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OF COMPETITION AND REGULATION INC.**

## **Legal Protection for the Database: Is there a better way?**

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30 November 2011

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We thank Alexandra Chapman and Simon Vose for research assistance.

## **Abstract**

*The business database is a valuable commodity. However without adequate legal protection the economic incentives required to invest in their creation, ongoing updating and maintenance will be absent. The underlying objectives of many business databases can only be achieved if they are made accessible to the public; these databases are particularly vulnerable to misuse. Although copyright law provides protection for the original structure and format of a database, judicial decisions in this area reveal many inconsistencies. In addition, traditional copyright law fails to address the complexity of features found in a modern database. In this article we examine decisions from the European Union, the United States and Australia and conclude that traditional copyright protection for the modern database is inappropriate. We analyse the structure of the 21<sup>st</sup> century business database and explain how copyright could protect specific features of this structure in a more nuanced fashion. As an alternative we consider the use of compulsory licensing as a suitable tool for protecting the economic value of the database.*

## **Introduction**

Should the economic value of a database be reliant upon copyright law for its legal protection? Although our narrow objective in this paper is to make recommendations for New Zealand's legal framework in regard to databases, this objective is achieved by examining the physical and conceptual structures of the database and their relation to the economic value of the business database through a much broader lens.

The question of what is the appropriate legal protection for a database is important in the electronic age when much of the economic value of a business is likely to be derived from its databases. In principle, copyright protection for the intellectual property in a database offers a low-cost means of enforcing a tacit agreement between the database creator and the users of the database that ensures a balancing of the rights of all parties, whilst simultaneously ensuring that the economic incentives to create, update, and distribute original and derivative works remain intact. In practice, however, there are two difficulties with relying on copyright as a means of legal protection for a business database.

First, because copyright protection arises automatically without any requirement for formalities, such as registration the existence of copyright protection for a specific database is never certain until a court rules on the matter. The second difficulty arises from the increasing structural complexity of many contemporary databases. In the 21<sup>st</sup> century, many business databases are complex, many-layered constructions comprised of both architectural (structural design) and occupational (data element) components. In this article we challenge the notion that a published collection of poetry, which is a traditional ‘collection’ or ‘compilation’ as envisioned by the Berne Convention for the Protection of Artistic and Literary Works 1896 (‘Berne’), is structurally identical to a vast online commercial collection of data, and should therefore meet the same standards in order to achieve copyright protection. Yet, without adequate legal protections, the commercial value of many databases is at risk. Uncontrolled and unauthorised copying and adaptation may disincentivise the welfare enhancing creation of such databases. In addition, the absence of adequate legal protection for their investments of time and finance is likely to discourage the compilers from investing further time and expense in the ongoing maintenance and updating that is essential for the ongoing accuracy and reliability of any database.

Although databases containing business sensitive information, such as customer lists, can be protected as a trade secret or by explicit contractual agreements between their creators and users, these protections are not effective against outsiders to the business or the contract. Such alternative means of protection also have the disadvantage of ‘locking away’ facts potentially for an unlimited term and hence reducing the public domain of information. This is contrary to the public interest. Furthermore there are many categories of business databases, such as telephone directories and television programme guides, which of necessity must be made publicly available in order to achieve their commercial objectives.

Similarly technological protection measures (TPMs) that can be applied to a database by its owners to lock up its infrastructure are theoretically contrary to the public interest, although in practice they are an unreliable means of protecting a database. This is because a TPM is often seen as a challenge by computer hackers and indeed there are few if any TPMs that can withstand attempts by a determined, expert hacker.

Due to the limited suitability of these alternative protections for the database, reliance upon copyright protection is the more prevalent. However as we demonstrate in this article, copyright protection for the database, in its current form, has serious flaws. Although, a plethora of judicial cases and rulings in English, United States (“US”), and Australian law exist on the question of copyright in databases, the decisions are inconsistent. The financial resources invested and profit generated by many commercial databases highlight a need for more certainty and consistency at an international level in order to safeguard the foundation upon which those investments are made. Today's copying technology, which crosses all the international boundaries, has created a vast global market for information and knowledge products, the electronic dissemination of which makes both value-adding data and the personal commercial gain derived from it potentially available at very low cost all over the world. Given the ease with which computers and other digital technologies may copy, reorganise and reproduce information, failure to protect the database deprives the compiler of a meaningful incentive to produce and compile them in the first place. There are monetary and labour resources invested in the creation (gathering, selection and arrangement of data) and the maintenance of databases (regular updates, and improvements of data and its interrelationship), hence decisions about databases need to take account of the initial costs of creating them, a large proportion of which is sunk. The database creator incurs further sunk costs through maintaining, ongoing updating and security requirements of a database which is the responsibility of the creator of that database. Absent adequate legal protection for a database, the need for large-scale investment that involves substantial sunk costs could provide a disincentive<sup>1</sup> for potential creators of databases because they would have so much to lose if unauthorised use of either the database in its entirety or elements of the database content results in the creator being unable to recover the costs of creation. This raises an important question regarding the extent to which traditional copyright laws, as they are currently worded and have been interpreted by the courts, can protect both the database in its entirety (the structural and data components together) and the separate components.

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<sup>1</sup> Carlton. D. W., and Perloff. J. M. (2005). Modern Industrial Organisation. Pearson Addison-Wesley. USA

In the next part of this article we examine copyright law as it applies to business databases in three jurisdictions; Europe, the US and Australia,<sup>2</sup> and identify inconsistencies which, we argue, potentially deter the creation of innovative and welfare-enhancing databases. We then present a rigorous analysis of the underlying structure of a database and the process by which this structure is created. This analysis provides the context for our argument that traditional copyright law fails to acknowledge the complexity of the modern business database and for our recommendations regarding the way that this failure could be addressed.

As an alternative to copyright protection, we also explore the concept of “compulsory licensing” as a means by which value-added information products could be created, using existing databases. We conclude by arguing that compulsory licensing may better promote innovation, enhance competition and reduce the transactional costs through the operation of private markets, than reliance upon copyright law alone.

### **Copyright Protection for the Database**

The territorial nature of the online environment has created a major challenge for copyright law in general and databases in particular. To be sure, there are international treaties and conventions which aim to ensure a certain international consistency of treatment of copyright works and provide minimum standards of protection to which all member countries must adhere. There are no barriers, however, to countries which choose to impose higher standards of copyright protection or pass *sui generis* laws which provide protections additional to the minimum copyright protections mandated by international laws.

International copyright law requires that member states provide copyright protection for the format of a compilation. Berne provides that ‘*collections of literary or artistic works, such as encyclopaedias and anthologies, which by reason of the selection and arrangement of their contents constitute intellectual creations shall be protected as such*’.<sup>3</sup> The more recent Agreement on Trade Related Aspects of Intellectual Property

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<sup>2</sup> In New Zealand, to date, there has been no definitive ruling on the subject of originality in a database – the few judicial decisions which have considered this issue are inconsistent – hence we focus on recent decisions of the Australian courts.

<sup>3</sup> See the Berne Convention for the Protection of Artistic and Literary Works 1896, Article 2(5).

Rights 1994 ('TRIPS') provides that 'compilations of *data or other material* ... which by reason of the selection or arrangement of their contents constitute intellectual creations shall be protected as such'.<sup>4</sup>

Copyright protection, in theory, allows public accessibility but at the same time protects the database from unauthorised uses. In contrast to protection as a trade secret, which can be permanent, copyright protection is for a limited term of years and also contains some public good exceptions for uses such as fair dealing and education, which prevent the term of copyright protection from being a monopoly. However, under copyright law, a database will only be protected by copyright if the arrangement of its data is found to have reached the threshold of originality appropriate to the jurisdiction. Admittedly, this threshold is very low in New Zealand, requiring only that 'a work' which, in the specific case of a database means the structure, is not copied and that it shows evidence of skill and effort.<sup>5</sup>

An individual data component of a database may also be separately protected by copyright if it satisfies the statutory requirements of 'an original work' in copyright law.<sup>6</sup> There might also be moral rights protection for the authors of such a work.<sup>7</sup> Most commercially valuable databases are, however, comprised of factual data which is generally not considered to qualify for copyright protection *per se*.<sup>8</sup> Copyright protects the format or arrangement of the data, rather than the data itself.

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<sup>4</sup> Agreement on Trade Related Aspects of Intellectual Property Rights 1994, Article 10(2).

<sup>5</sup> In New Zealand, for example, there is a dearth of decided cases on the issue of originality in the arrangement of a database and those are somewhat inconsistent: see *Quality Systems Ltd v Perkom Ast Pty Ltd* Unreported, 7 June 1994, Court of Appeal, CA187/93; *Telecom Corporation of New Zealand Ltd v Colour Pages Ltd* Unreported, 14 August 1997, High Court Wellington, CP 142/97; *Land Transport Authority of New Zealand v Glogau* [1999] 1 NZLR 261; and *Bartercard New Zealand Ltd v Tradecard Ltd and Others* CP 135/00, High Court Christchurch, 15 June 2001, all discussed in S Corbett "Harnessing data: The intellectual property in a racing database" (2003) 9, 3 *New Zealand Intellectual Property Journal* 194-202. More recently the Court of Appeal accepted that there was copyright in a database of financial information: *The University of Waikato v Benchmarking Services Ltd and Acclipse Accounting Ltd*, Unreported, 11 June 2004, CA 216/03.

<sup>6</sup> See the Berne Convention for the Protection of Artistic and Literary Works 1896, Article 2(5) and the Agreement on Trade Related Aspects of Intellectual Property Rights 1994, Article 10(2).

<sup>7</sup> Moral rights are provided for the author or creator of a copyright work in the copyright laws of most countries - one notable exception being the United States. In New Zealand copyright law, moral rights can be waived but they may not be assigned. Hence, the owner of the copyright in a work is frequently a different person or body from the owner of the moral rights. In most European countries moral rights may not be either waived or assigned.

<sup>8</sup> For discussion see Frankel, S. *Intellectual Property in New Zealand* (2nd edn, LexisNexis, Wellington, 2011) 728-731.

Paradoxically however, in effect, copyright protection for the structure of the database protects the data within that database from being used by others, although others are free to gather the facts themselves, independently of the database.<sup>9</sup> The threshold of originality required to achieve copyright protection differs depending upon the country; New Zealand and Australia have a low threshold of originality, requiring only evidence of “substantial skill and effort” or “sweat of the brow” in order that a work may qualify for copyright protection. The difference between the thresholds for originality in New Zealand and Australia and the thresholds in the US and Europe may prove disadvantageous to Australia and New Zealand database owners. All member States of Berne are required to offer national treatment in terms of copyright protection to citizens of other member States.<sup>10</sup> Hence, if litigation ensues for infringement of a New Zealand database in a foreign country, the issue of whether or not the New Zealand database was actually protected by copyright will be decided, according to the copyright law of the foreign country, by assessing whether the New Zealand database meets the prescribed standard of originality in that foreign country. In the US and Europe the standard of originality to provide copyright protection in a database requires at least “an element of creativity” to be demonstrated in the structure and format of the database.<sup>11</sup> Furthermore, the European Union Directive on the Legal Protection of Databases (‘the Directive’),<sup>12</sup> which provides additional *sui generis* protection for European databases (whether or not they are also protected by copyright) on evidence of sufficient financial investment in a database,<sup>13</sup> states explicitly that similar protection will not be extended to foreign countries that do not provide similar *sui generis* protection for their databases.<sup>14</sup>

## Databases created in the European Union

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<sup>9</sup> *Desktop Marketing Systems Pty Ltd v Telstra Corp Ltd* (2001) 51 IPR 257, [2001] FCA 612. See also (for example) *Waterlow Publishers Ltd v Rose and Anor* [1995] F.S.R. 207, (1989) 17 IPR 493 (CA); *Waterlow Directories Ltd v Reed Information Services Ltd* [1992] F.S.R. 409, (1990) 20 IPR 69; *Macmillan v Cooper* (1923) 40 TLR 186 LR 51 (PC); *Weatherby & Sons v International Horse Agency & Exchange Ltd* [1910] 2 Ch 297; and *Macmillan & Co v Suresh Chunder Deb* (1890) 17 I LR 91.

<sup>10</sup> Berne Convention for the Protection of Literary and Artistic Works 1886, art 5(1).

<sup>11</sup> For the US position see the leading decision, *Feist Publications, Inc. v. Rural Telephone Service Co* 499 U.S. 340 (1991). For the EU see the European Union Directive 96/9 EC on the Legal Protection of Databases.

<sup>12</sup> European Union Directive 96/9 EC on the Legal Protection of Databases (discussed post).

<sup>13</sup> European Union Directive 96/9 EC on the Legal Protection of Databases, Art 6.

<sup>14</sup> European Union Directive 96/9 EC on the Legal Protection of Databases, Art 4.

The Directive protects ‘a collection of independent works, data or other materials arranged in a systematic or methodical way and individually accessible by electronic or other means’.<sup>15</sup> The Directive harmonises the originality threshold for copyright protection of databases in EU member states and also provides *sui generis* protection for databases created by EU member states. Under the Directive, the standard of originality for a database to receive copyright protection is that ‘... the selection or arrangement of the database must be the author’s own intellectually creative selection’.<sup>16</sup> Similarly to databases in other countries, elements of data within an EU database may or may not also qualify for copyright protection depending upon their characteristics.

The Directive also provides legal protection for non-creative databases, utilising a *sui generis* right for the protection of the financial investment in a database.<sup>17</sup> The *sui generis* right does not afford protection from unauthorised copying but from unauthorised extraction of the whole or of a substantial part of the database. The *sui generis* right is not available to the elements of data comprising the database. The Directive has been implemented into the domestic law of all EU member states- hence it is possible for a database created within a member country to qualify for both traditional copyright protection and also the *sui generis* right.<sup>18</sup> Although the Directive requires all EU member states to introduce legal protection for databases that reflect ‘substantial investment’, there is little guidance provided regarding how the notion of ‘substantial investment’ is to be interpreted, nor is it clear which ‘investments’ may or may not be taken into account. This is especially problematic in cases such as television programme listings and telephone directory listings. Is the cost of labour spent in organising the services which have generated these ‘synthetic’ data relevant investment in the ensuing database? Or does the database right merely

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<sup>15</sup> EU Database Directive (96/9/EC) on the legal protection of databases, [1996] OJL77/20, Articles 1 and 2.

<sup>16</sup> Corbett, S. “Harnessing data: the intellectual property in a racing database.” (2003) 9, 12 New Zealand Intellectual Property Journal, 194.

<sup>17</sup> Corbett, S. “Copyright versus commerce: The business database as a commercial asset in New Zealand – Much ado about nothing?” (2005) The Journal of Business Law, 209.

<sup>18</sup> Ibid.



protect investment that is directly attributable to the production of a database?<sup>19</sup> Case law from national European courts demonstrates that the notion of ‘database’ itself is open-ended, leaving room for a wide variety of information products and services.<sup>20</sup> Laurence Kaye argues that four 2004 decisions of the European Court of Justice “created a hole in the protection given by the database right”.<sup>21</sup> Essentially, Kaye explains, these decisions ruled that there can be no protection for data which was newly created by the database owner, as distinct from pre-existing data gathered from third party sources. Hence, if a database is a by-product of the database maker’s principal activity and “the investment” is focused on that activity and not on the gathering together of pre-existing materials, then no *sui generis* protection is available.<sup>22</sup>

The original proposal for the Directive also included a compulsory licensing provision that would have required database owners who were the sole source of any given information to license that information to competitors on “fair and non-discriminatory terms.”<sup>23</sup> This provision proved controversial and was abandoned after a decision of the European Court of Justice in which principles of EU competition law were applied by the Court to impose a compulsory licensing requirement on a television broadcaster in respect of programming information.<sup>24</sup> Nevertheless, in acknowledgement of the economic importance of facilitating competition in the broad area of business databases, the Directive provides for review every three years in order to determine, *inter alia*, “whether the application of [the *sui generis*] right has led to abuse of a dominant position or other interference with free competition which

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<sup>19</sup> Hugenholtz, B., (2004). Abuse of Database Right. Sole-source information banks under the EU Database Directive. Retrieved 17 June 2009 from <http://www.ivir.nl/publications/hugenholtz/abuseofdatabaseright.html>

<sup>20</sup> Hugenholtz, B., (2004). Abuse of Database Right. Sole-source information banks under the EU Database Directive. Retrieved 17 June 2009 from <http://www.ivir.nl/publications/hugenholtz/abuseofdatabaseright.html>

<sup>21</sup> *Fixtures Marketing Ltd v. Organismos etc*; Case C-444/02; together with two other cases involving Fixtures Marketing Ltd; and *British Horseracing Board v. William Hill Organisation*; Case C-203/02.

<sup>22</sup> Kaye, L. The Directive on the legal protection of databases of 11 March 1996: does it have a future? at <http://copyright-debate.co.uk/?p=154> (Last accessed 16 August 2011)

<sup>23</sup> 1992 Proposal, art 8(1).

<sup>24</sup> Cases C-241/91 P and C-242/91 P, *Radio Telefis Eireann v. Commission of the European Communities*, E.C.J. (Apr. 6, 1995).

would justify appropriate measures being taken, including the establishment of non-voluntary licensing arrangements.”<sup>25</sup>

The Directive has been criticised for the perceived imbalances it has created between the monopoly rights of the investor to prevent extraction of data from databases and the right of public to information.<sup>26</sup> It has, however, achieved one of its objectives; it is now relatively straightforward to identify the intellectual property rights in a database that has been created in the EU.<sup>27</sup> Furthermore, the Directive has a strong economic focus – to protect and encourage a strong European database industry. This focus is less clear in traditional copyright law, in which the objectives are to protect the rights of the creator/owner of copyright in the database specifically from unauthorised copying of the selection and arrangement of data.

## **Databases Created in the United States**

The decision in *Feist Publications, Inc. v. Rural Telephone Service Co*<sup>28</sup> expanded the US concept of originality in copyright law to include the requirement of “a modicum of creativity”.<sup>29</sup> Feist had copied almost two-thirds of the white-pages listings from Rural’s directory and had made a substantial investment in the development of a new area-wide directory of white-page listings that consumers could previously obtain only by looking at eleven separate directories published by telephone companies servicing different parts of northwest Kansas. The district court granted summary judgment to Rural, relying on the sweat of the brow. However, the Supreme Court rejected this doctrine relying on Copyright Act of 1976 which holds “originality” as a requirement for copyright protection. The Court held that “Rural’s selection and arrangement of facts was ‘entirely obvious’ as they were compiled in a way that white

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<sup>25</sup> Art 16(3).

<sup>26</sup> Corbett, S. “Copyright versus commerce: The business database as a commercial asset in New Zealand – Much ado about nothing?” (2005) *Journal of Business Law*, 209.

<sup>27</sup> Corbett, S “Harnessing data: the intellectual property in a racing database.” (2003) 9, 12 *New Zealand Intellectual Property Journal*, 194.

<sup>28</sup> *Feist Publications, Inc. v. Rural Telephone Service Co* 499 U.S. 340 (1991).

<sup>29</sup> Ginsburg, Jane C. “Creation and Commercial Value: Copyright Protection of Works of Information” (1990) 90 *Colum. L. Rev.* 1865.

pages are typically organised”.<sup>30</sup> It concluded therefore that Rural’s compilation lacked the minimum standard of creativity. In its opinion, the Court noted that the Copyright clause of the Constitution was intended to reward originality and not effort”.<sup>31</sup>

The *Feist* decision demonstrates the pro-competition stance of US copyright law, according to which a user can usually extract and re-use published data from another firm's compilation, especially when the user adds substantial value to the data and uses it to develop a product or service different from the originator’s product. An example of the application of this law favouring competition can be seen in *New York Times Co v. Roxbury Data Interface, Inc.*<sup>32</sup> where the principle of “fair use” was held to justify the production of an index to New York Times’ indices<sup>33</sup>. Although the US courts acknowledge there is minimal if any creativity in compilations such as directories and address lists, they have extended protection to formats imposed upon the collected data.<sup>34</sup> These rulings are based on a desire to avoid economic harm to the owner of the compilation and to reprimand the free rider. Although extending protection to formats, they have observed that the real economic value of many compilations (databases) lies in their collection of information, not its arrangement. The economic incentives, they have argued, would be demolished if protection were to be limited solely to the form of expression.<sup>35</sup> This argument has resonance with the Australian decision in *Telstra* where protection was extended to the data (information) contained in Telstra’s directories when the ‘substantial investment’ principle was applied. This was a recognition and acknowledgement of the fact that the worth of such directories lies in the information rather than in the form imposed on the information.

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<sup>30</sup> The Future of Database Protection in U.S. Copyright Law. Duke Law & Technology Review. Retrieved on November 2, 2009 from: <http://www.law.duke.edu/journals/dltr/articles/2001dltr0017.html>

<sup>31</sup> Ibid.

<sup>32</sup> 434 F. Supp. 217, 226-27

<sup>33</sup> It was argued that the defendant’s derivative product was the result of considerable independent effort and did not displace sales of the Times’ indices.

<sup>34</sup> See discussion in Ginsburg, Jane C. “Creation and Commercial Value: Copyright Protection of Works of Information” (1990) 90 Colum. L. Rev. 1865, 1905-1907.

<sup>35</sup> Ibid.

## Databases Created in Australia

Since 2009 there have been three leading decisions in which the Australian courts have been provided with the opportunity to review the traditional criteria for copyright protection for the databases. It is our view that these decisions, by their very inconsistency, provide support for our argument regarding the inadequacy of copyright law as a tool to protect a business database.

### ***Desktop Marketing Systems Pty Ltd v Telstra Corp Ltd: Copyright protection for investment.***

Until 2002, the originality threshold for a database in Australian copyright law was similar to that in New Zealand, in that a database was considered to be ‘original’ if it was independently created and if “skill and effort” had been used in its selection and arrangement. The 2002 appellate decision in *Desktop Marketing Systems Pty Ltd v Telstra Corp Ltd*<sup>36</sup> (*Telstra*) however, removed Australia from the New Zealand position and toward that of the European Union. We believe this was a fortuitous move for Australia and one which provided the opportunity for Australian businesses to secure the competitive advantages provided by their business databases. *Telstra* set a new standard for originality in a database by acknowledging that ‘investment’ can be used as a criterion for finding copyright protection for a database.<sup>37</sup> The *Telstra* court ruled that there was copyright in the ‘industrious selection’ and arrangement of the facts in *Telstra*’s directories, implicitly applying a ‘labour and expenses’ threshold for copyright protection.<sup>38</sup> This judgment aligned Australia more closely with the European *sui generis* protection for databases,<sup>39</sup> diverging from the traditional standard of ‘originality’ towards the Directive’s standard of ‘substantial investment’ of time and finance.<sup>40</sup> In essence *Telstra* set a more commercially appropriate threshold for copyright protection in commercial databases of factual material. By

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<sup>36</sup> *Desktop Marketing Systems Pty Ltd v Telstra Corp Ltd* (2002) 192 ALR 433

<sup>37</sup> Corbett. S. (2003). Harnessing Data: the intellectual property in a racing database. *New Zealand Intellectual Journal*, 194

<sup>38</sup> *Desktop Marketing Systems Pty Ltd v Telstra Corp Ltd* (2002) 192 ALR 433, XX.

<sup>39</sup> European Union Directive 96/9 EC on the Legal Protection of Databases, Art 6.

<sup>40</sup> Corbett. S. (2003). Harnessing Data: the intellectual property in a racing database. *New Zealand Intellectual Journal*, 194

aligning the threshold more closely with that of the Directive, the *Telstra* court appeared to acknowledge the economic value of these databases.<sup>41</sup>

### ***Ice TV v Nine Network*: no protection for slivers of information**

*Ice TV v Nine Network*<sup>42</sup> arguably had no real impact on the advances towards the EU *sui generis* right that had been made by the Court in *Telstra*, apart from an *obiter* statement from the High Court suggesting that the emphasis in *Telstra* on “labour and expense” per se may need to be treated with caution since it is “out of line with the understanding of copyright law over many years”.<sup>43</sup> The High Court of Australia agreed with the finding of the Federal Court that Ice had taken only insubstantial ‘slivers’ of information and noted that copyright law permits ‘a measure of legitimate appropriation’.<sup>44</sup> We have argued that the *Telstra* court appeared to acknowledge more realistically the economic value of business databases.<sup>45</sup> The recent decision of the Federal Court in *Telstra Corporation Limited v Phone Directories Company Pty Ltd*<sup>46</sup> however, we contend, has steered Australia in a retrograde and unfortunate step backwards.

### ***Telstra Corporation Limited v Phone Directories Company Pty Ltd*: the ‘human element’**

In 1956, Kenneth Boulding described what we now call the database<sup>47</sup> as a model of a portion of the outside world.<sup>48</sup> Boulding argued that the structure or ‘data model’ is the outcome of many human decisions about what parts of the world to incorporate, how those parts interrelate, and how to encode real-world quantities and qualities. Analogous to the way each human has their own internal worldview which interprets incoming data, so in Boulding’s view the data model defines the initial worldview of

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<sup>41</sup> (2001) 55 IPR 1 (FCA). For discussion of this point see further Susan Corbett “Harnessing data: The intellectual property in a racing database” *New Zealand Intellectual Property Journal* 9, 12 (2003) 194

<sup>42</sup> *Ice TV Pty Ltd v Nine Network Australia Pty Ltd* [2009] HCA 14 [188].

<sup>43</sup> *Ice TV Pty Ltd v Nine Network Australia Pty Ltd* [2009] HCA 14 [188].

<sup>44</sup> *Ice TV Pty Ltd v Nine Network Australia Pty Ltd* [2009] HCA 14 [157].

<sup>45</sup> For discussion of this point see further Susan Corbett “Harnessing data: The intellectual property in a racing database” *New Zealand Intellectual Property Journal* 9, 12 (2003) 194

<sup>46</sup> *Telstra Corporation Ltd v Phone Directories Company Pty Ltd*. [2010] FCA 44.

<sup>47</sup> Whilst Boulding does not use the modern term ‘database, it is clear in his descriptions of a repository of data that is continuously under revision (by way of additions, deletions, amendments, and even adjustments to its structure – i.e. the range of data included in the repository) as a consequence of edited observations made by its custodian(s) that he was describing what we now term a database.

<sup>48</sup> Boulding, Kenneth. (1956). *The Image: Knowledge in Life and Society*. Ann Arbor, MI: University of Michigan Press.

the database.<sup>49</sup> Somewhat surprisingly, Boulding’s views have recently found resonance in 21<sup>st</sup> century Australia. In *Telstra Corporation Limited v Phone Directories Company Pty Ltd*<sup>50</sup> an additional requirement was added to the traditional ‘originality threshold’ in copyright law. The additional requirement is that a human should be involved in the creation of a database.<sup>51</sup>

The issue of a lack of an identifiable author or authors who could make “human” decisions led Justice Gordon in the Federal Court of Australia to deny copyright protection to Australian telephone directories.<sup>52</sup> Her Honour ruled that there was no copyright in either the White Pages or the Yellow Pages (‘the Works’) because they were not ‘original works’. She found that the Works had been created by computer Rules. Although there was a team of human authors who had been responsible for creating the Rules (Telstra provided 90 affidavits which testified to the work that had been undertaken to compile and publish the Works),<sup>53</sup> the creation of the Works, in Her Honour’s view, did not involve either ‘independent intellectual effort and/or the exercise of sufficient effort of a literary nature’.

With respect, we suggest that Justice Gordon’s reasoning was incorrect and shows a failure to grasp the underlying technological nature of a database. Databases differ from many other works that are eligible for copyright protection in that their content is not fixed at the time of publication. Of particular relevance to this paper is their difference from the traditional idea of a ‘compilation’ - which tended to be a published collection of works.

## **Differentiating the Database from a Compilation**

Modern databases are typically subject to on-going change: the addition of new data, the correction of out-dated or incorrect data, the removal of irrelevant data and the refinement of the underlying database structure. These change processes require

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<sup>49</sup> Boulding, Kenneth. (1956). *The Image: Knowledge in Life and Society*. Ann Arbor, MI: University of Michigan Press.

<sup>50</sup> [2010] FCA 44.

<sup>51</sup> *Telstra Corporation Limited v Phone Directories Company Pty Ltd* [2010] FCA 44.

<sup>52</sup> *Telstra Corporation Limited v Phone Directories Company Pty Ltd* [2010] FCA 44.

<sup>53</sup> *Telstra Corporation Ltd v Phone Directories Company Pty Ltd* [2010] FCA 44, para 5.

substantial human input in their design and/or operation; even fully-automated processes such as filters on new data require decisions about filtering criteria and verification that those criteria are achieving the desired results. These on-going costs represent a further sunk investment for the database owner.

Another difference from a traditional compilation is that a database is rarely published in a complete form. Typically, access is provided in such a way as to allow small subsets of the data or aggregate information to be retrieved in response to a user-specified query or other contextual information. Of course, it may be possible (e.g. with the use of large numbers of computer-generated queries) to extract and reconstruct all or substantial portions of a database. In essence, databases are comprised of two distinct components – design and data components - each subject to the exertion of separate and distinct efforts for which the creator might be seeking protection. Databases are fundamentally developed for the ease of search and retrieval. In their simplest conception, they can be viewed as comprising both architectural (structural design) and occupational (data element) components.<sup>54</sup> In the following part of the paper we consider whether copyright law recognises and addresses these separate and distinct components.

## **Copyright and the Database: Is there a fundamental flaw?**

In the absence of any other agreement, copyright law specifies the ways in which a rights user may have access to and use of a copyright work. The difficulty for a rights-holder to identify in advance who will wish to use their work, increases the transaction costs of striking individual agreements in each separate case. Copyright, however, offers a set of default arrangements that will prevail when a rights-holder makes a work available for use by others. By limiting the ways in which the rights user can use the work, the ability of the rights-holder to make a fair return on the effort exerted in the creation of the work is preserved, both in respect of the work in

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<sup>54</sup> This is analogous to the distinction between the expression of creativity that defines a work subject to copyright and the medium upon which that creativity is manifested, each of which is associated with a separate, and indeed separable, set of property rights. Corbett, S., Howell, B., & Moayyed, M. (2009). *Digital Rights and Copyright in New Zealand: s 92A of the Copyright Act and the Institutional Roles of ISPs*. Wellington: New Zealand Institute for the Study of Competition and Regulation. [http://www.iscr.org.nz/f536,15489/15489\\_Digital\\_Rights\\_and\\_Copyright\\_in\\_NZ.pdf](http://www.iscr.org.nz/f536,15489/15489_Digital_Rights_and_Copyright_in_NZ.pdf)

question (promoting allocative efficiency) and also any future creative works (promoting dynamic efficiency). Copyright law also enables the rights user to use the work subject to copyright to make further derivative works, which increases the body of works available (also promoting dynamic efficiency).

For the purposes of copyright law there are four different types of databases, depending upon whether or not the elements of the database itself qualify for copyright protection and whether or not the arrangement and structure of the database qualifies for copyright protection.<sup>55</sup> In respect of the business databases which are the focus of this article, the most important two categories are, first, a database of facts<sup>56</sup> or other public domain materials<sup>57</sup> where effort and skill in the compiling of the database is established. The individual items of data are not copyrightable, but the database itself is protected as an original collective work, or database. Secondly, a database of facts or other public domain materials, where the structure of the database itself is mundane - generally to ensure ongoing ease of accessibility by its business users. Neither the individual facts nor the database are copyrightable.<sup>58</sup> Hence, under copyright law principles such a database is in the public domain – “despite the fact that it might in reality be the single resource that gives the particular business its unique competitive advantage”.<sup>59</sup>

### **The data**

The law is somewhat inconclusive regarding the extent to which copyright protection for the structure of the database automatically protects the individual data elements of the database. Although it is frequently claimed that factual data does not qualify for copyright protection, the broad scope of this claim is not supported by the specific provisions of international copyright law. Berne, for example, provides only that copyright does not apply to ‘news of the day’ or to ‘miscellaneous facts having the

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<sup>55</sup> See discussion in Corbett, S “Copyright versus commerce: The business database as a commercial asset in New Zealand – Much ado about nothing?” (March 2005) *The Journal of Business Law* 209 at 213-214.

<sup>56</sup> It is fundamental to copyright law that facts are not copyright (although the way in which they are formatted may be).

<sup>57</sup> For instance works in respect of which the term of copyright has expired.

<sup>58</sup> See further, Corbett, S “Copyright versus commerce: The business database as a commercial asset in New Zealand – Much ado about nothing?” (March 2005) *The Journal of Business Law* 209 at 213-214.

<sup>59</sup> Corbett, S “Copyright versus commerce: The business database as a commercial asset in New Zealand – Much ado about nothing?” (March 2005) *The Journal of Business Law* 209 at 214.



character of mere items of press information”.<sup>60</sup> TRIPS provides that copyright protection applies to expressions, but not to ‘ideas, procedures, methods of operation or mathematical concepts’.<sup>61</sup> Both Berne and TRIPS, however, concur in regard to ‘collections’ and ‘compilations’. They provide that copyright protection for the selection or arrangement of the contents of a collection or compilation, shall not extend to the data or material itself - *but shall be without prejudice to any copyright subsisting in each of the works forming part of the collection,*<sup>62</sup> *or the data or material itself.*<sup>63</sup> Logical analysis of this latter provision does not lead to the generally cited (and overly broad) conclusion that factual data may not be protected by copyright.

The argument that facts in general are not copyrightable has led to decisions where individual data elements have been extracted from a database and their use deemed legal in subsequent activities, without seeking the permission of, or paying any compensation to, the owner of the database from whence the data was extracted. Such instances clearly impinge upon the incentives faced by database owners to exert the effort necessary to collect data in the first place. However, we suggest it is also possible that such use of individual data elements may infringe on the process of originality (creativity) that has led to that individual data item being collected and stored in the database. Our reasoning is as follows.

In order for data elements to be collected and placed in an ordered database, two steps must be undertaken. First, independent of any data that might subsequently be placed in the database, the database must be designed (akin to designing and drawing up the plans for a building) and subsequently constructed as the “frame” into which the individual data elements will subsequently be deposited. This requires both effort and creativity, and the database design (in total) is thus subject to copyright protection as with any other such plan or design. Secondly, the data elements to populate the database must be collected and entered into the ‘frame’ to create the “database”.

Whilst historical determinations have been inconclusive about the level of copyright

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<sup>60</sup> Berne Convention for the Protection of Literary and Artistic Works 1886, Article 2(8).

<sup>61</sup> Agreement on Trade Related Aspects of Intellectual Property Rights 1994, Article 9(2).

<sup>62</sup> Berne Convention for the Protection of Literary and Artistic Works 1886, Article 2(5)

<sup>63</sup> Agreement on Trade Related Aspects of Intellectual Property Rights 1994, Article 10(2)

protection afforded to the individual data elements, it is arguable that an element of creativity (originality) is required in the collection of the data that will subsequently populate the database.

When collecting data to populate the database from the mass of raw information available, specific selection criteria must be applied to ensure that only the relevant data are collected. In effect, a ‘filter’ must be created and applied in order to ensure that only the required data are selected and entered into the database from the vast array of raw unfiltered information available.<sup>64</sup> It can be argued that the design of the filter also embodies originality (creativity) that is separate from the effort exerted to use it in order to collect the relevant data. A subsequent user of the data benefits from both the *quality* of the filter applied (that is, has the filter enabled the appropriate data – and only the appropriate data - to be collected from the mass of available facts?) and the level of *effort* exerted to collect each data element and add it into the database. Thus, the data elements as collected and entered into the database, as well as the database itself, could be considered as unique creative outputs, and therefore also subject to copyright protection.

To employ the well-known ‘idea expression dichotomy’<sup>65</sup> facts *per se* are equivalent to ideas and are not protectable, but once they have undergone a process of filtered selection for a database, arguably they now represent the expression of that idea and should be protected by copyright.

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<sup>64</sup> The ‘filter’ is thus analogous to Boulding’s (1957) concept of the ‘image’ through which each human mind uniquely interprets and makes sense of the range of stimuli (information) an individual’s senses are continually bombarded by. Each individual has a unique ‘filter’ created as a consequence of past experiences (which allow opportunities to reshape both the content of the human mind (data repository or database) and the nature of the filter by which individual data elements are selected and stored from the array of stimuli the individual encounters. By this analogy, both the filter and database are separate elements of creative endeavour. Each has taken effort to create, and each can be changed as a consequence of an interaction between themselves and the unique individual to whom they pertain. Thus both the creativity and exertion criteria have been met in collating both the data elements and the database.

<sup>65</sup> See discussion in Frankel, S. and McLay, G. *Intellectual Property in New Zealand* (2002) LexisNexis, Wellington, 194.

## The TAB Database

An example of how this framework could be applied is provided by the collection of data for the New Zealand TAB database.<sup>66</sup> The TAB is a not-for-profit monopoly which operates within the highly-regulated racing industry in New Zealand. It owns and continually extends a database of racing information which is fundamental to its business. The database contains a collection of data (“facts”) that the database designers have determined are important in respect of calculating the winning odds for a horse in a race. The design of the data repository is a creative work, which also meets the test of exertion of effort, for which a return is required in order to justify its creation. However, there is a second creative effort in designing the means by which the data will be collected to populate the database. Arguably, and conversely to the findings of Justice Gordon in *Telstra Corporation Limited v Phone Directories Company Pty Ltd*<sup>67</sup> this creative effort can be expended by writing a suitable computer programme for data collection.

Although, in practice, the relevant data is collected as a consequence of an exertion of effort when an individual attends a race meeting and records the relevant information, this is possible only inasmuch as the data is collected using the ‘filter’ placed over all the race meeting information stimuli to ensure only the ‘facts’ of a specific form are collected (the data specified in the collection arrangements). Just as different individuals will identify and collect different information to lodge in their human minds as a consequence of attending the race meeting (conditioned by their unique individual experiences up to the point of attending) so too will the agents of different database and filter design processes pick up and store different data as a consequence of their unique design processes. This suggests that not only is the database in its entirety subject to copyright as a unique expression of creativity, but so too is the collection of each individual data element that populates the database. Both the ‘effort’ and the ‘creativity’ tests are met.

Of course, TAB’s database is of no use to its business unless the racing information contained in it is made publically available to those individuals who wish to use it to

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<sup>66</sup> The TAB is the brand name of the New Zealand Racing Board.

<sup>67</sup> [2010] FCA 44.

place a bet. The advent of internet technology has now made it possible for overseas racing businesses to offer New Zealanders betting opportunity on their sites, undercutting the TAB which is required to pay hefty duties to New Zealand government. To make the matter worse, several of these overseas sites allegedly access racing information through TAB's online database and offer the New Zealand punters better odds on New Zealand races than the TAB itself.<sup>68</sup> They are able to effectively compete with TAB in the New Zealand market because these firms do not face the same costs to obtain essential racing information as TAB. As a 'second comer' they rely on TAB's information published in its online database to offer a better deal to New Zealand punters.

The TAB must look to the copyright laws of that country for any copyright protection. It is likely that any claim for infringement of copyright by an overseas entity in a New Zealand-created database would be considered not justiciable in New Zealand.<sup>69</sup> Although the TAB has to make an ongoing investment of both time and finance in its database, New Zealand copyright law is not an effective mechanism for the TAB to protect its investment in its racing database. The selection or arrangement of data in the TAB's database may not be considered sufficiently original to meet the 'originality' threshold of a foreign country, if that country's threshold requires an element of creativity. In economic terms this is, we suggest, nonsensical - applying a standard of originality to this is irrelevant to the business efficacy of the TAB. Its business sustainability, by its nature, depends upon the usefulness, accuracy, and accessibility of the 'facts' contained in its database, not so much the arrangements of those facts.

Furthermore, as discussed above, it is suggested that the degree of originality should apply to the very capture of the data itself. Certain data may have been chosen, among myriads of raw data, based on certain thinking, logic or strategy which would arguably make the collection of such data and its transformation into 'fact' quite original.

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<sup>68</sup> Corbett, S. (2003). Harnessing Data: the intellectual property in a racing database. *New Zealand Intellectual Property Journal* Pg 194

<sup>69</sup> Corbett, S. (2003). Harnessing Data: the intellectual property in a racing database. *New Zealand Intellectual Property Journal* Pg 194

## **Database and Copyright Protection – Economic Implications**

Reflecting on TAB’s database dilemma, and drawing on key insights from the economic literature, we are prompted to point out the significance of the property rights inherent in databases and the underlying incentives that promote the creation and the ongoing maintenance of them. The concept of property ownership is associated with a bundle of property rights: the right to use the property, to enjoy the income generated from legally permitted uses of the property, to exclude others from using it, and to transfer control of some or all of the rights to other owners in exchange for mutually agreed compensation.<sup>70</sup> Key to the concept of property rights is that the owner has the right to choose who should have access to their property and who can derive benefit from it.<sup>71</sup> If these rights are not well-defined, externalities might result which cause market failure. These rights must be well defined, exclusive, enforceable, acceptable, transferable, and of efficient scale.<sup>72</sup>

The investment of time and financial resources necessary in creating a database is undeniable. The main cost occurs when the database is first developed. Expenses occur at the point of transferring raw data into “fact”. The owner (creator) bears all the risks and costs associated with collection and arrangement of the data. As the cost of reproduction is significantly less than the cost of original work, free riding significantly reduces revenue options for the creator of the database and deprives them of a fair gain on their investment. This undermines the incentive to compile useful facts, figures and information.

The publicly available databases such as Yellow Pages directory or TAB’s racing information have the characteristics of public goods (they are not depletable, exclusion of consumers is potentially difficult and costly, the marginal cost is close to zero whilst the marginal benefits are greater than zero). These characteristics indicate that with no adequate protection, the market is likely to feel unmotivated to produce

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<sup>70</sup> Corbett, Howell & Moayyed. Digital Rights and Copyright in NZ: s 92A of the Copyright Act and the Institutional Roles of ISPs and the Copyright Tribunal.

<sup>71</sup> Corbett, Howell & Moayyed. Digital Rights and Copyright in NZ: s 92A of the Copyright Act and the Institutional Roles of ISPs and the Copyright Tribunal.

<sup>72</sup> C. W. Maughan, Property and Intellectual Property: Foundations in Law and Economics. Prometheus, volume 22, number 4, December 2004.

new databases or to improve the existing ones unless the copyright law protects the right to a fair return to the creators/inventors. All the current methods to achieve the financial return on public goods are economically inefficient however the method of ‘creating a device for exclusion unless the user pays for the use’ is considered the most efficient because it turns public goods into tradable private goods and hence encourages the voluntary exchange of private goods.<sup>73</sup> From the point of view of economic efficiency, this method of ‘exclusion of use’ through providing legal protection has the merit of ensuring that the incentives to produce or improve databases exists, and that costs of development can be recovered.<sup>74</sup> However, a consequence of this is that if the barriers are too high, there will be restricted production and monopoly pricing, thereby creating inefficiencies.

Framing copyright and intellectual property protection requires a careful and diligent balancing of the interests of a number of parties: creators of both commercial and non-commercial databases, users, value-adding providers and other third party interests. Although the rights of the creator/compiler of a database to a fair return on their investment should be protected, any law that may hinder competition and innovation in the market should be carefully examined.

Digital technology has created new markets within the information industry. In these new markets, we have many firms that add value to existing information products to meet the needs of a new segment in the existing market or an entirely new market - the initial compiler of information may have failed to identify the information need of that particular segment or foresee the potentiality of the new market. With unclear copyright law, the value-adding firm will gain, with very little investment of their own resources, from the financial investment of the initial creator of the database. On the other hand, it is evident that consumers, more often than not, benefit from the existence of competitive markets for new and improved information products - innovation is important to a growing economy. Any legal or policy initiatives that could weaken the ability of second comers to enter and compete effectively in

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<sup>73</sup> Ibid.

<sup>74</sup> Ibid.

markets for products that add value to existing data should, therefore, be carefully scrutinised, lest they impede competition without offsetting benefits to the public.<sup>75</sup> The guiding principal from an economic standpoint is increasing overall welfare and public good.

Wendy Gordon argues that courts should defend the incentive to invest when: the costs of developing an information product are high, the costs of copying are low, copying yields a substantially identical product which a copyist can price cheaply, not having substantial research and development costs to recoup, and when consumers, believing the two products are substantially identical, decide to purchase the cheaper one, thereby inducing market failure because the first comer is unable to recoup its expenses.<sup>76</sup> The important question is how to overcome the creator/investor's financial risk without undermining either the general public interest in competition or the creation of innovative new products and services.

Classical intellectual property laws are meant to stimulate certain forms of creative endeavour that would not ordinarily have happened without a decision to award exclusive property rights. Legal regimes of many countries, therefore, have allowed "the short-term social costs of legal monopolies in return for these and other long-term benefits".<sup>77</sup> In contrast, laws protecting investment as such deal with situations in which both the requisite level of creativity and the needed quantum of investment would have been available as a matter of self-interest and sound business strategy were it not for the risk that free riders might appropriate the fruits of these investments without contributing, directly or indirectly, to the costs of production. Removing these obstacles from the entrepreneur's path presents a very different and far more delicate problem than that of stimulating a technological community to reach new heights.<sup>78</sup>

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<sup>75</sup> J. H. Reichman, P. Samuelson, 'Intellectual Property Rights in Data?' 50 *Vanderbilt Law Review*. 51 (1997) 124-125.

<sup>76</sup> W. J. Gordon, *On Owning Information: Intellectual Property and the Restitutory Impulse*, 78 *Va. L. Rev.* 149, 165 (1992) Cited in J. H. Reichman and P. Samuelson. 'Intellectual Property Rights in Data?', 50 *Vanderbilt Law Review*. 51 (1997) 141

<sup>77</sup> J. H. Reichman and P. Samuelson. 'Intellectual Property Rights in Data?', 50 *Vanderbilt Law Review*. 51 (1997)

<sup>78</sup> J. H. Reichman and P. Samuelson. 'Intellectual Property Rights in Data?', 50 *Vanderbilt Law Review*. 51 (1997). Pg 164-166.

There may also be the concern that excluding the value-adding providers and second comers to the information market by means of a copyright protection extending to improved versions of the original compiled data (database) would not necessarily prompt the creator of the original database to invest further in improving it, or creating new and innovative information product that would meet the particular needs of a segment of the public. As Jane Ginsburg states “This result disfavors both would-be labourers and the greater public who thereby would be deprived of novelty and improvement. The enlarged copyright, thus, would have the deleterious social effect of “put[ting] manacles upon science”.<sup>79</sup>

Lack of adequate legal protection of databases has further ramifications. Valuable resources will need to be dedicated to protecting and defending the unauthorised use of databases and the information contained in them. These resources, which are usually financial in nature and are spent on legal fees and court cases, are sunk costs.

## **Recommended Solution**

The perspective put forward in this paper suggests that neither an obscure and sketchy copyright law protecting either “originality”, nor a general test of investment and labour in a database is adequate as a threshold for legal protection of a database. Revised models and laws should feature transparent economic criteria capable of “incentivising and offering certainty of application as well as including provisions within the statutory framework to deal with the problem of data aggregation”.<sup>80</sup> Optimal protection provides economic incentive especially in the ever-growing commercial database industry.

Addressing the question of how much or what kind of protection should be extended to databases in New Zealand, one option is to apply the “industrious collection” interpretation of the originality threshold. It has been asserted that the industrious collection threshold has the added advantage of proximity to the EU standard for *sui*

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<sup>79</sup> Ginsburg, Jane C. Creation and Commercial Value: Copyright Protection of works of Information. Pg 1878.

<sup>80</sup> C.D. Freedman. Should Canada Enact a New Sui Generis Database Right? Fordham Intellectual Property, Media & Entertainment Law Journal.



*generis* protection, a feature that can only be beneficial should it become necessary for a European ruling on whether New Zealand provides “comparable protection”<sup>81</sup> for databases. However, it may be argued that such extended protection would create too restrictive a copyright law. To alleviate the economic ‘disadvantage’ of such a restricting law, an alternative solution could be *compulsory licences*. This solution provides a means by which welfare-enhancing economic activities - such as creating value-added information products using existing databases - could be carried out without any legal liability. It promotes innovation, “enhances the competition and reduces the transitional costs through the operation of private markets”.<sup>82</sup>

The absence of legal protection diminishes the incentives to engage in initial gathering, organising and maintaining data in a database. A restrictive copyright protection, on the other hand, threatens to restrict access to compiled information by giving too much market power to the original compiler. A compulsory license policy offers creators and value-adding users of databases a legally acceptable and economically efficient “exit from the impasse”.<sup>83</sup> The solution of compulsory license enables “competitors to access, copy, and reorganize data gathered by the first compiler, but affording the first compiler compensation for the appropriations”.<sup>84</sup> The result should produce a just and productive allocation of rights and duties more welfare-enhancing than what copyright law currently offers. Other factors to consider are: 1) individual usage, 2) non-commercial or use for educational purposes, and 3) distribution. The creator of the original database may license rights separately. For example, under the compulsory licence policy, the compiler may allocate rights to private non-commercial use or use for academic research but they may (and should be permitted to) retain rights in regards to dissemination of commercially-sensitive data contained in their database.

## Conclusion

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<sup>81</sup> S. Corbett, NZIPJ 9,12 (2003).

<sup>82</sup> Database Protection. Cornell International Law Journal. Vol 34. L. J. 181 2001.

<sup>83</sup> Ginsburg, Jane C. Creation and Commercial Value: Copyright Protection of works of Information. Pg 1872.

<sup>84</sup> Ginsburg, Jane C. Creation and Commercial Value: Copyright Protection of works of Information. Pg 1870-71.

Evidence from the US indicates that “the growth rates for both databases and database producers have slowed considerably in the years following the *Feist* decision, a signal of dampened investment in the industry”.<sup>85</sup> Databases serving legitimate public needs may never be created without some economic incentive for their creation.

It is suggested that additional protection of databases is warranted to stimulate the innovation of useful and welfare-enhancing databases, and to ensure New Zealand’s economic interests in a global information economy. The threat of free-riding, exacerbated by the technological advances and digitalisation of information may discourage the development of commercially valuable databases. Value-adding providers and infringers alike can copy and distribute over the internet an entire database (or part of) effortlessly within minutes. Without adequate protection, there will be no incentive for individual entrepreneurs and companies to take on the arduous and expensive task of compiling and producing useful databases that would benefit the public and the New Zealand economy. At the same time, too restrictive a copyright law may prohibit the creativity in building new and innovative databases.

We contend that compulsory licensing provides a solution which addresses both of these concerns. It will provide for the original creator of the database to reap the benefits of their investment of time and resources in creating a database, while it will present a second comer with an opportunity to build on the work of the original creator and build new and welfare-enhancing information products. Accountability for the accuracy of data in the databases could be assured by a condition in the contractual agreement (licence) between the creator of the database and its users.

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<sup>85</sup> Russell G. Nelson as cited in the article “Database Protection”. *Cornell International Law Journal*. Vol 34. L. J. 186 2001. Retrieved from: [http://heinonline.org/HOL/page?handle=hein.journals/cint134&div=118collection=journals&g\\_sent=1](http://heinonline.org/HOL/page?handle=hein.journals/cint134&div=118collection=journals&g_sent=1)