DATABASE PROTECTION—THE EUROPEAN WAY AND ITS IMPACT ON INDIA

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ABSTRACT

Historically, and still today, most databases are protected under copyright laws. The United States Supreme Court decisions, coupled with new developments in digital technology, made most of the database manufacturers susceptible to parasitic competition. The European Union Directive on legal protection of databases created a new proprietary right in information, the database right, which is termed as stronger protection. This directive has a strong impact on the database industries of third-world countries due to its reciprocity clause and the European Union's emergence as a major player in the world market.

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I. INTRODUCTION

The world today is rapidly evolving from a manufacturing-based economy to a service-based economy. Due to this shift, the importance of traditional raw materials is declining while the importance of "Information," the raw material of a service-based economy, is increasing. Also, with the advent of information technology, the "information" has major implications on the creation and distribution of wealth.

Today, every business, trade and industry needs data, information or facts in their daily transactions. The information industry adds value to the raw information by compiling large amounts of raw data. This requires investment of labour, capital, time and skill.

We know that facts and information are inexhaustible. They cannot be extinguished by a second use. This makes compilations of data, facts or information, called databases, prone to full scale misappropriation. This problem has become worse with the rapid emergence of networked digital technologies. The database compilers who invest substantial capital, energy, time and skill cannot recoup their investment due to the free-rider problems and parasitic competition.

Through the ages, databases have been protected under the copyright laws of intellectual property regimes. This paper discusses the protection of databases under copyright laws, the latest European Union Directive on legal protection of databases,[1] and the current Indian position in this area. The European Union Directive created a purely economic right, and a TRIPS plus commitment in the area of database protection.

II. MEANING OF DATABASE AND COPYRIGHT PROTECTION FOR DATABASES

A database generally refers to an aggregate of information systematically arranged and fixed, whether on paper or in any other form such as electronic media, *i.e.* stored in computer system.[2] A database may be simply defined as a collection of data, facts or information.

Databases have long existed in manual or book form. Contemporary examples of manual databases still abound, such as the phone book and

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1 *See generally* Directive 96/9/EC of the European Parliament and of the Council (EC) of Mar. 11, 1996 on The Legal Protection of Databases, 1996 O.J. (L 77) [hereinafter Directive] (issued in an effort to harmonize the level of database protection throughout the European Union).

2 Graham JH. Smith, *Internet Law & Regulation* 24 (3rd ed., Sweet & Maxwell, London 2002).

many reference books, including law reporters. With the rapid emergence of digital network environments, the electronic form of databases has gained immense importance. This has increased the ability of individuals, as well as corporations, to retrieve and analyze large volumes of very crude data through a few keystrokes with the help of a suitable search engine.

While databases, like telephone directories, are "compiled out of necessity in the ordinary course of business, the originators of many electronic databases take on the risks and tasks of gathering raw data" and organizing it through an efficient search engine for easy access to data.[3] These processes involve huge capital investment and are undertaken solely on the reasonable expectation of generating a profit on the sale of the information or database services.

In order to recoup investment and to avoid free-rider or parasitic competition, the database manufacturer must be able to protect his compilation efforts. Databases are prone to full scale misappropriation because information contained within them is highly vulnerable to parasitic competition. Information by its very nature is inexhaustible and indivisible.[4] As a consequence, "the second use of some particular new information does not diminish or exhaust it."[5]

Now let us examine the protection available for databases under copyright laws.

A. Copyright Law & Databases

Traditionally, databases are protected through copyrights as tables and compilations under literary works. The two essential requirements for the grant of copyright protection are originality and fixation in a tangible medium of expression.[6]

The copyright laws of many countries are very similar because most are based on the Berne Convention for the Protection of Literary and Artistic Works (Berne Convention). The Berne Convention, however, does not use the word database; instead it specifies that collections which are original in

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3 Charles Brill, *Legal Protection of Collection of Facts*, Comp. L. Rev. & Tech. J. 1, 2 (Spring 1998).

4 F.W. Grosheide, *Symposium on Intellectual Property, Digital Technology & Electronic Commerce: Digital Copyright and Database Protection: Database Protection—The European Way*, 8 Wash. U. J.L. & Policy 39, 40 (2002).

5 *Id.*

6 *See e.g.* 17 U.S.C. § 102(a) (2000).

selection and arrangement of their contents can be protected.[7] It lays down creativity as a requirement for originality.[8] This originality should be reflected in selection and arrangement of the contents of the database.[9]

The facts, data, information or works alone are not copyrightable. Only the selection and arrangement of information as far as it reflects some originality is protected. Thus, copyright law protects only expression of ideas, not ideas themselves.

The Agreement on the Trade Related Aspects of Intellectual Property Rights (TRIPS) broadens the allowance for database protection while still stipulating an originality requirement for copyright protection of databases.[10] In essence, TRIPS relaxes the Berne Convention standard by allowing protection based solely on originality in the choice of works compiled or in the arrangement and broadens the definition of compilation to include data and other material in any form.

The recent World Intellectual Property Organization (WIPO) Copyright Treaty (WCT) of 1996, which came into force in March 2002, defines compilations of data substantially similar to the TRIPS Agreement provisions.[11] All three international agreements talk about the presence of some intellectual creativity as a requirement for originality in the author's selection of the materials or in their arrangement to get copyright protection.

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7 *Berne Convention for the Protection of Literary and Artistic Works* art. 2(5) (July 24, 1971), Sen. Treaty Doc. No. 99-27 (amend. Sept. 28, 1979) (available in 1971 WL 123138) [hereinafter Berne Convention] (stating, "[c]ollections of literary and artistic works which by reason of the selection and arrangement of their contents constitute intellectual creations shall be protected as such . . .").

8 *Id.*

9 *Id.*

10 TRIPS art. 10(2) provides 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 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.

Agreement on Trade-Related Aspects of Intellectual Property Rights art. 10(2) (Annex 1C, Marrakesh Agreement Establishing the World Trade Organization) (Apr. 15, 1994), 33 I.L.M. 81 (1994) [hereinafter TRIPS Agreement].

11 Databases are:

> 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.

World Intellectual Property Organization: Copyright Treaty art. 5 (Dec. 20, 1996), Sen. Treaty Doc. No. 105-17, 36 I.L.M. 65 [hereinafter WTC].

Originality has not been defined in any jurisdiction. Courts have developed different tests from time to time to assess the originality required for granting copyright protection, especially the courts in the United Kingdom (UK) and in the United States of America (US).

Though originality is the *sine qua non* of copyrightability, the courts in the UK have been more liberal in assessing this requirement. In *University of London Press Limited v. University Tutorial Press Limited,* the court held that drawing on the stock of knowledge in the relevant subject matter and the amount of time expended were not to be determinative for granting copyright protection.[12] In contrast, in *Ladbroke v. William Hill*, the court determined that where more than negligible skill and labour went into the selection of sixteen lists containing varieties of football-betting coupons, copyright protection was appropriate.[13] The courts use this "skill and labour" test to afford copyright protection to non-original databases if sufficient skill and labour was involved in their creation.

There was a similar test followed by the American courts called the "sweat of the brow" theory or doctrine of "industrious collection." The American courts introduced the "sweat of the brow" theory in *Jeweler's Circular Publishing Co. v. Keystone Publishing Co.* There, copyright protection was afforded solely on the basis of investment of labour and other resources in the act of collecting the content of the work, not on the creativity or originality shown by the author.[14] This theory did not protect the first author from the independent creation of a second work by a competing author, but protected the first author from what was viewed as a theft of the fruits of the first author's labour.[15]

Though called by different names, the "skill and labour test" in the UK and the "sweat of the brow" test in the US, both spoke the same—if sufficient investment of labour or any other resources was expended in the compilation of a database, it could get copyright protection. The validity of

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[12] 2 Ch. 601, 608-609 (July 1916) (holding that the word "original" did not mean "that the work must be the expression of original or inventive thought" and that skill, labor, and judgment expended merely in the process of copying could not make it original).

[13] 1 ALL ER 465 (21 Jan. 1964).

[14] 281 F. 83, 89 (2nd Cir. 1922). In this case, the US Court of Appeals for the Second Circuit, quoting from several English opinions, based the copyright of directories on the industrious efforts of the author in gathering the factual data used in the directory. The court quoted Vice Chancellor Giffard's opinion in *Morris v. Ashbee*, L.R.7 Eq.34 (10 Nov. 1868) (quoting *Kelly v. Morris*, L.R. 1 Eq. 696), stating "[n]o one has a right to take the results of the labour and expense incurred by another for the purpose of a rival publication and thereby save himself the expense and labour of working out and arriving at the results by some independent road."

[15] Brill, *supra* n. 3, at 11.

the sweat of the brow theory was not settled by the US until the decision of the Supreme Court in *Feist Publications, Inc. v. Rural Telephone Service Co., Inc.*[16]

B. Impact of the Feist Decision on the Copyrightability of Databases

Until 1991, the courts in the US used the "sweat of the brow" theory to afford copyright protection to databases. The US Supreme Court, however, rejected this approach in *Feist*. Referring to Article I, Section 8, clause 8 of the US Constitution[17] and the Copyright Act of 1976, the Court emphasized that originality, not "sweat of the brow," is the touchstone of copyright protection in directories and other fact-based works.[18]

The Court stated that the 1976 Act extends only to original works of authorship[19] and that there can be no copyright in facts.[20] It reasoned that a compilation is not copyrightable *per se*, but is copyrightable only if its facts have been selected, coordinated or arranged in such a way that the resulting work as a whole constitutes an original work of authorship.[21]

This decision negated the lower courts' industrious collection theory, which had extended copyright protection in compilations to the facts themselves, beyond selection and arrangement. *Feist*, therefore, held that mere labour expended in the creation of work is not sufficient to attract copyright protection.[22] There must be a modicum of creativity, however small it may be.[23]

This decision triggered the debate over the protection of databases, which are, in large percentage, non-original yet commercially very valuable.

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16 499 U.S. 340 (1991).

17 *Id.* at 346 (quoting U.S. Const. art. I, § 8, cl. 8 that Congress shall have the power "to promote the progress of science and useful arts, by securing for limited times to authors and inventors the exclusive right to their respective writings and discoveries").

18 *Id.* at 359-360.

19 *Id.* at 360 (citing 17 U.S.C. § 102(a)).

20 *Id.* (citing 17 U.S.C. § 102(b), which expressly excludes "idea, procedure, process, system, method of operation, concept, principle or discovery regardless of the form in which it is described, explained, illustrated or embodied in such work," from copyrightability).

21 *Id.* (citing 17 U.S.C. §§ 101, 102(a), which respectively, define "compilation" and copyrightable subject matter).

22 *Id.*

23 *Id.* at 346.

The commercial database manufactures, and even the corporations, industries, individuals, and service sectors for which the information is vital, became vulnerable to free-rider problems and parasitic competition.

To make matters worse, as the Berne Convention and TRIPS Agreement both require originality for the protection of databases, the decision in *Feist* holds good in almost all the member countries. With the advent of digitized network technology, the electronic database manufactures' position worsened.

A series of decisions delivered by US courts after *Feist* including *Kregos v. Associated Press*[24] and *Victor Lalli Enterprises, Inc. v. Big Red Apple, Inc.,*[25] among others,[26] have reaffirmed the *Feist* decision. Even the latest case, *Assessment Technologies of WI, LLC v. WIREDATA, Inc.,* affirmed the *Feist* decision that factual data alone does not attract copyright protection.[27] It further implied that only compilations of data that show originality in the selection, arrangement, and coordination of their content are protected under copyright law.[28]

The *Feist* decision gave rise to two problematic aspects of copyright protection for databases. First, copyright protection seems out of place for database protection. The comprehensiveness of the database due to rapid growth of digital technology gives it its special value. The more complete the database, the less likely it is to attract thick copyright protection because of lack of creativity or originality.[29] Second, and the most fundamental question with respect to database protection, concerns database producers seeking protection for the raw information, which is excluded from copyrightability. "[T]he only relevant copyright will be that which is inherent in the compilation or collection. The data does not itself acquire copyright protection merely by virtue of its inclusion in the compilation or collection."[30]

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[24] 937 F.2d 700, 703 (2nd Cir. 1991).

[25] 936 F.2d 671, 673 (2nd Cir. 1991).

[26] *See e.g. Key Publg., Inc. v. Chinatown Today Publg. Ent.*, 945 F.2d 509, 512 (2nd Cir. 1991); *Mason v. Montgomery Data*, *Inc.*, 967 F.2d 135, 141 (5th Cir. 1992); *BellSouth Advert. & Publg. Corp. v. Donnelley Info. Publg., Inc.*, 999 F.2d 1436, 1440 (11th Cir. 1993).

[27] 350 F.3d 640, 643 (7th Cir. 2003). This case clearly points out a controversial issue in the US as to whether non-original databases of commercial importance should be protected. John M. Carson & Brian C. Leubitz, *Copyright: Protection of Databases*, 26 European Intell. Prop. Rev. 5, N--75 (May 2004).

[28] *See Assessment Techs.*, 350 F.3d at 644.

[29] Grosheide, *supra* n. 4, at 43.

[30] *Id.* at 43-44.

C. Position in the US after the Feist Decision on Database Protection: Other Means of Protecting Databases

Manufacturers of commercially valuable databases became vulnerable to parasitic competition after *Feist*. They therefore searched for other statutory remedies like contracts, unfair competition, trade secret protection, as well as technological protections.

In *ProCD Inc. v. Zeidenberg*, the court upheld the validity of shrink-wrap licenses.[31] Shrink-wrap licenses are nothing but contracts. Though contracts can afford protection for databases, where the number of users grows, it becomes more difficult to have an enforceable contractual relationship with each user and a binding contract may not prevent the unauthorized use or appropriation of the data.[32]

US database manufactures also sought remedies under the laws against misappropriation and unfair competition.[33] The US Supreme Court in *International News Service v. Associated Press* (*I.N.S. v. A.P.*) held that, under misappropriation and false representation, the plaintiff could enjoin the defendant from intercepting war news and publishing that news as "the result of defendant's own investigation in the field."[34] It spelled out the elements of misappropriation but it was a limited doctrine.[35] The most recent definition

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[31] 86 F.3d. 1447, 1455 (7th Cir. 1996). The term "shrink-wrap license" takes its name from the clear cellophane wrapper typically used on packages of computer software or on an envelope containing the software disks. The license specifies restrictions on the use of the software and gives the purchaser the choice of either accepting the terms and using the software, or rejecting the terms and returning the software for a refund. Jennet M. Hill, *The State of Copyright Protection for Electronic Databases Beyond ProCD v. Zeidenberg: Are Shrinkwrap Licenses a Viable Alternative for Database Protection?*, 31 Ind. L. Rev. 143, 144 n. 3 (1998).

[32] Rahul Matthan, *The Law Relating to Computers and the Internet* 391 (Butterworths, New Delhi 2000).

[33] Brill, *supra* n. 3, at 20 (defining misappropriation as "a form of competition law that attempts to regulate the competitive interactions of commercial entities. Unfair competition prohibits passing one's goods off as the goods of another, while misappropriation prohibits passing another's goods off as one's own.").

[34] 248 U.S. 215, 242 (1918).

[35] Under *I.N.S. v. A.P.*, the possible elements of misappropriation are:

> (1) an unauthorized and (2) knowing appropriation of (3) an intangible product of a competitor (or others') labor from (4) a legitimate business so as to (5) diminish the profit of said competitor (or other) and/or (6) appropriate the profit for one-self.

Michael J. Bastian, *Protection of "Noncreative" Databases: Harmonization of United States, Foreign and International Law*, 22 B.C. Intl. & Comp. L. Rev. 425, 450 (1999) (quoting *I.N.S.*, 248 U.S. at 240).

of misappropriation was set forth by the US Court of Appeals for the Second Circuit in *National Basketball Association v. Motorola*, *Inc.*[36] The five-point test enunciated in the *National Basketball Association* case is incorporated in the Consumer Access to Information Act Bill, 2004 which is under discussion in the 108th Congress 2nd Session.[37]

The US database manufacturers also sought trade secrecy protection for databases.[38] Whether or not a database is legally a trade secret depends upon whether the compiler "has taken substantial measures" to maintain its secrecy.[39]

Other technological measures like encryption, authentication, watermarking, authorization, and fingerprinting are being adopted by US database manufacturers for the protection against parasitic competition.

Though all these protection systems are available for the protection of databases in the US, there is no specific legislation in European Union member countries to deal with database protection.

III. THE EUROPEAN UNION DIRECTIVE ON DATABASE PROTECTION[40]

The Berne Convention's Art. 2(5) and TRIPS Agreement's Art. 10(2) (stipulating an originality requirement for the protection of databases) coupled with the US Supreme Court's *Feist* decision, made the common law

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[36] 105 F.3d 841, 852 (2nd Cir. 1997). Bastian rephrased the misappropriation test from this case, as having the following elements:

> (1) the compiler generates or collects information at some cost, (2) the value of which is highly time-sensitive and (3) the defendant's use thereof constitutes a free-ride on the compiler's investment and (4) competes directly with the compilers product or service, and (5) is conduct of a kind that if repeated by others would so reduce the incentive to produce the product or service that its existence or quality would be substantially threatened.

Bastian, *supra* n. 35, at 451.

[37] H.R. 3872, 108th Cong. § 2 (Mar. 2, 2004). This Bill aims to protect databases from misappropriation while ensuring consumes access to data and information.

[38] Unif. Trade Secrets Act § 1(4), 14 U.L.A. 438 (1990). This section defines "Trade secret" as:

> information, including a formula, pattern, compilation, program, device, method, technique or process that: (i) derives independent economic value, actual or potential, from not being generally known to, and not being readily ascertainable by proper means by, other persons who can obtain economic value from its disclosure or use, and (ii) is the subject of efforts that are reasonable under the circumstances to maintain its secrecy.

[39] *Telerate Sys., Inc. v. Caro*, 689 F. 221, 232 (S.D.N.Y. 1988).

[40] *See* Directive, *supra* n. 1.

countries and member countries of the Berne Convention rethink the protection of database under copyright laws.

In an effort to harmonize the level of database protection throughout the European Union (EU) and promote the growth of the European database industry, the EC first presented its views on database protection in the Green Paper on Copyright and the Challenge of Technology published in 1988.[41] After *Feist*, the EC issued its first proposal for a Directive on the Legal Protection of Databases in 1992.[42]

It took another two and one half years to reach the Common Position adopted by the Council and the Parliament on July 10, 1995, which formed the basis for the present Directive.[43] Finally, the EC council of Ministers formally adopted it as a Directive in March 1996. It was to be enforced by the member countries of the EU by January 1, 1998 through implementation of national laws.[44]

The Directive defines a database 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."[45] It protects the databases in any form, either paper or electronic.[46] Expressly excluded from the purview of this Directive are computer programs used in the making or operation of databases accessible by electronic means.[47]

The definition of database given by the Directive is very broad, including both electronic and non-electronic databases, and the materials necessary for the operation or consultation of certain databases such as a thesaurus or indexation system. The term database may be used so diversely as to include a CD-ROM based multimedia package, a World Wide Website, an electronic or paper library card, catalogue, or even the library itself.[48]

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41 Grosheide, *supra* n. 4, at 47 (stating that "[d]uring a hearing with interested parties in 1990, the parties expressed a general preference for a copyright approach").

42 *Id.* at 38 (the European Parliament presented its amended proposal in 1993 "with special reference to the observations of the Economic and Social Committee").

43 *Id*. at 50.

44 *Id*. at 73.

45 Directive, *supra* n. 1, at ch. I, art. 1(2).

46 *Id.* at ch. II, art. 1(1).

47 *Id.* at ch. II, art. 1(3). The Directive does not address computer programs that themselves contain database elements. A database accessed by a separate and independent computer program would be protectable, but the same database, integrated with the computer program, may not be protectable. Mark Schneider, *The European Union Database Directive*, 13 Berkeley Tech. L.J. 551, 556 (1998).

48 Schneider, *supra* n. 47, at 556.

This Directive speaks about a two-tier protection system for databases, *i.e.* protection both under copyright and *sui-generis* "database right."[49]

A. Copyright Protection Under the Directive

The Directive adopts the civil law, *droit d' auteur*, approach to copyright protection by requiring the author's own intellectual creativity in selection or arrangement of the contents of the database.[50] This requirement is a slightly higher standard than a "modicum of creativity." Therefore, to obtain copyright protection for databases, the selection or arrangement of the contents of the database should constitute a higher level of creativity than the modicum of originality as propounded by the US courts. The Directive, however, does not provide clear guidance on where the line should be drawn.

Article 5 of the Directive provides for restricted acts.[51] With respect to databases that are protectable by copyright, the author shall have the exclusive right to carryout or to authorize, to reproduce, distribute, publicly display, or communicate the database and to prepare derivative databases.[52]

Article 6, in conjunction with Article 15 of the Directive, stipulates that the lawful user of a database or of a copy thereof may perform, without authorization of its author, all acts that constitute normal use of the contents of the database.[53] Further, Article 6 gives the Member States the option to include a limited list of exceptions in their national laws.[54] The Directive

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[49] *See generally* Directive, *supra* n. 1.

[50] *Id.* at ch. II, art. 3(1) (stating that "databases which, by reason of the selection or arrangement of their contents, constitute the author's own intellectual creation shall be protected as such by copyright. No other criteria shall be applied to determine their eligibility for that protection.").

[51] *Id.* at ch. II, art. 5.

[52] *Id*.

[53] *Id.* at ch. II, art. 6; *Id.* at ch. IV, art. 15.

[54] *Id.* at ch. II, art. 6. Exceptions to this option may be summarized by the following two categories:

> (a) any exception for private use or home copying is only permitted for a database in non-electronic form; and (b) no exception may unreasonably prejudice the legitimate interests of the database author or conflict with normal exploitation of the database.

Grosheide, *supra* n. 4, at 53.

recognizes natural person or group of natural persons who created the database as authors.[55]

B. Sui-Generis Protection for Databases

This *sui-generis* protection system called "database right" is the main product of the Directive on legal protection for databases. Along with the re-affirmation of copyright protection for databases, the Directive created a new right to protect the interests of the makers of databases that fail to rise to the level of originality required to obtain copyright protection.

The Directive requires Member States to provide a new proprietary right for the protection of database contents.[56] In order to obtain this *sui-generis* right, a database maker must show that there has been "a substantial investment in either the obtaining, verification or presentation of the contents."[57] Such substantial investment may consist of the deployment of financial resources, time, energy, or effort. This clearly shows a retreat to the "sweat of the brow" theory.

This database right gives the database maker the right to prevent extraction and/or re-utilization of the whole or of a substantial part of the database contents.[58] However, the first sale of a copy of a database by the right holder exhausts the right to control resale of that copy within the community and public lending is specifically excluded from definitions of re-utilization or extraction.[59]

The Directive provides that the repeated and systematic extraction and/or re-utilization of insubstantial parts of the contents of the database in a manner that prejudices the normal exploitation of the database shall be

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55 Directive, *supra* n. 1, at ch. II, art. 4(1) (which says that "[t]he author of a database shall be the natural person or group of natural persons who created the base or, where the legislation of the Member States so permits, the legal person designated as the right-holder by that legislation.").

56 *Id.* at ch. III, art. 7.

57 *Id.* at ch. III, art. 7(1) (providing that: "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 of a substantial part, evaluated qualitatively and/or quantitatively, of the contents of that database.").

58 *Id.* at ch. III, art. 7(2)(a) (defining extraction 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"); *Id.* at ch. III, art. 7(2)(b) (defining "re-utilization" as "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, [or] by on-line or other forms of transmission").

59 *Id.* at ch. III, art. 7(2)(b).

treated as infringement.[60] Article 7(5) of the Directive thus provides a powerful mode of protection for databases. Copyright protection essentially deals with substantial copying of any work, and the Directive makes no exception for databases.

The term of protection under this new database right is fifteen years from the completion of the compilation of the database.[61] Another important provision of the Directive to highlight is the renewal of the period of protection for another fifteen years whenever there is a substantial change to the protected database, qualitatively or quantitatively.[62]

There are two exceptions to the *sui-generis* right that limit the prerogatives of the database maker, *i.e.* their authority to prevent acts of extraction and/or re-utilization: (1) *vis-à-vis* the legitimate user thereof, and (2) for special purposes where Member States can show a non-commercial (*i.e.* education or scientific research) or security interest.[63] The *sui-generis* right applies irrespective of the database's eligibility for copyright or other protection.[64] In sum, authors of Member States may acquire a double layer of protection for databases that show their own intellectual creativity under

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60 *Id.* at ch. III, art. 7(5) (stating that "[t]he repeated and systematic extraction and/or re-utilization of insubstantial parts of the contents of the database implying acts which conflict with a normal exploitation of that database or which unreasonably prejudice the legitimate interests of the maker of the database shall not be permitted.").

61 *Id.* at ch. III, art. 10(1) (stating that "[t]he right provided for in [art.] 7 shall run from the date of completion of the making of the database. It shall expire fifteen years from the first of January of the year following the date of completion."); *Id.* at ch. III, art. 10(2) (that "[i]n case of a database which is made available to the public in whatever manner before expiry of the period provided for in paragraph 1, the term of protection by that right shall expire fifteen years from the first of January of the year following the date when the database was first made available to the public.").

62 *Id.* at ch. III, art. 10(3) (providing that "[a]ny substantial change, evaluated qualitatively or quantitatively, to the contents of a database, including any substantial change resulting from the accumulation of successive additions, deletions or alterations, which would result in the database being considered to be a substantial new investment, evaluated qualitatively or quantitatively, shall qualify the database resulting from that investment for its own term of protection.").

63 *Id.* at ch. III, art. 9 (providing exceptions to the *sui-generis* right, that "Member States may stipulate that lawful users of a database which is made available to the public in whatever manner may, without the authorization of its maker, extract or re-utilize a substantial part of its contents: (a) in the case of extraction for private purposes of the contents of a non-electronic database; (b) in the case of extraction for the purposes of illustration for teaching or scientific research, as long as the source is indicated and to the extent justified by the non-commercial purpose to be achieved; (c) in the case of extraction and/or re-utilization for the purposes of public security or an administrative or judicial procedure.").

64 *Id.* at ch. III, art. 7(4).

copyright laws, as well as enjoying a *sui-generis* right under the Directive. The database right is also transferable, assignable, and may be granted under contractual license.[65]

Overall, the net effect of the Directive is that it provides a stronger protection in the form of a database right than the copyright protection affords. The provisions for renewal of the database allow the right to extend into perpetuity. As for copyright protection for databases under the Directive, it raised the level of creativity to obtain copyright protection. The most important provision is the reciprocity clause in the Directive.[66] It extends protection under a *sui-generis* right to makers who are either nationals of a Member State or reside in the territory of the European Community.[67]

Individuals outside the EU and entities, including wholly owned subsidiaries, not meeting the above requirements may not claim the *sui-generis* right unless they reside, or were incorporated or formed in a jurisdiction that provides comparable protection for EU databases.[68] The EU Council may conclude reciprocal arrangements with countries that have an equivalent form of protection upon a proposal from the Commission.[69]

IV. IMPACT OF THE DIRECTIVE IN PRACTICE

The Directive on legal protection for databases created two levels of rights: copyright protection and *sui-generis* rights. The Directive raised the level of creativity required for obtaining copyright protection for databases from a mere modicum of creativity to the author's own intellectual creativity. To implement the Directive, the UK issued regulations for the protection of databases, effective beginning January 1, 1998, to make changes to the copyright law provisions of the Copyright, Designs, and Patents Act of 1988 and inserted a new section, 3(A), which provides that a literary work consisting of a database is original if and only if, by reason of the selection or arrangement of the contents of the database, the database constitutes the

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65 *Id.* at ch. III, art. 7(3).

66 *Id.* at ch. III, art. 11(1) (providing that "[t]he right provided in Article 7 shall apply to databases whose makers or right holders are nationals of a Member State or who have their habitual residence in the territory of the Community.").

67 *Id.*

68 *Id.* at ch. III, art. 11.

69 *Id.* at ch. III, art. 11(3).

author's own intellectual creation.[70] This raised the criteria to obtain copyright protection for databases in the UK.

The new *sui-generis* right is purely an economic right, unlike the existing forms of intellectual property that are grounded philosophically on the promotion of creativity or innovation, or to safeguard moral rights in the European tradition.[71]

As the modern service industry, as well as manufacturing industries, value information as assets, the *sui-generis* right provides for a proprietary right in information or facts. It offers stronger protection than copyright because if a person extracts insubstantial amounts of information from the database on a regular basis and/or re-utilizes it, these actions are treated as infringement.[72] This database right is also valuable because it may be renewed into perpetuity considering that most business entities constantly update their databases.

A. Other Side of the Coin

On one hand, data and information are bundled into private information goods that compete on the general products market with or without intellectual property protection. On the other hand, data and information constitute the building blocks of knowledge and there is a well-recognized public interest in ensuring its availability for the progress of education, science and research, and for the further development of new, value-adding informational goods.[73]

Given this dual nature of data and information, legislators must avoid over-protecting them. Over-protection would deprive basic and

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[70] The Copyright and Rights in Databases Regulations, 1997 (SI 1997/3032). Sec. 3(1) of UK's Copyright, Designs, and Patents Act, 1988 was amended to add a new Sec. 3(A). Sec. 3(A)(1) defines "database" as a collection of independent works, data or other materials which a) are arranged in a systematic or methodical way, and b) are individually accessible by electric or other means. Sec. 3(A)(2) states that databases are original for copyright purposes if, and only if, by reason of the selection or arrangement of the contents of the database, the database constitutes the author's own intellectual creation. *See generally* Bainbridge, David *Intellectual Property* 215, 218 (5th ed., Pearson Education, Singapore 2001).

[71] Andrew Oram, *The Sap and the Syrup of the Information Age: Coping with Database Protection Laws*, 31 Computer L. Rptr. 5-6 (2000).

[72] Directive, *supra* n. 1, at ch. III, art. 7(5).

[73] Oram, *supra* n. 71, at 7.

applied researchers of this information and retard the progress of worldwide economic development.[74]

There is no provision for mandatory licensing in the Directive. This may create monopoly in facts, data, or information, which is not healthy for the economy, and creates a risk of monopoly of pricing in cases of sole source providers of information in the market.

The primary objective of the intellectual property regime is to promote creativity and innovation and also to maintain a vigorous public domain. But this new right may block dissemination of information and obstruct its flow into the public domain. It may create hurdles for diverse communities like academicians, researchers, scientists, and students due to the commercial nature of facts. It may minute flows of information into the public domain, and the lack of mandatory public interest limitations is a point for concern.[75]

Further, there is a potential danger of the new database right ending in perpetuity. As the European community is emerging as a major world market, the reciprocity clause in the Directive may pressure all the nations to adopt similar type of *sui generis* protection in order to protect their databases in the European Market.

B. Case Law Development in European Union on the Directive

The first case addressing the scope of the database right to reach the English courts was *British Horseracing Board Ltd. v. William Hill Organization. Ltd.*[76] The English Court of Appeals held that even for an indirect use, systematic or regular extraction from a database amounted to infringement.[77]

There, the court found room for reasonable doubt on points argued by William Hill as to the vagueness of the terms used in the Directive such

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[74] *See id.* at 13 (A proposed law in the US has this in mind. "H.R. 1858 provides much more safety for copying for research purposes, protecting it 'so long as such conduct is not part of a consistent pattern engaged in for the purpose of direct commercial competition.'").

[75] *See Informational Meeting on Intellectual Property in Databases: Geneva, September 17 to 19, 1997* 4, WIPO Doc. DB/IM/6 (Sept. 19, 1997) (where "[t]he importance of free and open access to information was stressed by most delegations, especially in domains of high public interest, such as science, education and national security.").

[76] [2001] R.P.C. 31 (Ch. 2001).

[77] *Id.* at 638 (holding that though each day's use was a single extraction from a database, which is in a constant state of refinement, it amounted to prejudice against the legitimate interest of the British Horseracing Board and that William Hill Organization was infringing).

as: (i) "substantial parts" and "insubstantial parts" of the contents of the database;[78] (ii) expressions "qualitatively" and "quantitatively";[79] and (iii) expressions "re-utilization" and "extraction."[80] The court specifically noted that:

> Article 7(1) provides that substantiality is to be assessed by looking at the quantity and quality of what is taken but it does not require them to be looked at separately . . . . This exercise does not admit of precision but . . . in undertaking it the court must bear in mind that one of the objectives of the Directive is to protect the investment in obtaining, verifying or presenting the contents of databases.[81]

With an ambiguity facing the courts,

> [t]he [European Court of Justice] will likely be called upon to formulate a consistent test for: (1) interpreting the Directive; (2) determining how much or what kind of time, money, efforts, etc., spent in making a database constitute 'substantial investment;' and (3) determining whether any factors limiting the scope of the database right . . . are feasible.[82]

In another English case the court rejected the concept of reverse engineering as a defense in the context of the database right,[83] in contrast with its acceptance of a "spare parts" defense to copyright infringement as enunciated in *British Leyland Motor Corp. Ltd. v. Armstrong Patents Co. Ltd*.[84] There was no compelling analogy between repair by a blacksmith referred to in *British Leyland* and the "sophisticated devices operated and controlled by computer programs, which look to the original manufacturer for repair and maintenance, and updating of the programs involved."[85]

In other jurisdictions of the EU, courts have decided cases according to database protection afforded by the Directive. In a German case, the Bundesgerichtshof held that telephone directories were databases within the meaning of the Directive and were protected by the database right because they represented a substantial investment by the claimants and this protection was irrespective of whether the database was in electronic form.[86]

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78 *Id.* at 632, 635.

79 *Id.* at 631-32.

80 *Id.* at 633.

81 *Id.* at 632.

82 Xuqiong (Joanna) Wu, Student Author, *Foreign and International Law: Database Protection: E.C. Database Directive*, 17 Berkeley Tech. L.J. 571, 582-83 (2002).

83 *Mars U.K. Ltd. v. Teknowledge Ltd.*, [2000] F.S.R. 138, ¶¶ 13, 27-29 (Ch. 2000).

84 [1986] A.C. 577 (H.L. 1986).

85 *Id.* at ¶ 27.

86 *Re the Unauthorized Reproduction of Tel. Directories on CD-Rom* [2000] E.C.C. 433, ¶ ¶ 16, 18 (BGH 2000) (refusing to grant copyright protection in telephone directories

In *Societe Reed Expositions France v. Societe Tigest Sarl*, a French case, the court held that catalogues and magazines on the organization of trade fairs and exhibitions came under the scope of the Protection of Database Act 1998 (passed to implement the Directive in France) as the claimant had expended sufficient financial, material and human investment in the creation of the same.[87]

As of late, due to the broad definition of database given in the Directive, even for collection of materials on a website, the database right is being claimed. Currently, both deep-linking and surface linking to a website without prior permission is being claimed as an infringement of the database right. In many EU member countries, courts have decided that deep-linking to a website is infringement as per the Directive.[88]

With recent case law developments, at least one commentator maintains that there is a need to reassess the effectiveness of the Directive as the rights of the database creators are continuing to expand under the Directive's broad definition of database.[89] This is evident from the recent efforts by business interests to capitalize on "the uncertainty that persists in the case law interpreting key provisions of the Directive," for instance, the cases involving linking.[90]

V. INDIAN POSITION ON DATABASE PROTECTION

A. Background

Indian law on database protection lags far behind the West; Indian intellectual property laws are not properly geared up to face the new digital age.

Database manufacturers are relying on copyright laws as databases are protected as compilations under literary works.[91] In India, a member of the Berne Convention and TRIPS Agreement, the requirement of originality

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because they did not come under personal intellectual creations and they were not sufficiently creative to be protected as a composite work).

87 CA Paris, C d'A, 12 Sept. 2001, [2002] E.C.C. 29, ¶ 26.

88 Rebecca Lubens, Student Author, *Foreign and International Law: Survey of Developments in European Database Protection*, 18 Berkeley Tech. L.J. 447, 459-62 (2003).

89 *Id.* at 472.

90 *Id.*

91 India Copyright Act, 1957, § 2(o) (stating that "literary work includes computer programmes, tables and compilations including computer data bases").

in selection or arrangement of the contents of the database is required to attract copyright protection.[92] Furthermore, the Indian Copyright Act provides that copyright shall subsist in original works of authorship.[93]

To obtain copyright protection for a compilation, it must exhibit some creativity or originality in the selection or arrangement of the contents of the compilation. There has been no clear pronouncement by the Indian courts on the concept of originality and the term is not defined anywhere in the Indian Copyright Act.

The Indian courts seem to uphold the "sweat of the brow" theory or the skill, labour and judgment test in deciding copyright protection against infringement. In many cases, like *McMillan v. Suresh Chunder Deb*,[94] *Govindan v. Gopalakrishna*,[95] and others,[96] the courts held that a compilation developed through devotion of time, capital, energy and skill, though taken from a common source, amounted to a literary work and was therefore protected under copyright. The courts based their decisions on the point that no person was entitled to appropriate for oneself the fruits of another's skill, labour or judgment and even a small amount of creativity in a compilation was protected.[97] These cases clearly show that the "sweat of the brow" doctrine is being followed by Indian courts in deciding copyright protection to databases.

In a recent case, the Delhi High Court said that in the case of compilations, another person can make a similar compilation, but cannot infringe upon the copyright of the previous compiler by appropriating the fruits of his labour.[98] Rejecting protection for "Head notes" prepared by the plaintiff publishers, the Court observed that protection of copyright must inhere in a creative, original selection of facts and not in the creative means

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92 TRIPS Agreement, *supra* n. 10, at art. 10(2); Berne Convention, *supra* n. 7, at art. 2(5).

93 India Copyright Act § 13 ("Subject to the provisions of this section and the other provisions of this Act, copyright shall subsist throughout India in [original works of authorship].").

94 e.g. I.L.R. 17 (Cal.) 951, 961.

95 e.g. 1955 A.I.R. 42 (Mad.) 391, 393.

96 *Shyam Lal Paharia v. Gaya Prasad Gupta Rasal*, e.g., 1971 A.I.R. 58 (Allahabad) 192, 195, 199; *Gangavishnu Shrikisondas v. Moreshvar Bapuji Hegishte*, e.g., I.L.R. 13 (Bom.) 358, 363 (1889); *Burlington Home Shopping Pvt. Ltd v. Rajanish Chibber* (1995) 6 Ent. L.Rev. 159 (Delhi).

97 *Govindan*, e.g., 1955 A.I.R. 42 (Mad.) at 393.

98 *Eastern Book Company v. Desai*, e.g., 2001 A.I.R. (Delhi) 185. (IA Nos. 3149/2000, 6978/2000 in Suit Nos. 624/2000 & IA Nos. 3577-78, 3581, 4610/2000 in Suit Nos. 758/2000, Source MANU/DE/0066/2001m).

used to discover the facts.[99] The Court referred to the US Supreme Court's *Feist* decision and said that there should be a modicum of creativity in the selection, arrangement or co-ordination of the contents of a database to attract copyright protection.[100]

We may say that the Indian position on originality is along the middle path. There is an increasing demand for "information," the raw material for the service industry with a worldwide shift from the manufacturing sector to the service sector. Of course, the Indian service industry is one of the largest in the world. To protect Indian database manufacturers in the world's major market, *i.e.* the EU, India must enact legislation to afford an equal level of protection to databases as provided for in the Directive on legal protection of Databases, which provides for reciprocity for those Member States that provide such protection.[101]

At the same time, Indian legislation should have a strong mandatory licensing provision so as not to encourage monopoly in facts. Legislation should rely more on antimonopoly and pro-competitive practices in affording protection to non-original, commercial compilations.

B. Database Protection and the Indian Information Technology Act, 2000

If we look at the text of Section 43 of the Indian Information Technology Act, 2000 it provides that:

> "[i]f any person without permission of the owner or any other person who is in charge of a computer, computer system or computer network . . . downloads, copies or extracts any data, computer data base or information from such computer, computer system or computer network including information or data held or stored in any removable storage medium . . .

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[99] *Id.* at 209 ¶ 41. The court, while considering the copyrightability of judgment head notes, said that a genuine abridgment of judgments of the courts was an original work and could be the subject matter of copyright protection. The court also said that if the head notes were verbatim extracts from the judgments of the courts, there was no amount of skill or labour involved in such head notes and therefore no copyright therein. Here the court speaks about the labour and skill test.

[100] *Id.* at 203 ¶ 29. The court, speaking of the modicum of creativity requirement, said that reproduction of the judgments by giving paragraph numbers and correcting the mistakes, if any, was not enough creativity by the plaintiff so there could be no copyright in the reproductions. The court speaks of the requirement of modicum of creativity in selection and arrangement in this paragraph while it states later in paragraph 41 that if the plaintiffs prepare head notes with their own skill and labour, there can be copyright in such head notes. This decision speaks both about the modicum of creativity and the labour and skill test.

[101] Directive, *supra* n. 1, at ch. III, art. 11.

> he shall be liable to pay damages by way of compensation not exceeding one crore rupees."[102]

This section also defines database as the representation of information, knowledge, facts, concepts, or instructions prepared in a formalized manner.[103] Though this section can be applied for electronic databases, its efficacy is still to be tested for granting protection to databases or data on the Internet. This section can be further developed in order to use it efficiently.

VI. CONCLUSION

Databases are prone to full scale misappropriation, as information, by its very nature, is ubiquitous, inexhaustible, and indivisible. With a worldwide shift from the manufacturing sector to the service sector, there has been an increasing demand for the raw materials (*i.e.* information) of the service industry. Because information and data is not invented or created, the compilations of the same are mostly non-original. As the copyright laws protect only original databases, as reinforced by the *Feist* decision, the latest digital network technologies make database producers susceptible to free-rider problems and parasitic competition.

To avoid this lacuna, the EU introduced a new *sui-generis* right called the database right to protect un-original databases, which required substantial investment of time, labour or capital in their creation. This new right is purely grounded on economic interests of the database manufacturers unlike other forms of intellectual property, which encourage creativity or innovation. This right created a new proprietary right in facts and information, which may result in minute flows of information to the public domain.

Due to the reciprocity clause in the Directive on legal protection of databases, third-world countries like India, and developed countries like the US, have to provide similar types of protection in their national laws in order to protect their database industries in the world's major market. Even though US copyright legislation expressly excludes ideas, facts, and information, to protect its database manufacturers in the EU, it has to provide for a database right similar to that provided by the Directive.

The Directive created a new economic right essentially to protect the investment of the database industries. This database right is unlike any form of intellectual property in that it is not for promoting any intellectual

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[102] The Information Technology Act, 2000, § 43 (India).

[103] *Id.*

creativity or invention. It is purely trade related. Due to the reciprocity clause in the Directive, it may turn out to become a TRIPS-plus commitment.

An international level arrangement is required at this juncture, which provides for mandatory licensing and pro-competitive provisions to discourage monopoly in facts and information and to encourage the free flow and dissemination of information to the public domain. There should be efforts to minimize the period of protection so as not to monopolize this information into perpetuity. There should be clearly mentioned fair use provisions for public interest related needs, such as for research, education, and national security. WIPO presented, but failed to agree on, a draft protocol based on a proposal by the US and EU jointly, to grant *sui-generis* protection to databases in 1996.[104]

WIPO should once again take the initiative to facilitate an international arrangement because of the impact of the EU's Directive on the legal protection of databases on third-world countries, like India, as well as on developed countries like America.

[104] WIPO diplomatic conference held at Geneva in December 1996 on WIPO's Digital Agenda with a view to fostering the potential of electronic commerce and of the information society based on legal certainty. Available at: http://www.wipo.int/documents/en/diplconf/6dc_all.htm; document No.CRNR/DC/6.