

## Protection of Databases: An Analysis of the International Scenario and the Indian Position - The Road Ahead

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*Need for protecting database is a major issue both under International and Indian Laws. Multi-party Treaty which incorporates both the US and European models are needed for regulating the legislative framework regarding protection of database. This Article lays down the importance of the need of comprehensive legislation for the protection of database.*

### 1. Introduction

*"Increasingly, the central question is becoming who will have access to the information these machines must have in storage to guarantee that the right decisions are made."*

(Jean- Francois Lyotard)<sup>1</sup>

The transition of many First World Economies from industrial based economies to information-based economies is a relatively recent phenomenon. It is the consequence of an explosion in information and the means by which it can be disseminated that results in turn from far-reaching technological and scientific developments. In particular, advances in digital technology have facilitated the creation of databases. Large amount of data can be created in, or converted into, digital forms, and scanners and other devices permit the digital conversion of data. Alternatively, data can be originally produced and stored in digital forms that are perceived by humans as texts, pictures, tables, spreadsheets and other easily recognisable formats. The digitalisation of data in turn reduces the storage costs. This expanded capacity to store data is complemented by an increased capacity to access and use it. It is facilitated by computer programs that enable quick and reliable searching and retrieval of data.

Databases play an important role in the development of information market and its products. The pressure to provide specific legislative protection for databases has arisen from the increase in mass of raw data available in almost every area of commerce and science, the increased technological ability to create databases containing those data and to provide easy access to them.

The ambiguity of the present copyright laws governing the protection of databases creates a situation where database owners are unsure of how IP laws safeguard their information, Databases are fundamental to scientific research, yet the lack of interoperability between databases and limited access inhibits this research.

Over the past few years, India is gradually building up capability in the database field and initiatives are taken by domestic vendors and institutions to commercialize databases and related services in a number of fields. In this project the international and the Indian framework for the protection of databases has been analysed in detail. Also, it is analysed that there is a need for a separate legislation to protect them and an attempt has been made to state the points on which the legislation should focus.

### 2. Meaning of Database

Database is a term with no precise definition. At its most generic, it is a collection of independent components, such as pieces of information, data, or works, arranged in a systematic or methodical way and which are individually accessible by electronic or

other means.<sup>2</sup> In the Indian Copyright Act there are no specific meanings attached to word databases or computer databases. Compilations including databases are defined as literary works.<sup>3</sup> However, the Copyright, Designs and Patents Act, 1988 (CDPA) (the UK Act) defines a 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 electronic or other means.<sup>4</sup>

The U.S. Copyright Office has stated that “in the terminology of copyright law, a database is a compilation:

a work formed by the collection and assembling of preexisting materials or of data...”<sup>5</sup>

Furthermore, database is defined in Article 1(2) of the European Union Directive on Legal Protection of Database<sup>6</sup> as a collection of independent works, data or other materials arranged in a systematic or methodical way and capable of being individually accessed by electronic or other means. A similar definition is contained in the Database Regulations. The significant elements in this definition are the references to “independent works, data or other materials”, to arrangement in a “systematic or methodical” way, and to individual access ‘by electronic or other means.’<sup>7</sup> Database protection applies to electronic and non-electronic databases.<sup>8</sup>

Therefore, it needs to be noted that there are ambiguities and the concept of database is not always clearly understood. This ambiguity implies that there is scope to debate what are the best means of protecting databases.<sup>9</sup>

The present debate regarding database protection can be viewed simply as an extension of the historical clash between two conflicting models of copyright protection for compilations. The first model advocates that databases and factual compilations receive protection *per se*, i.e. without any showing of creativity or original authorship. Proponents of this theory, better known as the “sweat of the brow” or “industrious collection” doctrine, justify their position by arguing that protection should be extended to databases as a reward for the hard work and investment required to compile the facts and information contained in the database.<sup>10</sup> Such a reward provides compilers with the incentive to develop new databases. Under this doctrine, protection extends to the otherwise unprotected facts contained in the compilation.<sup>11</sup>

The second model of intellectual property rejects the notion that databases without any originality or creativity should be protected.<sup>12</sup> Instead, Advocates of the second model would only extend copyright protection to the “expression” contained in the database, which is limited to the original selection, coordination, or arrangement of facts in the database — but not the facts themselves.<sup>13</sup>

### **3. Need to Protect the Property in Database**

Databases are useful collections of materials which consequently have value independently of their several items of content.<sup>14</sup> They are often creative, and usually costly to compile, present and maintain. In the information society, they are of increasing economic significance.

Those who create databases, and those who invest in their development and maintenance, may reasonably expect to enjoy a return on their investments, but once a database has been made publically available securing a financial return from

it is likely to be difficult, if not impractical, unless some form of property right is recognized in the database as such.<sup>15</sup>

There is a view that taking a database and simply rearranging the data, creates something new and is not infringement of the original database copyright.<sup>16</sup> The alternative view is that nowadays the data in a database are not placed in the computer memory in any particular order, and are simply available for retrieval so the former view implies an infringement of the original database.<sup>17</sup>

Another view states that if there was no skill in selecting the individual items that go in a compilation or database and if there is no skill in the arrangement (no addition of keywords or indexing terms, simply a listing), then such a compilation should not justify copyright protection.<sup>18</sup>

Database manufacturers base their call for a new right on purely economic grounds, unlike existing forms of intellectual property that are grounded philosophically on the promotion of creativity, or “moral rights” in the European tradition. An author tends to maintain the copyright on a creative work even when he or she receives no remuneration for it (as in the case of this article) simply so other people won’t change it and ship it around in garbled form. But database manufacturers have little reason to be concerned about how people use facts from the collections unless the manufacturers’ markets are threatened.

The doctrines of “unfair competition” and “misappropriation” have long been used to protect database manufacturers, like other providers of goods and services, from losing business to competitors who become “free riders” by simply republishing the work that the original manufacturer has taken so long to acquire.<sup>19</sup>

While printed compilations have always been protected under copyright law, the protection of computer databases is fairly recent.<sup>20</sup> As with all copyright law, copyright on databases protects only original works. As such, in most instances only the layout of the database is protected and not the inherent data itself. Prior to *Feist Publications v. Rural Telephone Service*,<sup>21</sup> the general practice was for the courts to allow for database owners to argue that their efforts—by “sweat of the brow”—constituted reason enough to protect a database and its data under copyright.<sup>22</sup> In *Feist*, however, the Supreme Court held that collections of facts could be granted only “thin” protection, that is, only the arrangement of the database would be protected. The underlying data would be part of the public domain if not novel<sup>23</sup> as only originators may receive the benefits of copyright—“Only those who add to human knowledge may receive an exclusive right in what they added.”<sup>24</sup>

The problem for many scientific fields and the databases that service these fields is that they *only* deal with compilations of fact.<sup>25</sup> Database owners, unsure of their rights, create long and complicated licenses in an effort to protect their investments from competitors.<sup>26</sup> Academia, also unsure of its rights, counters with long and complex negotiations, to insure that it is not being roped into an unfair situation. In addition, many owners of scientifically important databases recoil into the absolute protection of trade secret laws, further hindering scientific research.<sup>27</sup>

What has put database protection on the policy agendas of most developed economies (and India’s), has been the ease with which technology has allowed the profligate spread of databases (along with their information), and, ironically, a corresponding increase in unauthorised access to these databases. This spread of technology has also increased the ease with which data may be copied. If hard work

was ever at any point a deterrent to copying a database, it has suffered a well-deserved rout through the spread of technology coupled with the ubiquitous use of technology for copying and replication.

#### **4. Protection under Copyright Laws and Database Directive**

The European Union, in its efforts to harmonize and provide greater protection for intellectual property in data, passed the EU Database Directive,<sup>28</sup> which allowed the information within a database to be protected under a new *sui generis* right. At a theoretical level, it would be pertinent to look at the reasons for copyright in general versus the copyrighting of databases in particular (in the form of a *sui generis* regime).<sup>29</sup> The underlying rationale of copyright law in general has been to promote the making of creative works. While the idea behind copyright law is to provide an incentive to persons to produce creative works by granting them a monopoly over their product, the idea behind granting a *sui generis* protection to databases is more akin to a “real” property right (in the Lockean sense). So, we find that the rationale behind database protection is that information is treated as “property *per se*”, as opposed to copyright in general, where it is limited to “property with a purpose”.<sup>30</sup> Under traditional copyright law, the right in intellectual property was purposive in nature, meaning that the association of the term “property” with cultural production was merely a fiction to grant protection to works produced by members of society.

#### **5. International Regime for Protection of Databases**

There are three main international agreements specifically dealing with collection or compilations which consequently impact on databases. They are the Berne Convention, TRIPS and the Copyright Treaty.

#### **6. Berne Convention**

The Berne Convention for the Protection of Literary and Artistic Works (the “Berne Convention”), guarantees quite minimal protection for compilations of literary and artistic works. Article 2(5) is restricted to collection of literary and artistic works rather than collection of information where the individual pieces of information were not in a form entitling copyright protection. The Berne Convention lists the works governed by it and since databases are not specifically mentioned, it could either fit into the list as a “collection” or “literary and artistic works”.

#### **7. TRIPS**

TRIPS referred to databases and set up a framework for their protection. Its formula summarises and resolves the main controversies concerning database protection by using the fundamental approach that copyright in a database concerns its structure rather than its content. It is the mode of compilation that is protected and not the materials in question, which are assembled to create the database in question.

#### **8. Copyright Treaty**

Protection under this treaty is conditional upon the collection being selected or arranged in such a way as to constitute an intellectual creation.<sup>31</sup> There are also more general provisions concerning copyright protection that have impact on legal protection of databases. These provisions are those concerning electronic dissemination of copyright material<sup>32</sup>, *sui generis* protection<sup>33</sup>, restrictions on manufacture, importation and distribution and use of devices that may be used to circumvent technological measures of protection in the contracting parties<sup>34</sup>,

providing protection for rights of management information to the owners of databases subject to copyright protection<sup>35</sup>, etc.

## 9. Database Directive

### 9.1 Copyright in the Compilation

This Directive seeks to bypass this difficulty i.e copyright in the compilation. The term database is defined in the Directive itself to mean a collection of independent works, data or other materials arranged in a systematic manner or methodological way and individually accessed by electronic or other means.<sup>36</sup> It also allows copyright in a database (as distinct from its contents) but only on the basis of authorship involving personal intellectual creativity.<sup>37</sup> This is a new limitation so far as the common law countries are concerned. Intellectual judgment which is in some sense the author's own must go either into choosing contents or into the method of arrangement. For example, a selective dictionary will be a clearer case for copyright than the classified telephone dictionary.

Where this copyright arises, it is an author's right. Accordingly it will last for life plus 70 years; so a couple of youngsters should be on the production team. The author's right will be available under the Berne Convention to Americans and others entitled to national treatment. The right covers a comprehensive list of copying and like activities, and of public communication and similar steps.<sup>38</sup>

### 9.2 Database Right

In addition to the copyright protection, there is a separate *sui generis* right given to the maker of a database (the investor who initiates it) against extraction or re-utilization of the contents of the database.<sup>39</sup> Five points are important in this regard:

(1) This right applies to databases whether or not their arrangement justifies copyright or not and whatever the position may be regarding copyright in individual items in its contents.<sup>40</sup>

(2) The focus upon contents, rather than organizational structure, is intended to give a right where the contents have been wholly or substantially taken out and rearranged (generally by a computer) so as to provide a quite different organisation to essentially the same material – a re-organisation which would not necessarily amount to infringement of copyright in the original arrangement.<sup>41</sup> This, however, is not to discount the relevance of structural arrangements of the materials.

(3) The database has to be a product of substantial investment. It cannot, for instance, consist merely of different works collected together on an ordinary music CD.<sup>42</sup> In some European States, there were early decisions that website files of articles, news items or advertisements from the continuing numbers of a paper or magazine would constitute a database.<sup>43</sup> The question has now become intertwined with the issue of whether the investment has been made in creating the information material, as distinct from construing the database.

(4) The right protects "extraction" and/or "re-utilisation" of the whole or substantial part, evaluated quantitatively and qualitatively, of the contents. "Extraction" here means the permanent or temporary transfer of contents to another medium by any means or form; and "re-utilisation" means making the contents available to the public by any means.<sup>44</sup> It is expressly stated that

repealed and systematic extraction of insubstantial parts of a database can continue infringement.<sup>45</sup>

(5) The right lasts for 15 years from the completion of the database, or 15 years from its becoming available to the public during a 15 year period.<sup>46</sup> However, further substantial investment in additions, deletions or alterations starts time running afresh.<sup>47</sup> This means in effect that a living database has indeterminate protection, just as does a copyright textbook from regular editions containing revised material.<sup>48</sup>

These agreements provide minimum standards of protection. Individual nations are at a liberty to provide higher level of protection. However, the effect of the EU Directive has been to standardise copyright protection for databases to the level prescribed in TRIPS and Copyright Treaty.

## **10. Protection in the Indian Scenario**

### ***10.1 Database Protection under the Information Technology Act, 2000***

In 1999 prompted by United Nations Commission on International Trade Laws Model Law on Electronic Commerce<sup>11</sup> (MLEC) and notable developments in Asian countries such as Singapore and Malaysia, India commenced with providing a legal framework for internet activity.<sup>49</sup> The Union Cabinet approved the bill on 13<sup>th</sup> May, 2000 and it was finally passed by both the houses of Parliament by 17<sup>th</sup> May, 2000. The Act received presidential assent on 9<sup>th</sup> June, 2000 as the Information Technology Act, 2000.<sup>50</sup> India aims to regulate all digital activity through the Information Technology Act, 2000. However the database protections provided it to under the act is fairly limited.<sup>51</sup>

Specifically Section 43 of the Indian Information Technology Act, 2000 imposes liability "to pay damages by way of compensation not exceeding 1 crore rupees to the person so affected"<sup>52</sup> if "any person without permission downloads, copies, or extracts any data, computer database or information from such computer, computer system or computer network."<sup>53</sup> The section defines "database" as the "representation of information, knowledge, facts, concepts, or instructions prepared in a formalized manner." Though this section can be applied for electronic databases, its effectiveness is still to be tested for granting protection to databases or data on the Internet.

### ***10.2 Database Protection under the Copyright Act, 1957***

Database manufacturers are relying on copyright laws as databases are protected as compilations under literary works. In India, a member of the Berne Convention and TRIPS Agreement, the requirement of originality in selection or arrangement of the contents of the database is required to attract copyright protection.<sup>54</sup> Furthermore, the Copyright Act provides that copyright shall subsist in original works of authorship. 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. Typically each case is decided on the basis of its, peculiar, "facts and circumstances".

The Indian Courts seem to uphold the "sweat of the brow" theory or the skill, labour and judgment test in deciding copyright infringement of databases. In many cases,



like *McMillan v. Suresh Chunder Deb*,<sup>55</sup> *Govindan v. Gopalakrishna*,<sup>56</sup> and others,<sup>57</sup> the courts have 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 seize for oneself the fruits of another's skill, labour or judgment and even a small amount of creativity in a compilation was protected. These cases clearly show that the "sweat of the brow" doctrine is being followed by Indian courts in deciding copyright protection to databases.

The sections applicability to database protection was recently examined in *Diljeet Titus, Advocate & Ors v. Alfred A. Adebare & Ors*<sup>58</sup> where the Delhi High Court held that the copyright in a database prepared by an advocate working under and in the office of another advocate by using the latter's resources, expertise and investment, would vest in the employer-advocate. The Court reasoned that under Section 17(1)(c) in case of a work made in the course of the author's employment under a contract of service or apprenticeship, the employer shall, in the absence of any agreement to the contrary, be the first of the copyright therein.

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.<sup>59</sup> 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 used to discover the facts. The Court referred to the US Supreme Court's *Feist* decision<sup>60</sup> 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.<sup>61</sup>

## 11. The Way Forward

The practice of storing and retrieving copyrighted works in computer systems and maintenance and operation of database is likely to grow. In view of the development towards international computerised information systems and the increase of transborder data flow, it is highly desirable to have international cooperation in reaching common and practical solutions to problems of database protection. Efficient database protection legislation faces the problem of globalisation. The most important step to be taken here is to finish an international treaty on database protection that can be adopted by jurisdictions throughout the world.<sup>62</sup> However, to do so, consensus should be reached on the best way to balance the many rights, liabilities, and exceptions that would form database protection.<sup>63</sup> Thus, these issues should be debated further, particularly between the United States and the European Union, to arrive at a model that achieves an appropriate balance between protecting commercial activities and preserving the public domain. In addition, the traditional aims of intellectual property protection; encouraging innovation while protecting the public domain for the advancement of arts and sciences must be maintained.<sup>64</sup>

While framing a specific law is the need of the hour, some important considerations must be kept in mind before framing it. These include providing a wide and comprehensive definition for database, non-inclusion of scientific facts in protection regime, broader exemption to scientific research, etc. furthermore, it is required that the courts should take into account the intent of the infringer and the actual harm the infringer causes. Thirdly, protection should only be for a limited period of time and should be in pace with the changing technology. Finally, and perhaps most importantly, lawmakers should realise that the economics of databases remains

unclear.<sup>65</sup> Any reliable database protection measure must take into account the customary practices of scientists and knowledge-sharing. Such practices are fundamental to the continuance of our information society.<sup>66</sup>

India's status as a new information economy seems to necessitate database regulation. Our participation in an international framework for such protection cannot be limited to simply being a consumer of models that are in force in other jurisdictions. India must take into account the pitfalls that accompany enacting similar proposals. The WIPO study proposes that India adopt a similar regime to the sui generis regime adopted in the European Union.<sup>67</sup>

## 12. Conclusion

Although weight has been given to database protection under both the international and the Indian laws, a few issues still remain unanswered. For example, at what stage does the information enter public domain so as to lose protection, the concept of obtaining the contents of databases, etc. These questions remain have not been adequately addressed. No doubt sui generis rights have gone a long way in protecting the rights in databases, their extent is not clear. Further, at the international level, there is an immediate need of a multi-party treaty, which incorporates both the US and the European Models of database protection, for regulating the legislative framework regarding protection of databases.

With the increased digitization of data, India is increasingly seen as the back office of the world. This outsourcing of work to India has brought in an economic boom particularly in Information Technology Enabled Services. The creation and exploitation of databases is a natural component of such services. Without the granting of an adequate standard of protection to the authors of the databases, the economic boom will not be sustainable.

The lack of a comprehensive legislation pertaining to database protection has been a matter of concern. Even though the database protection laws are not specifically laid down in any statute as yet, Indian industry has begun the process of sensitising the Government and the masses regarding the importance of these laws.

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  - 22 See, e.g. *Southern Bell Tel.&Tel. v. Associated Telephone Directory Publishers*, 756 F.2d 801 (11th Cir. 1985); *West Publishing Co. v. Mead Data Central*, 616 F. Supp. 1571 (D. Minn. 1985).
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- 45 Article 7(5), Database Directive
- 46 Article 10(1), (2), Database Directive
- 47 Article 10(3), Database Directive; Recital 55
- 48 *BHB v. Wm Hill*, [2004] E.C.R. I-1045, ECJ
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- 59 *Eastern Book Company v. Desai*, AIR 2001 Delhi 185.
- 60 *Feist Publications, Inc. v. Rural Telephone Service Co.*, *supra* note 21
- 61 *Eastern Book Company v. Desai*, *supra* note 59. 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.
- 62 Mark Davison, *Proposed U.S. Database Legislation: A Comparison with the U.K. Database Regulations*, 21 EUR. INTELLECTUAL PROP. REV. 279 (1999).
- 63 John R. Therien, *Exorcising the Specter of a “Pay- Per-Use” Society: Toward Preserving Fair Use and the Public Domain in the Digital Age*, 16 BERKELEY TECH. L.J. 979, 1008-10 (2001)
- 64 Mary Maureen Brown et al., *Database Protection in a Digital World*, 6 RICH. J.L. & TECH. 2, ¶ 35 (1999), (5th February, 2011) <http://law.richmond.edu/jolt/v6i1/conley.html>
- 65 Rex Y. Fujichaku, *The Misappropriation Doctrine in Cyberspace: Protecting the Commercial Value of “Hot News” Information*, 20 U. HAW. L. REV. 421, 428 (1998)

- 66 Jacqueline Lipton, *Protecting Valuable Commercial Information in the Digital Age: Law, Policy and Practice*, 6 J. TECH. L. & POL'Y 2, 26-28 (2001)
- 67 Andrew Lawler, *Database Access Fight Heats Up*, 27 SCIENCE 1074 (1996).