (continued...)

The new extraction right for databases was lauded by some American producers of databases, but also proved highly controversial because the EU limits the extraction right to those countries that extend reciprocal database protection to EU database producers. United States copyright law in the post-*Feist* era seems consistent with the copyright principles enunciated in the EU Database Directive. New legislation would be required, however, to create a *sui generis* extraction right comparable to the extraction right in the EU Directive.

In part as a response to the EU Database Directive, bills were considered in the 104th and 105th Congresses, but not enacted, which would have created new federal protection for databases in the United States for 15 years, essentially under principles of misappropriation. H.R. 354, a closely similar bill, is now pending in the 106th Congress. [21] These proposals to create protection for noncreative databases, while supported by most database producers, have engendered opposition in the United States from the educational, scientific, and library communities and from some database producers.

The EU Database Directive consists of a Preamble of 60 paragraphs, which states important findings and includes many substantive principles. The main text of the Directive contains 17 articles, which are divided into 4 Chapters: Scope, Copyright, Sui Generis Right, and Common Provisions. Unlike most international instruments, the findings of the EU Directive have binding force for the members of the EU.

General Scope

The definition of the term "database" appears in paragraph 17 of the findings and in Article 1(2) of the main text. A "'database' shall mean a collection of independent works, data, or other materials arranged in a systematic or methodical way and individually accessible by electronic or other means." The definition in paragraph 17 goes on to exclude recordings of an audiovisual, cinematographic, literary or musical work.

Protection extends both to electronic and non-electronic databases.[22] Computer programs used in the production or operation of electronic databases are excluded from database protection.[23] However, the Database Directive does not in any way affect the provisions in earlier Community Directives on legal protection of computer

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[20](...continued)
Protection of Databases," adopted 11 March 1996 [hereafter: the EU Database Directive"].

[21] For a discussion of the domestic database proposals, *see* D. Schrader, *Intellectual Property Protection for Noncreative Databases,* CRS Report 98-902 A.

[22] Paragraph 14 of the findings.

[23] Article 1 (3) of the EU Database Directive.

programs, rental rights in certain copyrighted works, or the duration of copyright protection.[24]

Copyright Protection

To enjoy copyright protection, databases must, "by reason of the selection or arrangement of their contents, constitute the author's own intellectual creation."[25]

Copyright protection for databases under the Directive does not extend to their contents but copyright is available for independent works that result from the author's own intellectual creation.

The presumed authors of databases are the natural persons who create them, but the Member States by legislation may provide that the database author is the legal person designated as the owner of rights in the database.[26] The economic rights in collective works belong to the person holding the copyright.[27]

The exclusive rights granted to database copyright owners, which are specified in Article 5 of the Directive, are the rights ordinarily accorded owners of other copyright subject matter. These are the rights of reproduction, adaptation, public distribution, and public communication, display, or performance. The reproduction right specifically applies to temporary or permanent reproduction in whole or in part. The distribution right is exhausted by an authorized first sale of a copy of the database within the European Community.

The permitted exceptions to the exclusive rights may include 1) acts by lawful users which are necessary for access to the contents of the database and to engage in normal use of the contents; 2) reproduction of a non-electronic database for private purposes; 3) use for the sole purpose of illustration for teaching or scientific research (to the extent justified by a noncommercial purpose); 4) use for purposes of public security or in connection with an administrative or judicial procedure; and 5) other limitations that are traditional copyright exceptions under national law.[28] Any exceptions or limitations on the exclusive rights must not unreasonably prejudice the rightsholder's legitimate interests or conflict with normal exploitation of the database.[29]

Sui Generis Right

While the harmonization of the standard of originality for database copyright is highly important, the main focus of the EU Database Directive rests with the new

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[24] Article 2 of the EU Database Directive.

[25] Article 3 (1) of the EU Database Directive.

[26] Article 4 (1) of the EU Database Directive.

[27] Article 4 (2) of the EU Database Directive.

[28] Article 6 (1) of the EU Database Directive.

[29] Article 6 (2) of the EU Database Directive.

form of protection relating to extraction and re-utilization of the uncopyrightable data elements that comprise most databases. Chapter III of the Directive establishes this right.

A primary justification for the *sui generis* right is that this new form of protection is needed to encourage development of databases within the European Union absent uniformity in the laws of unfair competition and case law interpretation of existing laws.[30]

The 1992 draft Directive was more rooted in principles of unfair competition and would have protected against "unfair extraction from a database" for commercial purposes. Following the period of examination, consideration, and debate, the final Directive was modified to reflect a "property right" basis. This modification in part responds to the perceived difficulties in harmonizing unfair competition laws within the European Union. A major difference between unfair competition and property right approaches to protection of intellectual property is that the unfair competition right would apply only in competitive situations. A property based right may apply in noncommercial contexts such as educational or scientific research or teaching (although uses by nonprofit entities are often the subject of exceptions to the right).

Basic right. Unlike copyright protection, the *sui generis* right is not predicated on a minimum standard of originality. In essence, the *sui generis* right is based upon the "sweat of the brow" or industrious effort standard that was once applied to copyright for certain databases in the United States and in the United Kingdom but has now been abandoned under those copyright laws.

Sui generis protection for databases under the EU Directive requires qualitatively or quantitatively a "substantial investment in either the obtaining, verification or presentation of the contents."[31] The nature of the "substantial investment" is not further defined in the main text, but Paragraph (40) of the findings makes clear that the investment "may consist in the employment of financial resources and/or the expending of time, effort, and energy."

Qualifying databases shall be protected against "extraction and/or re-utilization of the whole of or a substantial part, evaluated qualitatively and/or quantitatively, of the contents" of the database.[32] "Extraction" is defined to mean "the temporary or permanent transfer of all or a substantial part of the contents of a database to another medium by any means or in any form."[33] The term "re-utilization" is defined to mean "any form of the making available to the public all or a substantial part of the contents

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[30] EU Database Directive, paragraphs (6) and (7) of the findings.

[31] Article 7 (1) of the EU Database Directive.

[32] *Ibid.*

[33] Article 7 (2) of the EU Database Directive.

of a database by the distribution of copies, by renting, by on-line or other forms of transmission."[34]

The extraction right applies in essence to the reproduction or adaptation of the database's contents. The re-utilization right essentially applies to public distribution or any transmission of the database's contents. Both rights are subject to exceptions or limitations, of course. One limitation is imbedded in the definition of re-utilization: the first sale of a copy of the database exhausts any right to control resale within the European Community.

Term of protection. The *sui generis* right endures for 15 years following the year of completion of the database. If the database is made publicly available before expiration of 15 years from completion, the 15 year term is measured from the period of public availability.[35]

Revisions of the database qualify for a new period of protection if there is a "substantial change" including changes that result "from the accumulation of successive additions, deletions, or alterations, which would result in the database being considered to be a substantial new investment...."[36] The changes and the nature of the investment are to be evaluated both qualitatively and quantitatively.

Persons eligible for protection. Article 11 (1) specifies that database makers or owners who are nationals of an EU member State or have their habitual residence within the European Community are eligible to claim protection under the *sui generis* right. The *sui generis* right can also be claimed by business entities with a business presence in the Community (which is evidenced by central administration or a permanent place of business, or by a registered office in accordance with national law plus a genuine, ongoing business operation, in a member State).[37]

Databases produced by non-EU nationals and non-qualifying businesses can become eligible for this *sui generis* protection only if their country of nationality concludes a special agreement with the Council of the European Union acting upon a proposal from the European Commission.[38]

While not stated in the main text, the only basis on which the European Commission will recommend *sui generis* protection for nationals of non-EU countries is on the ground that such countries "offer comparable protection to databases produced by nationals of a Member State." [39] That is, reciprocity is the basis for protection of foreign database producers. Moreover, if a reciprocal

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[34] *Ibid.*

[35] Article 10 (1) and (2) of the EU Database Directive.

[36] Article 10 (3) of the EU Database Directive.

[37] Article 11 (2) of the EU Database Directive.

[38] Article 11 (3) of the EU Database Directive.

[39] Paragraph (56) of the findings.

agreement is entered into, the term of protection extended to the foreign databases shall not exceed the 15 year term of the Directive.[40]

The condition of reciprocity applies only to the *sui generis* right. It does not and could not apply to the provisions in Chapter II on copyright since the Berne Convention, which also binds the members of the European Union, prohibits reciprocity as a condition of copyright protection (except with respect to comparison of the term of copyright and protection of applied designs).

Limitations or exceptions. A lawful user may generally extract or re-utilize insubstantial parts of the contents of a database. However, the "repeated and systematic extraction and/or re-utilization of insubstantial parts," which the Directive indicates implies a conflict with the normal exploitation of the database, shall not be permitted.[41]

A lawful user of a publicly available database may not perform acts which conflict with normal exploitation of the database or unreasonably prejudice the legitimate interests of the database maker.[42]

These provisions regarding lawful database users apply both in the case of copyright protection for the structure of the database and to the *sui generis* right.

Article 9 of the Directive specifies the exceptions to the *sui generis* right. These are expressed as options, which the member States may legislate at their discretion. These exceptions can be made available to lawful users of publicly available databases to permit use of **substantial** parts of the database. The permissible exceptions are: 1) extraction for private purposes in the case of non-electronic databases; 2) extraction for purposes of teaching or scientific research to the extent justified by the non-commercial purpose, provided the source of the information is credited; and 3) extraction and/or re-utilization for purposes of public security or administrative or judicial procedures. It is notable that exceptions to the re-utilization right are permitted only for essentially governmental purposes.

The final Database Directive makes no provision for compulsory licensing for use of databases, although a form of compulsory licensing had been proposed in the 1992 draft Directive. However, it is possible that narrow compulsory licensing that has already been established by case law within the European Union will continue to be applied to database protection. Moreover, the European Commission will review the possible anti-competitive effects of the Database Directive at three year intervals, and, if necessary, may recommend the establishment of compulsory licensing to cure any abusive competitive practices [43]

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[40] Article 11 (3) of the EU Database Directive.

[41] Article 7 (5) of the EU Database directive.

[42] Article 8 (2) of the EU Database Directive.

[43] Article 16 (3) of the EU Database Directive.

WIPO Database Treaty Proposals

As discussed earlier, WIPO had been working since 1989 to update the Berne Convention to improve protection of copyrighted works in digital, electronic environments and explicitly to protect computer software and databases. Until the European Union developed its Database Directive, discussion of database protection under the auspices of WIPO had essentially been confined to copyright protection of databases.

In February 1996, as WIPO made plans to convene a diplomatic conference to consider copyright proposals to update the Berne Convention and a possible new instrument for sound recordings, the European Commission proposed expansion of the diplomatic conference to consider a proposal for *sui generis* protection of databases. The European Commission proposal tracked its own legal directive on databases. It basically proposed a treaty establishing non-copyright protection for noncreative databases under the principle of industrious effort or substantial investment of resources.

At a follow-up meeting in May 1996, the United States countered with its own proposal for *sui generis* database protection, which was similar to the European Commission's proposal in principle, but differed concerning protection for government-produced databases (the United States proposed an option to deny protection), and term of protection (25 years in the United States proposal). The United States also proposed national treatment as the basis for protection of foreign databases and provisions relating to freedom of contract.

WIPO then prepared a draft Database Treaty by drawing upon the European Commission and United States proposals and circulated the draft in August 1996 along with the drafts for two other treaties. The draft Database Treaty was formally placed on the agenda for the December 1996 Diplomatic Conference at Geneva, Switzerland.

Ultimately, the governments at the 1996 Geneva Diplomatic Conference decided to postpone consideration of a Database Treaty to a subsequent diplomatic conference. The substantive provisions of the draft Database Treaty were never discussed at the Diplomatic Conference. The governments decided that there had been insufficient time to consider the specific proposals relating to database protection apart from copyright laws. Also, the three-week period allotted to the Conference did not realistically provide enough time to consider three separate treaties. The 1996 Diplomatic Conference adopted the WIPO Copyright and Performances and Phonograms Treaties but postponed the draft Database Treaty for possible consideration at a later diplomatic conference.

WIPO has pursued consideration of new protection for databases by holding follow-up informational meetings in September 1997 and September 1998. The next WIPO meeting is scheduled for May 1999.

The proposal for a Database Treaty has proved controversial in the United States. Proposals for new database protection in the United States were considered

by the 105th Congress both separately and as part of the process of implementing the two WIPO Treaties adopted by the 1996 Diplomatic conference. The database proposal was eliminated by the House and Senate Conference on the WIPO implementing legislation -- the Digital Millennium Copyright Act of 1998.[44] A closely similar bill has been re-introduced in the 106th Congress as H.R. 354.

Given the preeminence of the United States as a producer of databases, it is likely that a new diplomatic conference will not be convened to consider a possible database treaty until or unless the United States is prepared fully to support a proposal for a new database treaty.

Conclusion

Database products and services have great economic significance to industrialized societies both at the national and international levels. Computerized databases are transported electronically across national borders through the Internet and other computer networks almost in the blink of an eye. As a consequence of their economic significance, the adequacy of protection for databases at the international level has received substantial attention in a number of different venues.

One key issue relates to the standard of originality or creativity required to sustain copyright protection in databases. In the past, some databases were protected by copyright under a principle of "industrious effort" rather than creative effort. In general, this issue has been resolved internationally (and in the United States) in favor of a requirement of "intellectual creation" and rejection of the industrious effort standard under copyright law. The 1994 Agreement on Trade-Related Aspects of Intellectual Property Rights under the World Trade Organization and the 1996 WIPO Copyright Treaty both set minimum standards for copyright protection of databases based upon a standard of creative effort.

The absence of copyright protection for noncreative databases has led to national, regional, and international proposals for new, *sui generis* forms of protection. The European Union's Directive on the Legal Protection of Databases, effective January 1, 1998, mandates implementation of a new *sui generis* form of protection for databases within the European Union premised on industrious effort or investment of resources.

A WIPO proposal for a new Database Treaty was placed before the 1996 Geneva Diplomatic Conference but the governments postponed consideration of the Database Treaty to a future diplomatic conference. WIPO has held follow-up informational meetings and another informational meeting is planned for May 1999.

Further progress toward a new database treaty presumably is dependent upon development of an international consensus about the need for additional protection and about the basic principles underlying any new intellectual property protection for noncreative databases. The position of the United States on the need for additional

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[44] P.L. 105-304, October 28, 1998.

protection and the scope of such protection under its domestic laws is likely to be a critical element in determining the course of future international developments.