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SUI GENERIS DATABASE LEGISLATION: A CRITICAL ANALYSIS

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Over the last decade, one of the most contentious issues in intellectual property has been the question of statutory protection for databases and compilations. A number of factors had converged during the 1990's to place this issue on the policy agenda, including court decisions holding that the factual elements within collections of information are not necessarily covered by copyright laws,[1] the adoption within the European Union of a Directive on the subject,[2] and the continued advances in informational technologies that have made database collections increasingly vulnerable to misappropriation.[3] The efforts of proponents of new, or sui generis *database protections to enact new legislation in the United States had been unsuccessful in the 104th, 105th, 106th and 108th Congresses,[4] and an effort to bring database protections within the ambit of the World Intellectual Property Organization's (WIPO) system of treaties failed to gain approval at its 1996 diplomatic conference. The continuing efforts of the European Union to place the issue of a new database treaty at the fore of the WIPO agenda through its Standing Committee on Copyright and Related Rights, has been unsuccessful in the face of growing resistance from developing countries.[5] In the United States, various efforts to mediate the disparate position of the various stakeholders have been largely unsuccessful.[6]*

This paper presents the drive towards sui generis *legislation for databases as a case study that exemplifies the expansionary nature of the contemporary intellectual property policy environment. Section I places the problem in context by discussing the strategic importance of databases for the*

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1 *See infra* section II-A.

2 *See infra* section II-B

3 *See infra* section II-C.

4 *See infra* sections III-A, C, D, and G respectively.

5 *See infra* section III-D.

6 *See infra* text accompanying notes 174-178 and section III-F.

contemporary research enterprise. Focusing on what databases are, how they are used by researchers, how they are becoming increasingly central to the process of scientific research, and how sui generis *legislation would disrupt these processes helps frame the subsequent discussion of particular legislative proposals. Section II outlines and evaluates the three primary justifications advanced by proponents of* sui generis *database legislation; the need to fill in a perceived gap caused by lack of adequate protection under U.S. copyright law, the need to harmonize U.S. law with the European Union Database Directive, and the increased risks of misappropriation brought about by technological advances. Section III turns to the legislative response in the U.S., describing the database legislation that has been introduced in the 104th, 105th, 106th, and 108th Congresses, and setting forth the principle arguments raised by proponents and opponents of the measures. Section III also contains a discussion of the draft Database Treaty that had been considered by the World Intellectual Property Organization (WIPO) in 1996. Section IV provides an assessment of the validity of the claims of the proponents of database legislation by placing the database debate in a deeper political and economic context. The conclusion is reached that* sui generis *database legislation would hamper the goals of promoting scientific progress, and that such attempts should be rejected by policymakers.*

I. THE STRATEGIC IMPORTANCE OF DATABASES

A recent report on scientific and technical databases by the National Research Council describes the importance of databases for contemporary society.[7] The NRC noted, "as a

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7 COMMITTEE FOR A STUDY ON PROMOTING ACCESS TO SCIENTIFIC AND TECHNICAL DATA FOR THE PUBLIC INTEREST, A QUESTION OF BALANCE: PRIVATE RIGHTS AND THE PUBLIC INTEREST IN SCIENTIFIC AND TECHNICAL DATABASES (1999), *available at* http://www.nap.edu/books/0309068258/html/ (last visited Mar. 31, 2005) [hereinafter A QUESTION OF BALANCE]. The Report was based, in part, on a Workshop held in Washington D.C. on January 14-15, 1999 in Washington D.C. *See* PROCEEDINGS OF THE WORKSHOP ON PROMOTING ACCESS TO SCIENTIFIC AND TECHNICAL DATA FOR THE PUBLIC INTEREST: AN ASSESSMENT OF POLICY OPTIONS, *available at*

result of the near-complete digitization of data collection, manipulation, and dissemination over the past 30 years, almost every aspect of the natural world, human activity, and indeed every life form can be observed and captured in an electronic database."[8] In terms of the economic effect of databases, the NRC added, "[t]here is barely a sector of the economy that is not significantly engaged in the creation and exploitation of digital databases, and there are many-—such as insurance, banking, or direct marketing—that are completely database dependent."[9]

Joshua Lederberg emphasized the centrality of databases to the research process, as well as the need for their broad availability, in his testimony before the House Judiciary Committee on behalf of a coalition of scientific academies in opposition to the database bill then pending.[10] Lederberg linked the research enterprise to progress stating, "[s]cientific and engineering research drives our nation's progress. Society uses the fruits of such research to expand the world's base of

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http://books.nap.edu/html/proceedings_sci_tech/ (last visited Mar. 31, 2005) [hereinafter NRC 1999 PROCEEDINGS].

8 National Research Council, *A Question of Balance, supra* note 7, at 17. *See also* Jerome H. Reichman and Paul F. Uhlir, "Database Protection at the Crossroads: Recent Developments and Their Impact on Science and Technology," 14 BERKELEY TECH. L.J. 793, 812-13 (Spring 1999) (arguing that "All science operates on databases. The near-complete digitization of data collection, manipulation, and dissemination over the past thirty years has ushered in what many regard as the transparency revolution. Every aspect of the natural world, from the nano-scale to the macro-scale, all human activities, and indeed every life form, can now be observed and captured as an electronic database.").

9 National Research Council, *A Question of Balance, supra* note 7, at 17.

10 *Collections of Information Antipiracy Act: Hearing on H.R. 354 Before the House Subcomm. on Courts and Intellectual Property of the House Comm. on the Judiciary,* 106th Cong. ____ (March 18, 1999) (statement of Joshua Lederberg on behalf of the National Academy of Sciences, National Academy of Engineering, Institute of Medicine and American Association for the Advancement of Science) *available at* http://www.arl.org/info/letters/lederbergtest.html (last visited Mar. 31, 2005) [hereinafter *Lederberg Testimony*]. Lederberg was speaking in opposition to the proposed legislation.

knowledge and applies that knowledge in myriad downstream applications to create new wealth and to enhance the public welfare."[11] He also described the broad availability of databases as an essential element to the success of this research enterprise, stating that, "the policy of the United States has been to support a vibrant research enterprise and to assure that its productivity is exploited for national gain."[12] Lederberg emphasized that, "freedom of inquiry, the open availability of scientific data, and the open publication of results are cornerstones of our research system that U.S. law and tradition have long upheld."[13]

The construction of a definition for a database is elusive. As a legal concept, the *EU Database Directive* defines a database as "a collection of independent works, data or other materials arranged in a systematic or methodical way and individually accessible by electronic or other means."[14] The *Database and Collections of Information Misappropriation Act*, now pending in the 108th Congress defines a database as "a collection of a large number of discrete items of information produced for the purpose of bringing such discrete items of information together in one place or through one source so that persons may access them."[15] Historian Mark Poster says a

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11 *Id.*

12 *Id.*

13 *Id.* ("A necessary component of these past and continuing achievements has been the wide availability of scientific and technical data and information, ranging from raw or minimally processed data to cutting-edge research articles in newly developing fields. This information has been assembled as a matter of public responsibility by the individuals and institutions of the scientific and engineering communities, largely with the support of public funding.").

14 European Union. Directive 96/9/EC of the European Parliament and of the Council of 11 March 1996 on the Legal Protection of Databases, 1996 O.J. L77-20., art. 1(2), *available at* http://europa.eu.int/ISPO/infosoc/legreg/docs/969ec.html (last visited Mar. 31, 2005) [hereinafter *EU Database Directive*].

15 *Database and Collections of Information Misappropriation Act* , 108th Congress, H.R. 3261, section 2(5)(A). For a full discussion of the Bill, see *infra* section III G.

database is "a repository of messages."[16] On a more technical level, a database is defined as "[o]ne or more large structured sets of persistent data, usually associated with software to update and query the data. A simple database might be a single file containing many records, each of which contains the same set of fields where each field is a certain fixed width. A database is one component of a database management system."[17]

Martha E. Williams provides a statistical analysis of the growth of databases in the annual *Gale Directory of Databases*. She reports that from 1975 through 2001 the number of databases has grown from 301 to 12,111 and the number of records has increased from 52 million to 16.86 billion.[18] During the same period, the number of database producers has grown from 200 to 3879. Williams also discusses the various ways that databases may be classified. The primary method is by the form of data representation, for which she identifies six types: word-oriented,[19] number oriented,[20] image-oriented, sound oriented, electronic services,[21] and software.[22] Other forms of classification are by region and country of origin,[23] subject category, medium

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16 Mark Poster, The Mode of Information: Poststructuralism and Social Context 69 (1990).

17 FOLDOC (Free Online Dictionary of Computing), *available at* http://foldoc.doc.ic.ac.uk/foldoc/ (last visited Mar. 31, 2005).

18 Martha E. Williams. *The State of Databases Today: 2002*, *in* GALE DIRECTORY OF DATABASES at xx (Erin Nagel ed., 2002).

19 Word-oriented databases can be further divided into bibliographic, directory, dictionary, full-text, patent/trademark and other. *Id.* at xxi.

20 Numerical databases are subdivided into transactional, statistical, time-series, properties, and other. *Id.*

21 Electronic services databases include bulletin boards, electronic mail, and electronic conferencing. *Id.*

22 *Id.* at xxi. In 2001, word-oriented databases were the largest entry (68%), followed by number-oriented (17%), image-oriented (12%), audio (3%) and the remainder (<1%). *Id.* at xxii.

23 The countries with 100 or more databases entries are the United States (6889), England (921), Germany (418), Finland (406), Canada (350), Denmark (316), France (262), Norway (236) Sweden (231), Netherlands (229), Republic of Korea (198), and Australia (164). *Id.* at xxiv.

of distribution,[24] and type of distributor.[25] An alternative classification system based on the function of the database producer consisting of publisher, gatherer, refiner and portal is presented by Stephen Maurer.[26] The publisher takes pre-existing documents and converts them to a searchable electronic form with minimal alteration. The gatherer assembles data from multiple sources and reports it in a unified database. Unlike publishers or gatherers, refiners actually improve raw data by searching for errors and adding commentary. Finally, a portal provides access to multiple databases through a common gateway. Maurer's classification scheme is useful for policy analysis because of the various levels of both effort and creativity involved in the different areas.

In addition to the classification schemes suggested by Williams and Maurer there are three additional types of criteria: the nature of the data elements, the nature of the source of the data, and the uses to which the databases are put with respect to the production process, which are useful for policymaking purposes.

First, some databases and compilations are composed of individual elements that are in themselves works, or portions of works, in which copyright subsists. On the other hand, many databases are composed of factual elements that lack the requisite originality for copyright to subsist. This distinction is important because in the case of the former, there are already enforceable copyright interests. Many of the claims of the database industry for *sui generis* legislation are based on the assumption that there is no protection under current law for the contents of databases and compilations, and this claim is

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24 For 2001, the largest medium of distribution is online (49%) followed by CD-ROM (36%), diskette (8%), magnetic tape (5%), batch (2%) and hand-held (<1%) (*id*, p. xxvii).

25 For 2001, commercial/industrial publishers produced 82% of the database entries, followed by non-profit/academic (8%), governmental (8%) and mixed (2%). *Id.* at xxviii.

26 Stephen Maurer, *Across Two Worlds: Database Protection in the US and Europe*, at 5 (2001) Presented at Industry Canada's Conference on Intellectual Property and Innovation In the Knowledge-Based Economy, May 23-24, 2001, *available at* http://strategis.ic.gc.ca/pics/ip/maurer.pdf (last visited Mar. 31, 2005) [hereinafter *Across Two Worlds*].

overstated.[27] Another distinction relating to the nature of the data elements is the difference between natural and synthetic data. Synthetic data, such as entries in telephone directories, racing forms, inventory lists, and stock market quotes, does not exist in a state of nature but is a human construction in order to serve a particular purpose. Synthetic data is usually compiled as a by-product of some other activity. In contrast, natural data is based on observation and experiment and describes phenomena in the natural world. It is usually collected because of the utility of the data itself, not as an offshoot of some other activity.

Second, with respect to the nature of the source of data, it is important to distinguish between data prepared in the public sector, or with the support of public funds, and data that has been privately collected. Any set of rules governing the transfer and use of data should take into account the fact that governmental data, or data compiled in the course of government-funded research, has already been paid for by the taxpayers. It is also important to distinguish between data that is available from only one source and data that is available from multiple sources. This distinction is relevant for policymakers in order to avoid the problem of monopoly control over any collection of data since sole-source databases will be less prone to substitution by rival products.

Third, it is useful to distinguish between databases that are used in the production process from databases that are primarily geared toward end users. Dan Schiller distinguishes two instances of the commodification of information: first, where information is the final product, and second, where information is an intermediate component of production.[28] This distinction becomes increasingly relevant as the process of production itself becomes more information-intensive. Unfortunately, unlike categories such as subject matter and origin, these last three criterion are not tracked in the Gale compilation.[29] This broad

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27 *See infra* Section II A.

28 Dan Schiller, *The Information Commodity: A Preliminary View*, *in* CUTTING EDGE: TECHNOLOGY, INFORMATION, CAPITALISM, AND SOCIAL REVOLUTION 110 (Jim Davis et al. eds., 1997).

29 In many instances, it would be feasible to assign a database to this production/consumption category by simply examining the record in the compilation. In many cases, however, the line would not be clear as there would be a dual

variety of classification criterion of databases points to their diverse nature, and should signal great difficulties in crafting policies for the use and transfer of data that apply across the board.

An important feature of modern databases that warrants further emphasis is their increasing complexity. Databases do not merely exist as fixed entities, but they should be thought of as non-linear and dynamic collections that are constantly undergoing change and transformative use. The NRC report, *A Question of Balance*, distinguishes between two different types of uses of databases, end use and derivative use. "End use—accessing a database to verify some fact or perform some job-related or personal task, such as obtaining an example for a work memo—is most typical of public consumer uses . . . [and] does not involve the physical integration of one or more portions of the database into another database in order to create a new information product."[30] In contrast, a derivative, or value-adding or transformative use "builds on a preexisting database and includes at least one, and frequently many more, extractions from one or more databases to create a new database, which can be used for the same, a similar, or an entirely different purpose than the original component database(s)."[31]

The ability to combine data from various sources is central to the success of the modern research process. The NRC speaks to the advantages flowing from the ability to link data from multiple sources:

> In seeking new knowledge, researchers may gather data from widely disparate sources. A significant advantage arising from the abundance of digitized data now accessible through both private and public networks is the potential for linking data in multiple (even thousands of) databases. The ability to link sites on the World Wide Web is one type of

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use. For example, the LEXIS-NEXIS database (element of which span all four of Maurer's classifications) is accessed by end-users for private research as is also used as a source of information in the process of producing some other work or product.

30 National Research Council, A QUESTION OF BALANCE, *supra* note 7, at 34.

31 *Id.*

> integration that could result in more data being available overall to users. Another is the merging of databases of the same or complementary content. It is now possible to maintain a site with continuously verified links to related information sites for use by subscribers or members of a specific group.[32]

The critical implications of derivative uses of databases flow from the cumulative nature of science itself:

> The ethos in research is that science builds on science. The creation of derivative databases not only enables incremental advances in the knowledge base, but also can contribute to major new findings, particularly when existing data are combined with new or entirely different data. The importance for research and related educational activities of producing new derivative databases cannot be overemphasized. The vast increase in the creation of digital databases in recent decades, together with the ability to make them broadly and instantaneously available, has resulted in entire new fields of data-driven research.[33]

Joshua Lederberg called the extraction and merging of sources from multiple databases "a hallmark trait of modern research."[34] Paul David also stresses the importance of the dynamic nature of databases for the research process, pointing

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32 *Id.*

33 *Id.* at 35.

34 *Lederberg Testimony*, *supra* note 10 ("A hallmark trait of modern research is to obtain and use dozens or even hundreds of databases, extracting and merging portions of each to create new databases and new sources for knowledge and innovation. However, not only researchers and educators, but all citizens with access to computers and networks, constantly create new databases and information products for both commercial and noncommercial applications by extracting and recombining data and information from multiple sources. The rapid and continuous synthesis of disparate data by all segments of our society is one of the defining characteristics of the information age. The ability of individuals and organizations to use information in a wide variety of innovative ways is also a measure of success of the original data-collection efforts.").

out that interactivity is part of the source of the value of the database itself:

> [f]or open science research communities, databases are *dynamic* tools, not merely static sources to be passively consulted; they are formed and kept effective through an interactive process of examination, error-correction, updating, and incremental elaboration that engages the critical expertise of many individuals in the communities of researchers who co-operate in developing, certifying and maintaining these research instruments. Thus, in *many contexts the value of the information to users is enhanced by the very fact that its use has been, and will continue to be shared with other researchers*.[35]

The last point is particularly significant because it points to the presence of network effects in databases where the value of the database is actually increased the more it is used. The dynamic and interactive aspect of databases is also a function of their increased complexity. In respect to databases in the life sciences, Maurer, Firestone and Scriver describe how databases have outgrown the ability of single workers or small groups to manage and use them. They argue that without the ability to combine various data sources, important information may be lost to researchers in the life sciences, where "millions of observations about location, interpersonal variation and function within the human genome are produced, but not published."[36]

The problem of complexity is particularly acute in the field of human genome research. Jamie Cuticchia notes that "[a]s more data are generated this year than ever before, it is unlikely that any single or small group of organizations can

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35 Paul A. David, *A Tragedy of the Public Knowledge 'Commons'?: Global Science, Intellectual Property and the Digital Technology Boomerang*, 9 (2000) (Working Paper 04/00 Oxford Intellectual Property Research Center). OIPRC ELECTRONIC JOURNAL OF INTELLECTUAL PROPERTY RIGHTS, *available at* http://www.oiprc.ox.ac.uk/EJWP0400.html (last visited Mar. 31, 2005) (emphasis added).

36 Stephen M Maurer et al., *Science's Neglected Legacy*, 405 *Nature* 117, 118 (May 11, 2000).

adequately collect, manage, and deploy the intellectual capital needed to meet the data collection, curation, and disseminations needs – particularly in the area of mutations."[37] Similarly, Lehvaslaiho, Stupka, and Ashburner describe the role played by the European Bioinformatics Institute (EBI) in combining several databases in order to support genetic research.[38] Rather than collect mutation data directly, EBI works to pool and analyze existing data collections in order to "create a coherent, unified database, with federated content, with the aim of providing a unique reservoir of information drawn from both the biological and medical world. By limiting redundancy and building links between related data, the full potential of worldwide research in this field can thus be exploited and accessed by the scientific community."[39] Lehvaslaiho, *et. al.* conclude that it is of "paramount importance that the raw data generated by all research projects is uniformly and easily available, so as to be able to integrate the biological and clinical implications of genetic variation."[40]

In their summary of the 2000 workshop, "Bioinformatics: Converting Data to Knowledge," Robert Pool and Joan Esnayra make the similar point in reference to barriers to database access. They say that "if researchers are to turn the data accumulating in biological databases into useful knowledge, they must first be able to access the data and work with them, but this is not always as easy as it might seen."[41] For Pool and

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37 Cuticchia, A. Jamie, *Future Vision of the GDB Human Genome Database*, 15 HUMAN MUTATION 62, 65 (2000). Cuticchia describes the GDB Human Genome Database as an amalgam of various other collections of data that is made available to the public free of charge. He points to the importance of central collections of databases and argues that GDB will "spend increasing amounts of time culling together data from major sites of biological discovery in order to create its compilation." *Id.* at 66.

38 Heikki Lehvaslaiho et al., *Sequence Variation Database Project at the European Bioinformatics Institute*, 15 HUMAN MUTATION 52 (2000).

39 *Id.* at 52.

40 *Id.* at 55.

41 Robert Pool & Joan Esnayra BIOINFORMATICS: CONVERTING DATA TO KNOWLEDGE: WORKSHOP SUMMARY 11 (2000), *available at*

Esnayra, "[t]he most basic barrier to putting databases to use is that many of them are unavalable to most researchers. Some are proprietary databases assembled by private companies; others are collections that belong to academic researchers or university departments and have never been put online." [42]

Speaking to the centrality of the database to the field of bioinformatics, Dov Greenbaum observes "[b]ioinformatics, a sort of in silico biology, attempts to efficiently process, curate, manage, and mine the deluge of biological data available in the databases. Bioinformatics does not produce its own raw data, as is the case with many other fields. Instead, it examines other researchers' data and relies on their benevolence and a culture of sharing, to attain this information."[43] Greenbaum describes a three-pronged approach to explain the complexity of database usage in bioinformatics:

> Bioinformatics provides a multi-pronged approach to dealing with and deciphering genomic and other sets of "omic data." Initially, bioinformatics provides a level of organization, allowing researchers to input and access data. Databases are composed of complex architectures, which should be manufactured with careful planning and design of the architecture, yet in most cases, they are not. The reason for this design is to integrate radically different forms of data from multiple databases. This data is extracted and coalesced into more definitive resources that are then used by researchers in all fields of biology. [44]

The second prong of the problem of complexity in bioinformatics is concerned with the curation and control of the data "so to prevent initial mistakes from being translated into

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http://books.nap.edu/books/0309072565/html/ (last visited Mar. 31, 2005).

42 *Id.* Online availability is crucial because, "[i]f a database cannot be searched online, few researchers will take advantage of it even if, in theory, the information is publicly available." *Id.*

43 Dov Greenbaum, *Commentary: The Database Debate: In Support of an Inequitable Solution*, 13 ALB. L.J. SCI. & TECH. 431, 446 (2003).

44 *Id.* at 449.

false results. Curation includes either reducing redundancy by clustering the data into assemblies of overlapping information, or minimizing complexity by organizing the data into distinctive parts."[45] Finally, Greenbaum points to the importance of the coherent presentation of the data, arguing that "[c]reative input in designing database layout is important for presenting confusing information to researchers who are not familiar with all the data in the database."[46]

At every step of the process, the interaction with the data is dynamic. Greenbaum concludes that "[i]t should be obvious to the reader that bioinformatics requires unhindered access to databases in order to endure."[47] In contrast to other fields that are less reliant on interactive and transformative database usage, Greenbaum argues that "bioinformaticians must use and integrate hundreds of databases; bioinformatics would be negatively affected by limitations imposed by Congress or database owners."[48]

Several participants in the NRC Workshop that formed the basis for the NRC report articulated their concerns about how restrictions on the utilization and dissemination of databases could hamper the research process. G. Christian Overton, of the Center for Bioinformatics at the University of Pennsylvania spoke to the importance of open access to databases for scientific research. Overton claims that "[d]atabases hold a unique status in biological research" [b]ecause all life is related through evolution, the study of

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45 *Id.*

46 *Id.* at 450.

47 *Id.*

48 *Id.* Greenbaum reaches the ultimate conclusion that: "While there are societal needs for databases, and as such, the government should support their growth, the social benefit created by maintaining a healthy public domain, and not privatizing information and facts, far outweighs the benefits provided by the database industry, and any subsequent loss of revenue or market following the implementation of a less favorable copyright regime. If Congress must choose between science and industry, the choice should be obvious." (*Id.* at 515).

virtually any question in biology is informed by consideration of the historical record of life as reflected in modern organisms."[49]

In response to a question concerning barriers to access to data, Overton pointed to both technical barriers and commercialization as serious impediments. At first, the problems were mostly technical in nature.[50] But Overton also points to barriers posed by commercialization as a growing trend:

> A growing trend, which will surely impact ready access to vital information, is the commercialization and restrictive licensing of formerly freely distributed data resources. In some cases this has been motivated by the need to secure stable long-term funding for data resource development and maintenance. Regardless, this trend could introduce insurmountable barriers to database integration efforts, particularly distributed database integration, as we are forced to negotiate with each provider terms for data access, acceptable data formats, and distribution on the Web.[51]

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49 NRC 1999 PROCEEDINGS, *supra* note 7, at 41. Overton adds that "...[the] development and maintenance of databases of biological data, information, and knowledge are critical to the rapid advance of research in fundamental problems in biomedicine," and that "unfettered access to the data housed in the large and diverse collection of online biology resources is essential if the pace of research is not to be inhibited." (id.)

50 *Id.* at 41-42 (stating that "[u]ntil recently, the barriers to accessing and integrating biological data resources were primarily technical in nature. Indeed, many of the issues involved in integrating diverse, heterogeneous, distributed biological data resources—such as data resource evolution, transformation, and integration, and data provenance—have motivated significant research efforts in information technology. Because the rich data resources for biology are largely in the public domain, they have become important testbeds for advances in information technology not readily available elsewhere.")

51 *Id.*

In response to a question about how he would solve the policy problem of database protection, Overton states he would like to see "easier access to all of this, especially when what we do is database integration. To make it more complicated, we do database integration on the fly . . . we query through these schools for heterogeneous, distributed data."[52] Overton expresses uncertainty for the future if "the restrictions become universal."[53]

Other conference participants shared Overton's fear about how proprietary restrictions could hamper the ability of researchers to use and transform databases. These concerns were not limited to the educational and not-for-profit sector. Pointing to the privatization of previously freely available databases, Myra Williams, CEO of Molecular Applications Group, a private firm, argued that the need to obtain licenses poses problems for researchers:

> "Many of the scientists and the academic institutions have minimal experience negotiating such an agreement; as a result, decision making is slow. Since our products depend upon having a rich variety of information available, these situations often require us to look for other information sources rather than dealing with the recognized leader. We have not yet faced any legality issues in creating a derivative database based in part on information extracted from a different database. Should we lose the right to reutilize information in the public domain, our entire product focus would be invalidated. [54]

She concludes that since "[s]cience builds upon science, with one discovery becoming the basis for another," the inability to freely access databases would be a serious impediment to the science.[55]

Law professor Jerome Reichman summarized these concerns in the final plenary session of the workshop, noting "the possibilities for a strong database right to interfere with the

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52 *Id.* at 44.

53 *Id.*

54 *Id.* at 46-47.

55 *Id.*

scientific community's ability to recombine data in complex new databases would wreak even more havoc than we had previously predicted." [56] Reichman emphasized the recurring concern raised by a variety of participants:

> Everyone who has looked into this problem has said, look out for the danger that a so-called redistribution right can just disrupt the ability that scientists have now to take databases that they have paid to access and then take a piece of that and pieces of other things and make something new. I think that the consequences of getting in the way of that customary practice would be very grave.[57]

One of the most significant challenges facing the future development of databases is interoperability. The facts that diverse users utilize complex databases, and that the databases themselves are derived from a multiplicity of sources means that the problem of incompatibility of data elements and structures must be addressed for databases to realize their potential in the research process. Dov Greenbaum and Mark Gerstein claim "[i]t is obvious that interoperation of databases through universal scientific formats and standards facilitates research; data are ineffectual if scattered among incompatible resources. Not as obvious is the need for robust legal frameworks to ensure interoperation." [58] A primer on genomic research prepared by the Human Genome Project also addressed the importance of interoperability issues." [59]

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56 *Id.* at 307.

57 *Id.*

58 Dov Greenbaum and Mark Gerstein, *A Universal Legal Framework as a Prerequisite to Database Interoperability*, 21 NATURE BIOTECHNOLOGY 979 (September 2003).

59 HUMAN GENOME PROJECT, UNITED STATES DEPARTMENT OF ENERGY, *To Know Ourselves* 31 (1996), *available at* http://www.ornl.gov/hgmis/publicat/tko/tko.pdf/ (last visited Mar. 31, 2005) ("Public resource databases must provide data and interpretive analyses to a worldwide research and development community. As this community of researchers expands and as the quantity of data grows, the challenges of maintaining accessible and useful databases likewise increase.

As the technology enhancing interoperability continues to advance, the potential utility of databases for researchers will increase. But such technologically-enabled gains will be more than offset by human-imposed limitations, such as the access and use restrictions that will accompany broad *sui generis* database legislation and which have already accompanied the anti-circumvention rules of the Digital Millennium Copyright Act (DMCA). Greenbaum and Gerstein argue that "proprietary formats and encryption encumber the transfer of information to a medium where it can be manipulated and analyzed. Finally, watermarking adds overt or hidden digital fingerprints, slightly corrupting the data. It can prevent copying, but it also adds background noise to large scale calculations, potentially leading to errors."[60]

Malla Pollack argues that "[f]undamental scientific research requires unintimidated access to masses of data,"[61] and that this access is impeded when a "researcher is intimidated by

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For example, it is critical to develop scientific databases that 'interoperate,' sharing data and protocols so that users can expect answers to complex questions that demand information from geographically distributed data resources. As the genome project continues to provide data that interlink structural and functional biochemistry, molecular, cellular, and developmental biology, physiology and medicine, and environmental science, such interoperable databases will be the critical resources for both research and technology development.").

60 Greenbaum & Gerstein, *supra* note 58, at 981. The authors argue that the legal uncertainty arising from the lack of a universal standards of database protection "has resulted in an explosion of technological safeguards, far more limiting than any law in their ability to control database producers' data. These effectively operate as *de facto* laws that give copyright owners the ability to overcome the limitations of their government-granted monopolies, undermining interoperation." *Id.* They advocate "a universal industry-wide standardized and compulsory license that would allow academic users the ability to access any data set at a reasonable price without having to negotiate different complex and limiting agreements for each database." *Id.* at 981-82.

61 Malla Pollack, *The Right to Know?: Delimiting Database Protection at the Juncture of the Commerce Clause, The Intellectual Property Clause, and the First Amendment*, 17 CARDOZO ARTS & ENT. L.J. 47, 116 (1999).

the need to contract for, and pay for, each tidbit of data, or risk a lawsuit that would disrupt work and perhaps lead to stiff financial penalties or even criminal liability."[62]

As scientists such as Lederberg, Overton, David, Greenbaum and others have articulated, the propensity for modern databases to be cumulative, interactive, and dynamic weakens the dichotomy between database producer and database user. Indeed, many users of databases should be considered refiners in the sense used by Maurer.

II. THE "NEED" FOR DATABASE LEGISLATION: BACKGROUND AND JUSTIFICATIONS

Most accounts of the current drive towards statutory protection for databases highlight three background elements.[63] The first two are legal developments and the third is a technological factor. First, in a 1991 ruling, the United States Supreme Court held that facts contained in a compilation did not qualify for copyright protection because they lacked the

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62 *Id.*

63 *See* UNITED STATES COPYRIGHT OFFICE, REPORT ON LEGAL PROTECTION FOR DATABASES 1 (Aug. 1997), *available at* http://www.copyright.gov/reports/db4.pdf (last visited Mar. 31, 2005) [hereinafter COPYRIGHT OFFICE REPORT] (stating "[i]n the past few years, the issue has taken on new urgency due to changes in the legal, technological and international landscape. The major landmarks among these changes have been the U.S. Supreme Court's 1991 decision in *Feist Publications v. Rural Telephone Service Co.*; rapid developments in the technologies for collecting, organizing, reproducing and disseminating information; and the actions of the European Union in harmonizing the laws of its member states.") *See also* J. Ryan Mitchell, *If at Feist You Don't Succeed, Try, Try Again: An Evaluation of the Proposed Collections of Information Antipiracy Act*, 78 NEB. L. REV. 900, 909 (arguing that the "Supreme Court's decision in Feist, coupled with international database legislation and the emergence of new technology that allows for the copying and arranging of massive amounts of information at the push of a button have all hastened the need for database legislation in the United States.").

requisite originality.[64] Second, in 1996, the European Parliament adopted a directive extending legal protection to compilations and databases.[65] And finally, advances in information technology have made it possible to copy and widely disseminate information resources over worldwide networks. The increased ease of copying has raised concerns among content owners that their works might be misappropriated in cyberspace. Each of these three impetuses will be reviewed in sections A, B, and C, respectively.

A. THE ORIGINALITY REQUIREMENT AND THE *FEIST* CASE

Turning to the factors that have given impetus to the drive towards *sui generis* database legislation, the first issue concerns how courts have treated the elements of databases under existing copyright law. In *Feist Publications v. Rural Telephone Service Co.*,[66] the United States Supreme Court held that a compilation must have a modicum of creativity in its selection, coordination, or arrangement to qualify for copyright protection. In this case the Rural Telephone Service, a local telephone company in Kansas, sued Feist Publishing Company for copyright infringement because Feist had used information contained in Rural's white pages in the compilation of its own directory. Feist specialized in producing area-wide telephone directories covering a much larger geographic area than local directories produced by phone companies such as Rural. In order to obtain white pages listings for its area-wide directory, Feist approached each of the eleven telephone companies operating in northwest Kansas and offered to pay for the right to use its white-pages listings. Of the eleven companies, only Rural refused to license its listings to Feist. This refusal created a problem for Feist because without these listings, Feist would have a major hole in its area-wide directory. Feist then extracted the listings it needed from Rural's directory without Rural's permission. While both Rural's and Feist's directories were distributed free of charge in the area, they were vigorous competitors for yellow page listings.

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64 Feist Publ'ns v. Rural Tel. Serv. , 499 U.S. 340 (1991).

65 EU Database Directive, *supra* note 14.

66 *Feist*, 499 U.S. at 340.

The court rejected Rural's infringement claim because the listings, which only contained factual information (names in alphabetical order along with corresponding phone numbers and addresses) lacked the requisite degree of originality required for copyright protection. The court began its analysis by noting the tension between two well-established principles of copyright law: while facts are not copyrightable, compilations of facts generally are. "The most fundamental axiom of copyright law is that 'no author may copyright his ideas or the facts he narrates.' Rural wisely concedes this point . . . . At the same time, however, it is beyond dispute that compilations of facts are within the subject matter of copyright . . . . There is an undeniable tension between these two propositions."[67]

The requisite level of original creativity is extremely low; even a slight amount will suffice. While mere facts do not meet this threshold, compilations of facts often may meet the requirement because of some creativity in the selection and arrangement of the facts:

> The compilation author typically chooses which facts to include, in what order to place them, and how to arrange the collected data so that they may be used effectively by readers. These choices as to selection and arrangement, so long as they are made independently by the compiler and entail a minimal degree of creativity, are sufficiently original that Congress may protect such compilations through the copyright laws. . . Thus, even a directory that contains absolutely no protectable written expression, only facts, meets the constitutional minimum for copyright

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67 *Id.* at 344-45. The Court explained that the reason for the tension is the originality requirement of the Constitution: "The source of Congress' power to enact copyright laws is Article I, § 8, cl. 8, of the Constitution, which authorizes Congress to 'secure for limited Times to Authors . . . the exclusive Right to their respective Writings.' In two decisions from the late 19th century—*The Trade-Mark Cases*, 100 U.S. 82 (1879); and *Burrow-Giles Lithographic Co. v. Sarony*, 111 U.S. 53 (1884)—this Court defined the crucial terms 'authors' and 'writings.' In so doing, the Court made it unmistakably clear that these terms presuppose a degree of originality." *Id.* at 346.

> protection if it features an original selection or arrangement.[68] (citations omitted)

But the applicability of copyright to a compilation of facts is subject to an important limitation. The mere fact that a work is copyrighted does not mean that every element of the work may be protected:

> Originality remains the *sine qua non* of copyright; accordingly, copyright protection may extend only to those components of a work that are original to the author. . . Thus, if the compilation author clothes facts with an original collocation of words, he or she may be able to claim a copyright in this written expression. Others may copy the underlying facts from the publication, but not the precise words used to present them.[69] (citations omitted)

This limitation means that the copyright in a factual compilation is thin. Even if a compilation is under copyright, "a subsequent compiler remains free to use the facts contained in another's publication to aid in preparing a competing work, so long as the competing work does not feature the same selection and arrangement." [70]

Since the *Feist* ruling, lower federal courts have had numerous opportunities to apply the decision. In some cases, courts have found the requisite originality in the arrangement to qualify for copyright protection. For example, the Second Circuit found in *Key Publications, Inc. v. Chinatown Today Publishing Enterprises, Inc.*[71] that the selection of businesses to be included in a directory was not mechanical, but involved creativity. In that case, the compiler made a decision about what categories to include under what name. Other Second Circuit cases have found sufficient creativity in the compilation of facts to warrant copyright protection. In *CCC Information Servs. v. MacLean Hunter Market Reports, Inc.,*[72] the Court found sufficient creativity in the selection of optional car features and

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68 *Id.* at 348.
69 *Id.*
70 *Id.* at 349.
71 945 F.2d 509 (2d Cir. 1991).
72 44 F.3d 61 (2d Cir. 1994).

the number of models of a given year to be included in a used-car price compilation. In *CCC*, the price estimates were based on professional judgment and expertise rather than mere recitals of historical prices. The requisite creativity was also found in *Lipton v. Nature Co.*,[73] where the author selected the terms included in the work from numerous variations of hundreds of available terms. The important element in these three cases finding copyright protection is the large number of possible options of arrangements from which the author could have selected. These selections were considered by the Court to be subjective judgments of taste, not standards dictated by industry practices.

In other cases, courts have denied copyright protection for lack of requisite originality. The Eleventh Circuit held in *BellSouth Advertising & Publishing v. Donnelley Info. Publishing*[74] that the categories for the organization of material in a yellow pages directory lacked creativity, where many of the selected headings were simply obvious and many others resulted from standard industry practices. Similarly, in *Warren Publishing, v. Microdos Data Corp.*,[75] the Court found that Warren's selection of cable systems to include in its Factbook lacked the requisite creativity or judgment because the entire relevant universe known to Warren was included. All of these cases apply *Feist* in such a way as to place database producers on reasonable notice that they will be protected under copyright law to the extent they make creative choices in the selection and arrangement of materials.

In *Matthew Bender & Co. v. West Publishing*,[76] the Second Circuit rejected West Publishing's claims of copyright on its page numbering and the factual content of its collections of court opinions. The Court found "the creative spark is missing where: (i) industry conventions or other external factors so dictate selection that any person composing a compilation of the type at issue would necessarily select the same categories of information, . . . or (ii) the author made obvious, garden-variety, or routine selections."[77] Applying this standard, West's

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73 71 F.3d 464 (2d Cir. 1995).
74 999 F.2d 1436, 1444 (11th Cir. 1993).
75 115 F.3d 1509 (11th Cir. 1997).
76 158 F.3d 674 (2d Cir. 1998).
77 *Id.* at 682.

arrangements failed to meet the criteria of creativity needed to meet the originality test of *Feist*.

The *Feist* court emphasized that the primary objective of copyright is not to reward authors, but to promote the Progress of Science and Useful Arts, and that while copyright assures authors the right to their original expression, it also encourages others to build freely upon the ideas and information conveyed by a work:

> No matter how much original authorship the work displays, the facts and ideas it exposes are free for the taking . . . . The very same facts and ideas may be divorced from the context imposed by the author, and restated or reshuffled by second comers, even if the author was the first to discover the facts or to propose the ideas . . . . It may seem unfair that much of the fruit of the compiler's labor may be used by others without compensation . . . [h]owever, this is not "some unforeseen byproduct of a statutory scheme." It is, rather, "the essence of copyright," and a constitutional requirement.[78] (citations omitted)

In concluding that there was no infringement, the Court posed the question: "[d]id Feist, by taking 1,309 names, towns, and telephone numbers from Rural's white pages, copy anything that was 'original' to Rural?" The Court answered this question in the negative.[79]

Whether *Feist* was consistent with existing law or represented a departure became a subject of considerable

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78 *Feist,* 449 U.S. at 349-50.

79 *Id.* at 361 (stating that "[c]ertainly, the raw data does not satisfy the originality requirement. Rural may have been the first to discover and report the names, towns, and telephone numbers of its subscribers, but this data does not 'owe its origin' to Rural... Rather, these bits of information are uncopyrightable facts; they existed before Rural reported them and would have continued to exist if Rural had never published a telephone directory. The originality requirement rules out protecting . . . names, addresses, and telephone numbers of which [Rural] by no stretch of the imagination could be called the author.") (citations omitted).

controversy. Proponents of new legislation argued that the case was inconsistent with prior rulings, and presented a new obstacle to the database industry. As the *Feist* court's ruling placed the contents of most databases and compilations outside the scope of copyright protection, the decision led many database producers to argue that this lack of legal protection undermined their ability to protect their investments from misappropriation. In their report prepared for the database industry, Tyson and Sherry criticized *Feist* as a radical departure from settled precedent, calling the case a "sweeping decision" that "eliminated the traditional 'sweat of the brow' rationale for database protection that had been accorded under copyright law and left database producers in legal limbo in terms of their ability to protect themselves from unauthorized copying and dissemination of their products and from outright piracy."[80] A similar reading of *Feist* was presented by Mitch Glazer, then Chief Counsel of the Subcommittee on Courts and Intellectual Property of the House Judiciary Committee.[81] In his influential

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80 Laura D'Andrea Tyson & Edward F. Sherry, *Statutory Protection for Databases: Economic & Public Policy Issues*, (unpublished report, Information Industry Ass'n, 1997), *available at* http://judiciary.house.gov/legacy/41118.htm (last visited Mar. 31, 2005). Tyson was the former National Economic Advisor to President Clinton and former Chair of the Whitehouse Counsel of Economic Advisors. She is currently the Dean of the Haas School of Business at the University of California, Berkeley.

81 Mitch Glazier, *Legislation Under Consideration by the Congress of the United States of America Regarding the Protection of Databases*, Presentation at Protection of Databases Workshop, International Conference on Electronic Commerce and Intellectual Property September 16, 1999 (WIPO/EC/CONF/99/SPK/22-B), *available at* http://ecommerce.wipo.int/meetings/1999/papers/glazier.html (last visited Mar. 31, 2005) (URL no longer available). Glazier argued that

> [F]ederal courts have traditionally held databases to be protected under one of two interpretations of copyright law, either 'originality' or 'sweat of the brow' (i.e., the labor and resources invested in the protected materials). [The Feist decision] marked a tougher attitude toward claims of copyright in databases, abandoning the 'sweat of the brow' legal

treatise on copyright law, Paul Goldstein called *Feist* a "significant departure from precedent."[82]

But other legal scholars have disputed the claim that *Feist* has unsettled existing doctrine. Using *Feist* as a rationale for new legislation is dependent on a particular reading of the case, one that finds the disruption of settled doctrine. In her response to the Tyson-Sherry Report, Pamela Samuelson argued that *Feist* was not unsettling of established doctrine, and that the authors had overstated the acceptance of the 'sweat of the brow' doctrine.[83] Samuelson's response also effectively

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> theory. While reaffirming that most although not all –commercially significant databases satisfy the 'originality' requirement for protection under copyright, the Court emphasized that this protection is 'necessarily thin.' Several subsequent lower court decisions have underscored that copyright cannot stop a competitor from lifting massive amounts of factual material from a copyrighted database to use as the basis for its own competing product.

82 PAUL GOLDSTEIN, COPYRIGHT, PATENT, TRADEMARK, AND RELATED STATE DOCTRINES § 2.2.1 (2d ed. 1996).

83 Pamela Samuelson, Letter to Representative Howard Coble, *re: Tyson/Sherry Report*, Oct. 23, 1997, *available at* http://www.arl.org/info/frn/copy/psamlet.html (last visited Mar. 31, 2005) [hereinafter Samuelson Letter] (arguing that "[t]he misunderstanding begins with the opening paragraph of the report. In referring to the 'sweeping' decision [in *Feist*] the Tyson-Sherry report implies that 'sweat of the brow' protection for databases was a longstanding and widely accepted norm that the U.S. Supreme Court rudely upset, and that ever since the Feist decision, database developers have been 'in legal limbo.' However, the 'sweat of the brow' doctrine had been controversial in U.S. copyright law for decades. It had at most been adopted in only some, not all, Circuits, and even then, some Circuits had conflicting rulings on this point. Furthermore, as the Supreme Court rightly held in Feist, it is impossible to square the 'sweat of the brow' argument for copyrighting data compilations with the plain language of the Copyright Act of 1976, or with over a hundred years of previous Supreme Court and other appellate court decisions . . . . As if this was not enough, the law review literature prior to Feist was replete with commentary critical of 'sweat of the brow' copyrights. In short, the aberration lay in the

discredited the reports' claim that it was based on sound economic analysis.[84]

Notwithstanding the deficiencies of the Tyson-Sherry Report, proponents of database legislation have consistently pointed to their perceived gaps in the law created by *Feist* ruling as justification for their position. In a similar manner, they have pointed to the enactment of the *EU Database Directive,* and the need for the US to harmonize its laws with it as justification for new enactments.

B. THE EUROPEAN UNION DATABASE DIRECTIVE

The second impetus towards *sui generis* database legislation in the United States is the European Union Database Directive. Beginning in the late 1980s, the European Union (EU) began studying database protection as part of a larger attempt to harmonize the copyright and related laws of its various member states.[85] This study culminated in the adoption of the

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'sweat of the brow' cases, not in Feist. Database developers never had the fictional blanket of 'sweat of the brow' copyright protection that the Tyson-Sherry report conjures up.").

84 The Tyson-Sherry Report began: "This paper presents the economic rationale for statutory protection of databases, building on the general economic concepts of private property rights. It argues that databases produced and disseminated by private producers require legal protection to ensure that they are provided in amounts and forms consistent with their market demand." But by 2000, the website for the Software and Information Industry Association included the disclaimer: "Although we are not aware that anyone has conducted a thorough and detailed economic analysis of the U.S. database industry, one commentator has estimated business-to-business sales in the tens of billions of dollars and notes that the number of online databases has grown from 59 in 1979 to 899 in 1997." (13th paragraph at http://www.siia.net/ga/ip/dbWIPO4-20.htm (last visited May 8, 2000, the link has been subsequently removed).

85 *See* European Union, Green Paper on Copyright and the Challenge of Technology, Doc. COM (88) 172 final, 7 June 1988; and Follow-up to the Green Paper, Doc. COM (90) 584 final, 17 Jan. 1991; and Jörg Reinbothe, "The Legal Protection of Non-Creative Databases," Presentation at

Directive by the Council of the European Union in March of 1996.[86]

The U.S. *Copyright Office Report* summarized the state of database protection law in Europe prior to the Directive:

Protection of Databases Workshop, International Conference on Electronic Commerce and Intellectual Property September 16, 1999. (WIPO/EC/CONF/99/SPK/22-A). Geneva: World Intellectual Property Organization, *available at* http://ecommerce.wipo.int/meetings/1999/papers/reinbothe.html (last visited Mar. 31, 2005, link has subsequently been removed). *See also The Database Right File*, *at* http://www.ivir.nl/files/database/ (last visited Mar. 31, 2005). The File is a collection of links to documents, case law and publications regarding the database directive maintained by P.Bernt Hugenholtz. It states:

> In the Green Paper the Commission observed that copyright might be inadequate in protecting database producers. At a hearing that took place in Brussels in April 1990 interested parties were given the opportunity to express their views. During the hearing a general preference for a copyright approach was expressed. As the Commission reported in its Follow-up to the Green Paper no support at all was given to a 'sui generis' approach (COM(90) 584 final). Both the Van Dale decision (Netherlands Supreme Court) and the Feist decision (U.S. Supreme Court) strengthened the European Commission in its belief that copyright was not the optimal instrument in protecting databases. In the Explanatory Memorandum to the original proposal the relevance and scope of traditional copyright protection, based on original arrangement and selection, are critically examined.

Id.

86 *EU Database Directive, supra* note 14. Prior to the adoption of the final directive, the European Commission submitted a proposal to the World Intellectual Property Organization ("WIPO") (1996). The United States submitted a similar proposal in May of 1996 (1996). A draft treaty on the legal protection of databases was published by WIPO on August 30, 1996 (1996). At the December 1996 WIPO Conference in Geneva, action on the matter was postponed.

> Prior to the adoption of the Directive, copyright protection for databases in the member states could be divided into two general groups. In the U.K., Ireland and the Netherlands, the threshold for protection was quite low. In particular, Anglo-Irish common law incorporated a "sweat of the brow" doctrine that developed from the same line of eighteenth and nineteenth century English cases that were cited in early U.S. compilation cases. In the remaining European countries, however, copyright imposed a fairly high threshold of originality to qualify for protection.[87]

Article 7 of the Directive required member states to adopt legislation providing statutory protection for databases and compilations in the form of a right to limit the extraction and/or reutilization of the whole or of a substantial part, evaluated qualitatively and/or quantitatively, of the contents of that database."[88]

Extraction is defined as "the permanent or temporary transfer of all or a substantial part of the contents of a database to another medium by any means or in any form."[89] Re-utilization is defined as "any form of making available to the public all or a substantial part of the contents of a database by the distribution of copies, by renting, by on-line or other forms of transmission."[90] The term of protection for a covered database was set at fifteen years,[91] although a "substantial change" would result in the database being considered to be a "substantial new

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87 COPYRIGHT OFFICE REPORT, *supra* note 63, at 42.

88 *EU Database Directive*, *supra* note 14, at art. 7.

> Member States shall provide for a right for the maker of a database which shows that there has been qualitatively and/or quantitatively a substantial investment in either the obtaining, verification or presentation of the contents to prevent extraction and/or re-utilization of the whole or of a substantial part, evaluated qualitatively and/or quantitatively, of the contents of that database.

Id.

89 *Id.* at art. 7(2)(a).

90 *Id.* at art. 7(2)(b).

91 *Id.* at art. 10(1).

investment," which would qualify the resulting database for its own term of protection.[92]

The stated deadline for passing implementing legislation was January 1, 1998.[93] But member countries have been slow to comply with the Directive as only Germany, the United Kingdom and Sweden met the deadline. In 1999, the European Commission referred Greece, Ireland, Luxembourg and Portugal to the European Court of Justice for their failure to implement the Directive.[94]

Of particular concern outside the European Union is a provision that protection will be provided to foreign database holders only if their home countries have adopted similar levels of statutory protection. The preamble to the Directive provides:

> [T]he right to prevent unauthorized extraction and/or re-utilization in respect of a database should apply to databases whose makers are nationals or habitual residents of third countries or to those produced by legal persons not established in a Member State, within the meaning of the Treaty, *only if such third countries offer comparable protection to databases produced by* nationals of a Member State or persons who have their habitual residence in the territory of the Community.[95] (emphasis added).

This provision has been pointed to as justification for the enactment of similar *sui generis* legislation in the United States. In his written testimony in support of H.R. 2652 before the House Judiciary Subcommittee on Courts and Intellectual Property, Paul Warren wrote of the need to respond to the Directive with *sui generis* legislation.[96] He presented a dire

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92 *Id.* at art. 10(3). Such a substantial change could result from a series of insubstantial changes.

93 *Id.* at art. 16(1).

94 The court issued a declaration of non-compliance with the Directive against Ireland in January (Case C-370/99).

95 *EU Database Directive*, *supra* note 14, Preamble, Recital 56.

96 *See Collections of Information Antipiracy Act: Hearing on H.R. 2652 Before the Subcomm. on Courts and Intellectual Property of the House Comm. on the Judiciary*,

warning that "[i]f the U.S. does not act promptly, existing and future databases created in this country will be free for the taking in EU member states, while EU-produced products or those pirated by EU producers from the U.S. database market will be protected in the EU."[97]

In her response to the Tyson-Sherry Report, Pamela Samuelson discounted the importance of this justification and argued that the reciprocity threat was more imagined than

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105th Cong. (1997) (statement of Coalition Against Database Piracy), *available at* http://judiciary.house.gov/legacy/41117.htm (last visited Mar. 31, 2005) [hereinafter CADP Testimony]. "The need for prompt congressional action is also underscored by the recent developments in the European Union ('EU')—an obvious effort by the EU to ratchet up its share of the world-wide database market, primarily at the expense of U.S. database providers. Last year, the EU adopted a *sui generis* database protection directive [which] requires its members to adopt conforming database protection legislation by December 31, 1997. Under the Directive, a database company outside of the European Union—such as those in the United States—is not within the reach of the Directive's provisions unless its own country provides a level of protection that the EU deems 'equivalent' to its own. Without comparable U.S. legislation, U.S. databases will suffer a significant competitive disadvantage in the huge EU market: databases from EU nations will enjoy the benefits of *sui generis* database protection and U.S. products will not." *Id.*

97 *Id.* *See also* UNITED STATES PATENT AND TRADEMARK OFFICE, REPORT ON RECOMMENDATIONS FROM THE APRIL 1998 CONFERENCE ON DATABASE PROTECTION AND ACCESS ISSUES, (July 1998) *available at* http://www.uspto.gov/web/offices/dcom/olia/dbconf/dbase498.htm (last visited Mar. 31, 2005). "An American firm that does not enjoy protection under the EU Directive faces several possible competitive disadvantages. First and most obviously, its noncopyrightable database may be duplicated and remarketed by others. Second, European data sources looking for a firm to 'process' and market raw data will be more likely to enter into a contract with a European company that can guarantee protection of the database versus an American company that cannot. Thus, even if the American firm could effectively protect the database with technology and contract law, it may be at a disadvantage in obtaining 'suppliers' of data." *Id.*

real.[98] She concluded that the reciprocity provision of the Directive "is not a reason for rush on domestic database legislation. The U.S. should approach database legislation in a measured and balanced way incorporating our historical preference for the free exchange of ideas and information while recognizing a need to correct market inefficiencies where they can be shown to exist."[99]

Howard Knopf, a Canadian intellectual property attorney, concurs with Samuelson's assessment that the reciprocity provisions of the *EU Database Directive* may violate international trade law.[100] Like the *anti-Feist* rationale, arguments for *sui generis* database legislation based on the *EU Database Directive* have been strongly contested. In his assessment of the first round of European case law that has construed the Directive, Brent Hugenholtz concluded

> It is far too early to draw conclusions, except, perhaps, that non-European countries contemplating the introduction of a database right or similar regime would be well advised to wait and see – wait until the European Court of Justice has had the opportunity to clarify the key notions of the

98 *See Samuelson Letter*, *supra* note 83 (arguing that "U.S. database companies will continue to be able to rely on copyright, contract, and unfair competition law to protect their databases from market-destructive appropriations in member states of the E.U. For another, the idea that European companies are lying in wait for January 1998 in hopes of sucking all of the valuable data out of U.S. databases unless the U.S. has adopted an equivalent database law by then is utterly fantastic. It beggars the imagination to think that a European court would find such conduct, even if it occurred, to be acceptable. And in the unlikely event a court found such conduct tolerable, the U.S. could challenge lack of enforcement before the World Trade Organization (WTO) as an outrageous nontariff barrier to trade in violation [of established international law].").

99 *Id.*

100 Howard Knopf, *The Database Dilemma in Canada: Is 'Ultra' Copyright Required?*, 48 U. NEW BRUNSWICK L.J. 163, 183 (1999).

> Directive; and see if what ensues is beneficial to the information industry, and in the public interest.[101]

Stephen Maurer provided a similar assessment of the Directive's impact to date, noting that "[t]here years after the EU Directive went into effect, there is still very little evidence on the costs and benefits of Europe's database protection experiment." Maurer challenged EU officials to provide an empirical basis for their assessment that the Directive was working and that until such data is presented, "policymakers should not take such assertions on faith."[102]

Maurer concludes with the observation that while "the Directive may have given the European database industry a one-time boost equivalent to roughly a year's worth of normal growth . . . this benefit has been purchased at the cost of serious, and more or less permanent, side effects including excessive

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101 P. Bernt Hugenholtz, *The New Database Right: Early Case Law from Europe* 13 (2001) (paper presented at Ninth Annual Conference on International IP Law & Policy, Fordham University School of Law, New York, 19-20 April 2001), *available at* http://www.ivir.nl/publications/hugenholtz/fordham2001.pdf (last visited Mar. 31, 2005). *See also* P. Bernt Hugenholtz, *Program Schedules, Event Data and Telephone Subscriber Listings under the Database Directive: The 'Spin-Off' Doctrine in the Netherlands and elsewhere in Europe* (paper presented at Fordham University School of Law *Eleventh Annual Conference on International IP Law & Policy* New York, 14-25 April 2003),*available at* http://www.ivir.nl/publications/hugenholtz/spinofffordham.html (last visited Mar. 31, 2005) (assessing recent case law under the Directive and arguing that the E.C. Court of Justice should limit the scope of the Directive by adopting the "spin-off doctrine," which would deny protection to database that are generated as by-products of other activities).

102 Maurer, *supra* note 26. While Maurer's study was prepared for use by Canadian policymakers and was presented at a May 23-24, 2001 conference sponsored by Industry Canada, his conclusions are also relevant for policymakers in the United States.

monopoly, disruption of data aggregation,[103] and increased transactions costs."[104]

In a subsequent paper, Maurer, Hugenholtz and Onsrud observed "the EC Council Directive may have given Europe's database industry a limited one-time boost. If so, the cost was high. Recent court rulings show that the directive has eroded the public domain, overprotected 'synthetic value' of doubtful worth, and raised new barriers to data aggregation."[105] They argue "Congress should take a long, hard look at these drawbacks before imitating Europe's database experiment."[106] As for the European Union, the authors argue that they should "admit that the directive is unnecessary and repeal it. However, this may not be politically possible. What else can Europe do? Probably the easiest step would be for lawmakers to minimize the database right by passing as many exemptions as the directive allows."[107]

The UK based Royal Society agrees with this assessment, claiming that:

> [T]he current law harms science and ultimately the economy of science-based industry, including those of developing countries, and should be changed... [t]he sui generis database right, that prevents extraction and use of the data themselves, is inappropriate for scientific data and we recommend that it be repealed or substantially amended following the Commission's review of the Database Directive." [108] The Royal Society called for repeal,

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103 Maurer argues that the evidence suggests that some European database owners have used their new property rights in order to block the function of aggregation of previously disparate material. For example, he cites instances of realtors associations using the new laws to try to block third party search engines that allow consumers to search multiple records from different sources. *Id.* at 44.

104 *Id.*

105 Stephen M. Maurer et al., *Europe's Database Experiment*, 294 SCIENCE 789, 790 (Oct. 26, 2001).

106 *Id.*

107 *Id.*

108 THE ROYAL SOCIETY, KEEPING SCIENCE OPEN: THE EFFECTS OF INTELLECTUAL PROPERTY POLICY ON THE CONDUCT OF

> but failing that they recommended that "scientists and learned societies gather information on the impact of the Database Directive on the conduct of science, so that they can give sound guidance to their governments at the European Commission's next review of the Directive, likely to be in 2006.[109]

The Directive mandates continuous review on three-year cycles, and the first evaluation report was to have been submitted in 2001.[110] The report has been delayed and the E.C. has commissioned the law firm of Nauta*Dutilh* to assist with the

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SCIENCE, 27 (Apr. 2003), *available at* http://www.royalsoc.ac.uk/files/statfiles/document-221.pdf (last visited July Mar. 31, 2005). *See also* Royal Society, Letter to the Patent Office, May 31, 2002, *available at* http://www.royalsoc.ac.uk/files/statfiles/document-202.pdf (last visited Mar. 31, 2005) (arguing that "the Directive constrains access and limits the open use of data and information for scientific and educational purposes and thereby reduces the public benefit that might otherwise be derived," and that an exemption be added to the effect that "extraction and/or re-utilisation for the purposes of scientific research or illustration for teaching is allowed without the authorisation of its maker for any database which is made available to the public in whatever manner.")

109 *Id.*

110 Article 16(3) of the *EU Database Directive* provides: "Not later than at the end of the third year after the date refered to in paragraph 1, [January 1, 1998] and every three years thereafter, the Commission shall submit to the European Parliament, the Council and the Economic and Social Committee a report on the application of this Directive, in which, *inter alia*, on the basis of specific information supplied by the Member States, it shall examine in particular the application of the *sui generis* right, including Articles 8 and 9, and shall verify especially whether the application of this right has led to abuse of a dominant position or other interference with free competition which would justify appropriate measures being taken, including the establishment of non-voluntary licensing arrangements. Where necessary, it shall submit proposals for adjustment of this Directive in line with developments in the area of databases."

project.[111] A questionnaire had been circulated to various stakeholders, and it is available because some of the groups opposed to the Directive have publicly posted their responses to their websites.[112] The questionnaire, dated June 17, 2002, indicates that the study is to proceed in several stages. In the first stage, "Nauta*Dutilh* carried out a full-scale analysis of the transposition of the Directive in all Member States, indicating to the Commission which parts of the Directive were either not or wrongly transposed and how the Directive's principles were applied by national courts."[113] In the second stage:

> Nauta*Dutilh* is required to consult national authorities and interested parties about their practical experiences with the Directive, in particular with the application of the *sui generis* right, its impact on free competition, the resulting risks for abuses of a dominant position and its impact on the development of the Information Society. Nauta*Dutilh* is also required to assess if, and to what extent, the purposes of the Directive,

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111 *See* Nauta*Dutilh*, *at* http://www.nautadutilh.com/ (last visited Mar. 31, 2005).

112 *See* Royal Society, *Response to the European Commission's Questionnaire on the Implementation and Effects of the Database Directive*, June 17, 2002,, *available at* http://www.royalsoc.ac.uk/displaypagedoc.asp?id=6287 (last visited Mar. 31, 2005).

113 *Id.* The European Bureau of Library, Information and Documentation Associations (EBLIDA) has posted a report on the July 1, 2002 hearing. *See* "Hearing on Database Directive 96/9/EC, Nauta Dutilh, Brussels 1 July 2002: EBLIDA Report," *available at* http://www.eblida.org/topics/database/ndhearing_report.doc (last visited Mar. 31, 2005, link subsequently removed) (indicating that Nauta*Dutilh* seemed "genuinely interested in producing a balanced report and are knowledgeable about the legal issues. But they lack knowledge about the workings of the library and publishing industry, so a further meeting would enhance their understanding.") Subsequently, EBLIDA held a meeting with Nauta*Dutilh* on August 8, 2002. *Database Directive 96/9/EC, European Commission Review: Meeting with EBLIDA* (Aug. 8, 2002), *at* http://www.eblida.org/topics/copyright/nautadutilh_aug02.doc (last visited Mar. 31, 2005).

> including the intended balance of rights and interests, have been achieved and to identify issues which should be the subject of further harmonisation. In this respect, Nauta*Dutilh* is required, especially with regard to non-voluntary licences, to indicate to the Commission whether the Directive should be amended.[114]

As to the timeframe for the completion of the study, the questionnaire indicated that the draft final report was to have been submitted to the Commission on July 28, 2002,[115] but the document does not appear to be publicly available.[116] A positive assessment in this long-awaited report seems crucial to the credibility of the claims of the proponents, but this outcome remains to be seen.

C. ADVANCES IN INFORMATION TECHNOLOGY

While the first two justifications for *sui generis* legislation respond to developments in the law, the third prong deals with advances in information technology, and how such advances allegedly disadvantage database proprietors. The third impetus to statutory protection is the belief that advances in information technology enable potential competitors and pirates to engage in market-destructive copying. The Tyson-Sherry Report emphasizes this point:

> [t]o protect our common interest in identifying, creating and making available the best information, we must protect this valuable resource from pirating. Revolutions in electronic technologies that have made databases easier to

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114 Royal Society, *supra* note 112. Nauta*Dutilh* was also to hold hearings in July 2002 "to separately collect the opinions and concerns of rightholders and users, and the consultation of the national authorities and interested parties by means of the present questionnaire, in order to gather expert opinion and validate some findings." *Id.*

115 *Id.*

116 While the Nauta*Dutilh* website contains an extensive listing of publications and reports prepared by the firm, there is no indication of the E.C. database study. *Supra* note 111.

> use and more potentially useful have also made them easier to 'pirate.' The ability of a potential competitor (or customer) to 'free ride' on the substantial investment of an original database developer by copying and selling (or re-selling) his database weakens market incentives for investment in the database industry.[117]

Claims of technology-enabled piracy are a common theme in the information and entertainment industry's legislative advocacy program. The Software and Information Industry Association now issues an annual "Global Software Piracy Report." The press release accompanying the 2000 Report exemplifies the tenor of the industry's claims:

> Piracy losses exceeded $12 billion worldwide in 1999 and topped $59 billion during the past five years. The survey, conducted by an independent research firm, was commissioned by the Software & Information Industry Association (SIIA) and the Business Software Alliance (BSA). The 1999 software piracy estimates indicate that more than one in every three business software applications in use during 1999 was pirated. Piracy losses for the U.S. and Canada lead every other region of the world at $3.6 billion, or 26% of the total. The continuing problem means lost jobs, wages, tax revenues, and a potential barrier to success for software start-ups around the globe.[118]

Publisher Paul Warren expressed similar themes in his testimony before the House Committee on the Judiciary Subcommittee on Courts and Intellectual Property in support of H.R. 2652 in which he warned of the risk to society from "database pirates:"

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117 Tyson-Sherry Report, *supra* note 80.

118 Software and Information Industry Association, *Software Industry Suffers From Cumulative Impact of Global Software Piracy; Publisher Losses Total $12.2 Billion in 1999*, (May 24, 2000), *available at* http://www.siia.net/sharedcontent/press/2000/5-24-00.html (last visited Mar. 31, 2005).

> Today, database pirates can use widely available technologies to copy or print electronic databases and distribute them around the world. The advent of digital, high-speed computer networks adds greatly to this threat of piracy. Internet users can copy and distribute large collections of information with the click of a mouse and at a fraction of the enormous costs required to develop these products. These risks will only increase as our society becomes more dependent on computers and digitized information, and as technologies provide new and even more efficient ways to copy and distribute informational products.[119]

However, advances in information technology also provide database owners with the means of protecting their databases even without new laws. Stephen Maurer speaks of the "paradox" of databases, pointing out that "[t]he world of scientific and technology databases is already extremely rich and well-developed. Since the U.S. government has never enacted database legislation, this presents a paradox: If existing databases can be freely copied, why do firms continue to invest in them?"[120] Maurer answers the question posed by his paradox by noting that "database providers have devised a bewildering number of unofficial ('self-help') methods for protecting their investments . . . [such as] (1) bilateral agreements with users, (2) 'shrink-wrap' or 'click-wrap' language, (3) bundling with copyrighted materials, (4) continual updating and improvement that leaves would-be copiers 'out of date,' (5) search-only Web

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119 Statement of Paul Warren, (Executive Publisher, Warren Publishing). Hearing on H.R. 2652, the Collection of Information Antipiracy Act, House Committee on the Judiciary Subcommittee on Courts and Intellectual Property (October 23, 1997), *available at* http://www.house.gov/judiciary/41117.htm (last visited Mar. 31, 2005).

120 Stephen Maurer, *Raw Knowledge: Protecting Technical Databases for Science and Industry*, PROCEEDINGS OF THE WORKSHOP ON PROMOTING ACCESS TO SCIENTIFIC AND TECHNICAL DATA FOR THE PUBLIC INTEREST: AN ASSESSMENT OF POLICY OPTIONS, Jan. 14-15, 1999, *available at* http://www.nap.edu/html/proceedings_sci_tech/appC.html (last visited Mar. 31, 2005).

sites where the underlying database cannot be downloaded, and (6) passwords and encryption."[121]

Maurer shows how there are a variety of alternatives for protecting databases from misappropriation short of *sui generis* legislation. His conclusion that "rich and diverse databases exist in today's world shows that such protection can be extremely robust,"[122] has also been adopted by the National Research Council, which argues that the "danger of database misappropriation can be mitigated with increasing efficiency by technologies that help enforce the terms of licensing contracts, or that enable the rights holder to keep the database as a trade secret while also providing access to subsets of data."[123]

III. THE LEGISLATIVE (UN)RESPONSE

Using the *Feist* decision, the European Union Directive, and technological advances as its three pillars of justification, the information industry has placed the enactment of *sui generis* database legislation high on its legislative agenda over the past several years. But to date they have not been successful, and this section reviews the various proposals that have been introduced in the U.S. Congress and at the World Intellectual Property Organization (WIPO).

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121 *Id. But see* Dov Greenbaum and Mark Gerstein, *A Universal Legal Framework as a Prerequisite to Database Interoperability*, *supra* note 58 (arguing that technological protection measures substantially impair the research process). They claim that "proprietary formats and encryption encumber the transfer of information to a medium where it can be manipulated and analyzed. Finally, watermarking adds overt or hidden digital fingerprints, slightly corrupting the data. It can prevent copying, but it also adds background noise to large scale calculations, potentially leading to errors." *Id.* at 981. In an effort to enhance the interoperability of databases, Greenbaum and Gerstein would prefer a limited form of database protection that is coupled with compulsory licenses and limitations on the use of technological protection measures.

122 *Supra* note 120.

123 National Research Council, *supra* note 7, at 64. These arguments presented by Maurer and others will be developed further in section IV, *infra.*

At the outset, it is useful to distinguish between two broad approaches to database legislation. The first approach is grounded in the creation of a new property right and is often referred to as the *sui generis,* or proprietary approach. Under this theory, the owner of a database is given property interests that are similar in nature to the exclusive rights granted to rights holders under Section 106 of the *Copyright Act*. In the case of databases, the particular proprietary rights have been variously referred to as the extraction, utilization, reutilization, use, re-use, and making available rights. Regardless of the terminology employed, such proprietary rights are generally enforceable against end users, libraries, and educational institutions as well as against potential competitors.

A second, or alternative approach, is based on the theory of misappropriation and is in the nature of an unfair competition regulation.[124] This theory is geared towards preventing the misappropriation of the database for use in commerce by a competitor. It is not directed toward the isolated conduct of end-users of the database and does not subject end-users, libraries,

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124 The misappropriations approach was applied in *Int'l News Serv. v. Associated Press*, 248 U.S. 215 (1918) with respect to a claim that a rival news agency had unfairly misappropriated the plaintiff's "hot-news." The INS holding has survived a recent challenge on the grounds it has been pre-empted by federal copyright law. *See* Nat'l Basketball Ass'n. v Motorola, Inc., 105 F.3d 841, 845 (2d Cir. 1997) (holding that for a "hot-news" misappropriations claim to succeed, the plaintiff must show: "(i) a plaintiff generates or gathers information at a cost; (ii) the information is time-sensitive; (iii) a defendant's use of the information constitutes free-riding on the plaintiff's efforts; (iv) the defendant is in direct competition with a product or service offered by the plaintiffs; and (v) the ability of other parties to free-ride on the efforts of the plaintiff or others would so reduce the incentive to produce the product or service that its existence or quality would be substantially threatened"). While the Second Circuit declined to hold that misappropriation of "hot-news" claims under had been wholly preempted by federal copyright law, they found that the standard for such surviving claims had not been met. *Id.*

and educational institutions to potential liability for their typical uses of databases.[125]

The *EU Database Directive* is an example of a strong *sui generis*, proprietary rights measure, as are the draft *WIPO Database Treaty*, reviewed in subsection B, and H.R. 3531, H.R. 2652, H.R. 354, and H.R. 3261, reviewed in subsections A, C, D and G, respectively. In contrast, H.R. 1858, reviewed in subsection E, exemplifies the misappropriations approach.

A. 104TH CONGRESS – H.R. 3531

Database legislation was first introduced in the U.S. in the 104th Congress as *The Database Investment and Intellectual Property Antipiracy Act of 1996.*[126] With the intent to reverse *Feist* and extend copyright-type restrictions to databases and compilations, Rep. Carlos Moorhead's (R-CA) introductory remarks set the bill in the context of several lofty goals including protecting developers against piracy and unfair competition, encouraging investment in the production of databases, and improving the market climate for databases. [127]

The *Moorhead Bill* was modeled on the *EU Database Directive* and represents a strong version of a property-rights approach to database legislation. Section 4 of the bill prohibited a wide range of activities without the authorization of the database owner. [128]

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125 *See* Michael J. Bastian, *Protection of 'Noncreative' Databases: Harmonization of United States, Foreign and International Law*, 22 B.C. INT'L & COMP. L. REV. 425 (arguing that the doctrine of misappropriation provides a better approach towards harmonization of noncreative database protection than does *sui generis* rights based on the *EU Database Directive*).

126 The Database Investment and Intellectual Property Antipiracy Act of 1996, H.R. 3531, 104th Cong. (2d Sess. 1996) (Moorhead R-Cal) [hereinafter H.R. 3531].

127 142 CONG. REC. E890-91 (daily ed. May 23, 1996) (statement of Rep. Carlos Moorhead). Rep. Moorhead was then Chair of the House Judiciary Subcommittee on Courts and Intellectual Property.

128 H.R 3531 § 4 provides: "(a) No person shall, without the authorization of the database owner—

This prohibition against extracting, using, or re-using a substantial portion of the database would have applied to all users of the database, not just potential competitors of the database producer. The prohibited activity is extremely broad, and is framed in terms of extracting, using or reusing a substantial portion of the database. But what constitutes a substantial portion of a database is vague. It is to be measured in terms of economic effect, that is, if it conflicts with the database owner's normal exploitation of the database or adversely affects the actual or potential market for the database. This language is given a broad meaning in subsection 4(b).[129]

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(1) extract, use or reuse all or a substantial part, qualitatively or quantitatively, of the contents of a database subject to this Act in a manner that conflicts with the database owner's normal exploitation of the database or adversely affects the actual or potential market for the database;

(2) engage, notwithstanding section 5(a), in the repeated or systematic extraction, use or reuse of insubstantial parts, qualitatively or quantitatively, of the contents of a database subject to this Act in a manner that cumulatively conflicts with the database owner's normal exploitation of the database or adversely affects the actual or potential market for the database;

(3) or procure, direct or commission any act prohibited by subsections (i) or (ii)."

129 "(b) Acts that conflict with a normal exploitation of the database or adversely affect the actual or potential market for the database include but are not limited to the extraction, use or reuse of all or a substantial part of the contents of a database—

(1) in a product or service that directly or indirectly competes in any market with the database from which it was extracted; or

(2) in a product or service that directly or indirectly competes in any market in which the database owner has a demonstrable interest or expectation in licensing or otherwise using or reusing the database; or

(3) in a product or service for customers who might otherwise reasonably be expected to be customers for the database; or

(4) by or for multiple persons within an organization or entity in lieu of the authorized additional use or reuse (by license, purchase or otherwise) of copies of the database by or for such persons. "

The circular nature of these criteria should be readily apparent. While an act is impermissible if it conflicts with the economic interests of the owner, it is the owner's point of reference that determines the scope of these expectations.[130] This language reaches the conduct of end-users of a database, not just potential competitors.

Section 5 provided limited exclusions from the prohibition in the cases of insubstantial extraction, use, or reuse, and independent collection,[131] but these exclusions are limited and do not address the issue of what constitutes a substantial portion of the database. The exclusion in subdivision (b) is illusory in the case of sole-source data, and any limitation on the right of the database owner akin to the fair-use doctrine in copyright law is noticeably absent.[132]

The duration of the prohibitions contained in section 6 was also a major cause for concern. While the term of protection is initially set at "a period of twenty-five years from the first of January following the date when it was first made available to the public or the date when it was first placed in commercial

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130 In many ways, the yardstick of economic interest as used here is similar to the fourth prong of the fair use test. *See* 17 U.S.C. § 107 (1996). But in the case of fair use, there are three other factors that must be balanced with the economic interest. Here, the economic interest is given a unique and privileged status.

131 "(a) Subject to section 4(a)(ii), a lawful user of a database made available to the public or placed in commercial use is not prohibited from extracting, using or reusing insubstantial parts of its contents, qualitatively or quantitatively, for any purposes whatsoever.

(b) Nothing in this Act shall in any way restrict any person from independently collecting, assembling or compiling works, data or materials from sources other than a database subject to this Act."

132 *See* 17 U.S.C. § 107. Section 107 of the Copyright Act provides that the "fair use of a copyrighted work . . . for purposes such as criticism, comment, news reporting, teaching (including multiple copies for classroom use), scholarship, or research, is not an infringement of copyright."

use, whichever is earlier,"[133] the term can be extended, perhaps perpetually, by changing the database.[134]

Peter Jaszi, a leading opponent of *sui generis* database legislation, argued that the bill would encourage a pay-per-use licensing model and would raise the operating costs of libraries, universities, schools, and other institutions significantly.[135] Jaszi believed that the proprietary approach of H.R. 3531 "with its sweeping conception of proprietary rights -- might actually slow the 'Progress of Science.' Building legal fences around 'raw' scientific data and experimental results could mean less competition among researchers, leading to fewer new discoveries less competition among researchers, leading to fewer new discoveries." Reichman and Samuelson also criticized the sweeping effect of the bill. They argued that the approach was flawed because it would "confer a far broader and stronger monopoly on database developers than is needed to avert market failure" and would "create an exclusive property rights regime of virtually unlimited duration that would be subject to few, if any, public policy limitations."[136] It would jeopardize basic scientific

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133 H.R. 3531 § 6(a).

134 H.R. 3531 § 6(b): "Any change of commercial significance, qualitatively or quantitatively, to a database, including any such change through the accumulation of successive additions, deletions, reverifications, alterations, modifications in organization or presentation, or other modifications, shall make the resulting database subject to this Act for its own term, as calculated under subsection (a). "

135 Peter Jaszi, *Some Public Interest Considerations Relating to H.R. 3531,* (Aug. 28, 1996), *available at* http://www.arl.org/info/frn/copy/peter.html (last visited Mar. 31, 2005).

136 Jerome H Reichman and Pamela Samuelson, *Intellectual Property Rights in Data?* 50 VAND.L. REV. 51, 55 (1997). However they conceded that additional legal protections are needed because the "risk of market failure inherent in [the current] state of chronic under-protection tends to keep the production of information goods at suboptimal levels." *Id.* at 59. In this respect, they differ from other critics who believe no new protections were warranted. Reichman and Samuelson wanted instead to rely on "either the use of unfair competition principles to protect database contents, or the adoption of an intellectual property regime based on more refined liability principles, rather than on exclusive property rights that would reconcile the

research, eliminate competition in the markets for value-added products and services, and convert existing barriers to entry into insuperable legal barriers to entry.

In the face of stiff opposition from education, library, and research interests, the *Moorhead Bill* died in the House Judiciary Committee. Before continuing with subsequent measures in the U.S. Congress, the next section will review the developments pertaining to a database treaty at the World Intellectual Property Organization.

B. DRAFT WIPO DATABASE TREATY

At its Diplomatic Conference held in Geneva Switzerland during December 1996, the World Intellectual Property Organization (WIPO) considered, and ultimately deferred a proposal for a Database Treaty.[137] Since then, the matter has remained on the agenda of WIPO's Standing Committee on Copyright and Related Rights (SCCR), but there has been little movement due to increasing opposition from developing countries.

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need for legal incentives to invest with a calculus of net social benefits." *Id.* at 56. They argue that either of these approaches "would provide those who develop commercial databases with enough lead time to recoup their investments and make sufficient profits to enable further investments. At the same time, these alternatives would not retard scientific research or educational activities, impede the development of follow-on products and services, or otherwise create legal barriers to entry." *Id.* at 56-57. *See also* Stephen Maurer & Suzanne Scotchmer, *Database Protection: Is It Broken and Should We Fix It?*, 284 SCIENCE 1129 (May 14, 1999), *available at* http://www.sciencemag.org/cgi/content/full/284/5417/1129 (last visited Mar. 31, 2005) (arguing that additional statutory protection is unnecessary)..

137 World Intellectual Property Organization, *Basic Proposal for the Substantive Provisions of the Treaty on Intellectual Property in Respect of Databases to be Considered by the Diplomatic Conference*, CRNR/DC/6, Aug. 31, 1996, *available at* ___ (last visited Mar. 31, 2005) [hereinafter *WIPO Database Treaty*].

In the memorandum accompanying the 1996 draft treaty,[138] the WIPO Committee of Experts outlined the history leading up to its preparation.[139] After receiving these comments from the European Commission, the Committees of Experts "accepted the conclusion that the issue of such a possible *sui generis* system would be discussed further at the next sessions of the Committees on the basis of the proposals that might be made by Governments and the European Commission."[140] The EC subsequently submitted a formal proposal for the international harmonization of the *sui generis* protection of databases[141] at the February 1996 sessions of the Committees of Experts, which included the text of draft provisions for a treaty. "The Committees considered the proposal and several Delegations expressed positive interest in the *sui generis* right and in the continuation of work."[142] In May 1996, the U.S. also submitted a proposal for a Database Treaty,[143] and the Committee of Experts proceeded to prepare a draft treaty based on the EC and US proposals.[144]

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138 World Intellectual Property Organization, *Memorandum Prepared by the Chairman of the Committees of Experts* (Aug. 30, 1996), *available at* http://www.wipo.int/documents/en/diplconf/6dc_mem.htm (last visited Mar. 31, 2005) [hereinafter *Committee of Experts Memorandum*].

139 *Id.* ¶ 3 ("In the December 1994 sessions of the Committees of Experts the delegation of the European Commission informed the Committees about the progress of work in the European Community on a proposal for a Directive on the legal protection of databases which included a proposal for creating a *sui generis* right to be granted to the maker of a non-original database. In the September 1995 sessions the European Community and its Member States submitted to the Committees of Experts a discussion paper on '[t]he *sui generis* right provided for in the Proposal for a Directive on the legal protection of databases'").

140 *Id.*

141 *Id.* ¶ 4.

142 *Id.*

143 *Id.* ¶ 5.

144 The details concerning the fate of the draft Database treaty at the WIPO Diplomatic Conference have been recounted elsewhere and need not be repeated in detail here. *See* Pamela Samuelson, *The U.S. Digital Agenda at WIPO*, 37

Both the European and U.S. proposals were similar in nature and scope to the *EU Database Directive,* and they formed the basis for the draft *WIPO Database Treaty*.[145] The draft treaty provided for a very broad proprietary right, "[t]he maker of a database eligible for protection under this Treaty shall have the right to authorize or prohibit the extraction or utilization of its contents."[146] The creation of exceptions or limitations to the right was left to national legislation, but was substantially restricted to "certain special cases that do not conflict with the normal exploitation of the database and do not unreasonably prejudice the legitimate interests of the rightholder."[147] One

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VA. J. INT'L L. 369, 437 (1997) (discussing the events at the December 1996 Diplomatic Conference and, with respect to the database issue, concluding that "the repudiation of the database treaty is consistent with the preservation of freedom of information principles that also have a long history in U.S. copyright law").

145 *See* PATENT AND TRADEMARK OFFICE, BRIEFING ON REQUEST FOR COMMENTS ON THE CHAIRMAN'S TEXT OF THE DIPLOMATIC CONFERENCE ON CERTAIN COPYRIGHT AND NEIGHBORING RIGHTS QUESTIONS 38, Nov. 12, 1996, *available at* http://www.uspto.gov/web/offices/dcom/olia/diplconf/briefing.pdf (last visited Mar. 31, 2005) (statement of Jukka Liedes) ("[t]he database treaty is based on the European directive and the European Union proposal for a treaty on the *sui generis* protection of databases. And at the same time, it is based on the United States proposal, which was made last May in the context of the last expert committee meeting dealing with both conventions.") [hereinafter *WIPO Briefing Session*].

146 *WIPO Database Treaty, supra* note 137, art. 3(1).

147 *Id.* art. 5(1). The language is based on a similar provision in Article 9(2) of the *Berne Convention on the Protection of Literary and Artistic Works* ("It shall be a matter for legislation in the countries of the Union to permit the reproduction of such works in certain special cases, provided that such reproduction does not conflict with a normal exploitation of the work and does not unreasonably prejudice the legitimate interests of the author."), *available at* http://www.wipo.int/clea/docs/en/wo/wo001en.htm (last visited Mar. 31, 2005), and Article 13 of the Trade-Related Aspects of Intellectual Property Rights (Agreement Establishing the World Trade Organization, Annex IC) ("Members shall confine limitations or exceptions to exclusive rights to certain special

significant difference between the draft *WIPO Database Treaty* and the *EU Database Directive* is that the basis for protection of foreign nationals under the treaty is National Treatment whereas protection under the Directive is on the basis of reciprocity.[148]

Pamela Samuelson made the argument that the Clinton Administration was using the WIPO process as an end-run around Congress in order to advance an expansionary copyright agenda, one that would not pass muster in its own right through the normal legislative process.[149]

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cases which do not conflict with a normal exploitation of the work and do not unreasonably prejudice the legitimate interests of the right holder."), *available at* http://www.wto.org/english/docs_e/legal_e/27-trips.pdf (last visited Mar. 31, 2005).

148 *WIPO Database Treaty*, *supra* note 138, art. 7(1) provides: "The maker of a database shall enjoy in respect of the protection provided for in this Treaty, in Contracting Parties other than the Contracting Party of which he is a national, the rights which their respective laws do now or may hereafter grant to their nationals as well as the rights specially granted by this Treaty." *See supra* text accompanying note 95 pertaining to the reciprocity provision of the Directive.

149 Samuelson, *supra* note 144, at 373-74.

> The digital agenda that Clinton administration officials pursued in Geneva was almost identical to the digital agenda they had put before the U.S. Congress during roughly the same time period. Notwithstanding the fact that this digital agenda had proven so controversial in the U.S. Congress that the bills to implement it were not even reported out of committee, Clinton administration officials persisted in promoting these proposals in Geneva and pressing for an early diplomatic conference to adopt them. For a time, it appeared that administration officials might be able to get in Geneva what they could not get from the U.S. Congress, for the draft treaties published by WIPO in late August 1996 contained language that, if adopted without amendment at the diplomatic conference in December, would have substantially implemented the U.S. digital agenda, albeit with

In October 1996, the U.S. Patent and Trademark Office's published a Request for Comments on the draft WIPO treaties in the Federal Register.[150] While the Notice called for Comments, presumably to help formulate the Clinton Administration's policies on the three WIPO Treaties under consideration,[151] the tone of the statement clearly indicated that the U.S. had already developed a very clear position on the issues.[152]

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some European gloss. Had this effort succeeded in Geneva, Clinton administration officials would almost certainly have then argued to Congress that ratification of the treaties was necessary to confirm U.S. leadership in the world intellectual property community and to promote the interests of U.S. copyright industries in the world market for information products and services.

Id.

By late 1996, it was evident that Moorhead's database bill (H.R. 3531) was stalled. There had been no activity on the bill since it was introduced and referred to the House Judiciary Committee on May 23, 1996.

150 Patent and Trademark Office, Request for Comments on the Chairman's Text of the Diplomatic Conference on Certain Copyright and Neighboring Rights Questions, 61 Fed. Reg. 54159-60 (Oct. 17, 1996). The Notice announced a Briefing Session to be held on November 12, 1996 and a deadline for Comments of November 22, 1996. *Supra* note 145.

151 In addition to the draft Database Treaty, the Diplomatic Conference was also to consider *A Protocol to the Berne Convention for the Protection of Literary and Artistic Works* (referred to as the WIPO Copyright Treaty or WCT), and *A New Instrument for the Protection of Performers and Producers of Phonograms* (referred to as the WIPO Performance and Phonograms Treaty, or WPPT). Both of these treaties were approved by the Diplomatic Conference in December and have since come into force.

152 *See* 61 Fed. Reg. 54159

The United States is committed to making progress in . . . (WIPO) toward improving international protection for works protected by copyright and neighboring rights. We want to build upon the international intellectual property norms that were set in the Agreement on Trade-Related Aspects of Intellectual Property (TRIPs). This is essential,

Despite the clear signal that the administration had already decided on its course of action with respect to these treaties, various organizations and individuals submitted comments in response to the Notice. The proposed database treaty was strongly criticized by several groups, including the Association for Computing Machinery (ACM),[153] the American

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> especially in view of the need to deal with the intellectual property issues associated with the Global Information Infrastructure (GII). To accomplish this goal, the members of WIPO, with the leadership of the United States, are working to establish three new international agreements, commonly referred to as . . . [the WIPO Copyright Treaty, the WIPO Performers and Phonograms Treaty, and] A Treaty for the Sui Generis Protection of Databases, which would ensure adequate incentives to invest in creating databases, through a new type of protection that would safeguard databases against destruction of their commercial value. These agreements would provide the levels of protection for both copyright and neighboring rights that are critical to the development of the commercial potential of the GII.
>
> *Id.*

It is worth noting that the contact person identified in the Notice, Keith M. Kupferschmid, has since left the government and become intellectual property counsel for the Software and Information Industry Association (SIIA), and has since been promoted to Vice President of Intellectual Property Policy and Enforcement for the association. Similarly, the current General Counsel and Senior Vice President of SIIA, Mark Bohannon, was formerly "a senior official of the U.S. Department of Commerce where he served as Chief Counsel for Technology and Counsellor to the Under Secretary". Internet Law and Policy Forum, Events, *at* http://www.ilpf.org/events/jurisdiction2/biographies/bohannon_bio.htm (last visited Mar. 31, 2005).

153 Barbara Simons, USACM Letter on WIPO Database Treaty (Nov. 22, 1996), *available at* http://www.acm.org/usacm/copyright/wipo_database_letter.html (last visited Mar. 31, 2005) (noting that the treaty's "limitation on the use of data is contrary to the traditional scientific research model. In the U.S. data collections are routinely reused

Association for the Advancement of Science (AAAS),[154] the Consumer Project on Technology,[155] and the library associations.[156] A group of fifty law professors submitted a letter

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and revised in the course of scientific and academic research without royalties being exchanged," and concluding that "A sensible treaty proposal should promote the 'Progress of Science and the Useful Arts' by allowing exemptions for public-good uses in libraries, universities and laboratories. It should not establish perpetual protection for data while eliminating 'fair use' upon which the research community is heavily dependent").

154 Letter from American Association for the Advancement of Science, to Albert Gore, Jr. (Nov. 25, 1996), *available at* http://www.aaas.org/spp/sfrl/projects/database/gore.htm (last visited Mar. 31, 2005) (discussing the implications of databases for scientific research, objecting that the treaty's "possible implications for scientific research and communication have been subjected to minimal scrutiny[,]" objecting to the vague nature of basic definitions such as "database," "extraction," "use," and "substantial parts[,]" and noting the possibility of a perpetual term of protection).

155 James Love, *Primer on WIPO Database Treaty,* Nov. 10, 1996, *at* http://www.eff.org/IP/WIPO/HTML/cpt_wipo_treaty_primer.html (last visited Mar. 31, 2005) (outlining objections to the treaty, noting that "[d]espite the controversial and far reaching nature of the database protection proposal and the lack of discussion on its impact in the United States, the Clinton Administration is asking for quick approval of the database treaty," and urging readers to respond to the PTO Request for Comments).

156 Letter from American Library Association et al., to Dr. John H. Gibbons, Asst. to the President for Science and Technology and Director, Office of Science and Technology Policy (Nov. 7, 1996), *available* at http://arl.cni.org/info/frn/copy/dblet.html (last visited Mar. 31, 2005) (stating opposition to the treaty and asking for its withdrawal, outlining various objections to particular provisions, and noting that "there were no hearings on H.R. 3531, and no companion bill was introduced in the Senate"). The Librarian of Congress, James H. Billington, also submitted a letter reiterating that the library, educational, and scientific communities are very concerned about the database treaty, and the Congress had not fully resolved issues involved in the

including a strong statement of opposition to the Database Treaty.[157]

According to Pamela Samuelson, the U.S.- European efforts to secure passage of the Database Treaty at the Diplomatic Conference was effectively scuttled by opposition from the scientific and research community. She observes that "[t]he thread that led to the unraveling of the coordinated . . . strategy to push for adoption of a database treaty at the [conference] was a joint letter sent . . . by the presidents of the National Academy of Sciences, National Academy of Engineering, and the National Institute of Medicine."[158]

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treaties. *See* Letter from James H. Billington, Librarian of Congress, to Laura D'Andrea Tyson, Asst. to the President for Economic Policy (Nov. 7, 1996), *available at* http://lists.essential.org/1996/info-policy-notes/msg00046.html (last visited Mar. 31, 2005).

157 James Boyle et al., *Urgent International Copyright Action*, *available at* http://lists.essential.org/1996/cpt-ip/msg00395.html (last visited Mar. 31, 2005):

> One of the Draft Basic Proposals would create a new property right over databases—defined to include almost any compilation of "facts"—with potentially devastating effects on research and also free speech. This proposal has been opposed by the Presidents of the National Academy of Sciences, the National Academy of Engineering, and the Institute of Medicine — as well as by librarians and scholars more generally. It has also been criticised by a Washington Post editorial. The creation of a property rights in facts would interfere with the speech, debate and research protected by the First Amendment. It raises the spectre that those who wish to avoid criticism could "lock up" the facts about their organisations or companies. In addition, the dramatic expansion proposed by the database proposals could have serious effects on the accessibility of legal materials—which, as government documents—are not subject to copyright.

Id.

158 Pamela Samuelson, "U.S. Digital Agenda at WIPO," *supra* note 144. *See* Bruce Alberts et al., *Letter to*

While the database treaty was removed from the conference agenda and taken off the table, WIPO has not abandoned its work on the subject. WIPO held an Information Meeting on Database Protection at its Geneva headquarters in September 1997,[159] which was convened to discuss possible future actions on a database treaty. According to the International Council for Science, Committee on Data for Science and Technology (ICSU/CODATA),[160] "the consensus of the meeting was that the issue of database protection was not ready for WIPO action," but that "WIPO will be preparing for national, regional, and inter-regional discussions and

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Michael Kantor (Oct. 9, 1996), *available at* http://www.hpcc.gov/fnc/nas_letter.html (last visited Mar. 31, 2005) (expressing concern about the proposed treaty, arguing it would undermine the ability of researchers and educators to access and use scientific data, and claiming it would have a deleterious long-term impact to U.S.' research capabilities).

159 WIPO, *Information Meeting on Intellectual Property in Databases* (Sept. 17-19, 1997), *available at* http://www.wipo.org/documents/en/meetings/infdat97/index.htm (last visited Mar. 31, 2005) (linking to the agenda and other documents pertaining to the meeting).

160 *See* International Council for Science (ICSU), *About ICSU*, *available at* http://www.icsu.org/5_abouticsu/INTRO.html (last visited Mar. 31, 2005); Committee on Data for Science and Technology (CODATA), *About CODATA*, *available at* http://www.codata.org/codata/about/about.html (last visited July 18, 2004) ("CODATA is concerned with all types of data resulting from experimental measurements or observations in the physical, biological, geological and astronomical sciences. Particular emphasis is given to data management problems common to different scientific disciplines and to data used outside the field in which they were generated. The general objectives are the improvement of the quality and accessibility of data, as well as the methods by which data are acquired, managed, and analysed; the facilitation of international cooperation among those collecting, organizing, and using data; and the promotion of an increased awareness in the scientific and technical community of the importance of these activities.")

consultations on the need for international agreement on database protection."[161]

At the meeting, representatives from the United Nations Educational, Scientific and Cultural Organization (UNESCO) made a presentation urging careful and deliberate consideration of the issues before moving to a treaty.[162] They argued that under any database measure, "[s]cientists should be able to have free access to databases from all sources in exchange for mere participation in the cost of producing and communicating the data . . . [and that] [e]ducational, cultural and information circles should also be allowed to make free and fair use of databases in the discharge of their public-service duties."[163]

The Report adopted by the meeting[164] contained a listing of the "particular questions and aspects or elements of a possible

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161 ICSU/CODATA, WIPO Information Meeting on Database Protection (Nov. 30, 2000), *available at* http://www.codata.org/data_access/WIPOpaper.html (last visited Mar. 31, 2005). The group submitted a paper on its position on a Database Treaty, but they claim that WIPO was unwilling to distribute it or any other NGO papers in advance, as they had done with governmental reports. But they also report that WIPO decided to include the NGOs in all future discussions and distribution of documents. *Id.* *See* ICSU/CODATA, *Position Paper On Access To Databases: Prepared by the ICSU/CODATA Group on Data and Information* (Sept. 1997), *available at* http://www.codata.org/data_access/wipo.pdf (last visited Mar. 31, 2005). The paper argued that the EU Directive was not a suitable model for subsequent database measures, and that any such measures "should provide measures to safeguard the scientific and educational communities' ability to obtain access to both publicly and privately funded data on reasonable terms and conditions." (*Id.* at 8).

162 WIPO, *Observations*, DB/IM/5 (Sept. 15, 1997), *available at* http://www.wipo.int/eng/meetings/infdat97/db_im_5.htm (last visited Mar. 31, 2005).

163 *Id.*

164 *See* WIPO, *Report adopted by the Information Meeting*, DB/IM/6 (September 19, 1997), *available at* http://www.wipo.int/eng/meetings/infdat97/db_im_6.htm (last visited Mar. 31, 2005).

sui generis right that needed to be addressed,"[165] and outlined a series of recommendations for future work.[166] Over the next few years, the matter of a new Database Treaty continued to appear on the agenda of the Standing Committees on Copyright and Related Rights[167] Despite persistent attempts by the United

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165 *Id.* ¶ 11. The issues were "the need for such a system of protection; definitions of necessary concepts, such as 'database'; the protected subject matter; the rights that should be granted; the scope of protection; determination of the beneficiary or holder of the rights; duration of the rights; exceptions in favor of e.g. scientific and educational activities; principles of operation, such as national treatment or reciprocity; and means of enforcement and means for acquiring the proof of infringement." *See also* WIPO, *Analytic Table of Questions Raised*, DB/IM/7 (Nov. 18, 1997), *available at* http://www.wipo.int/eng/meetings/infdat97/pdf/db_im_7.pdf (last visited Mar. 31, 2005).

166 *Id.* ¶ 12 (including the making available of the summary of discussions to the member states of WIPO and the EC and the other participating organizations "so as to facilitate consultations on the issues concerning intellectual property in databases at national and regional level.") The report concluded with the statement that "it was up to the competent Governing Bodies of WIPO to take a decision about the convocation of any further WIPO meeting on intellectual property on databases at regional and/or international level." *Id.* ¶ 13.

167 For a listing of the nine sessions of the Committee taking place from 1998 through 2003 as well as the various studies the Committee has received on the subject, *see* WIPO, *Protection of Non-Original Database*, *available at* http://www.wipo.org/copyright/en/activities/databases.htm (last visited Mar. 31, 2005). At the Seventh Session of the Committee in May 2002, the Committee received a number of Reports. *See* Yale M. Braunstein, *Economic Impact of Database Protection In Developing Countries And Countries In Transition*, SCCR/7/2 (Apr. 4, 2002), *available at* http://www.wipo.org/eng/meetings/2002/sccr/pdf/sccr7_2.pdf (last visited Mar. 31, 2005); Sherif El-Kassas, *Study on the Protection of Unoriginal Databases*, SCCR/7/3 (April 4, 2002), *available at* http://www.wipo.org/eng/meetings/2002/sccr/pdf/sccr7_3.pdf (last visited Mar. 31, 2005); Thomas Riis, *Economic Impact of the Protection of Unoriginal Databases in Developing Countries And Countries In Transition*, SCCR/7/4 (Apr. 4, 2002), *available at*

States and European communities to directly address the database issue, the committee continued to carry the matter forward.[168]

By the Ninth Session of the Committee in June 2003, delegates from several developing countries expressed the sentiment that the matter had been on the agenda long enough and that it should be removed.[169] The U.S. responded that while

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http://www.wipo.org/eng/meetings/2002/sccr/pdf/sccr7_4.pdf (last visited Mar. 31, 2005); Phiroz Vandrevala, *A Study on the Impact of Protection of Unoriginal Databases on Developing Countries*: *Indian Experience*, SCCR/7/5 (Apr. 4, 2002), *available* at http://www.wipo.org/eng/meetings/2002/sccr/pdf/sccr7_5.pdf (last visited Mar. 31, 2005); Zheng Shengli, *The Economic Impact of the Protection of Database in China*, SCCR/7/6 (April 22, 2002), *available* at http://www.wipo.org/eng/meetings/2002/sccr/pdf/sccr7_6.pdf (last visited Mar. 31, 2005). It had commissioned on the subject of database legislation, and they carried forward action on the subject to its next meeting. At the Eighth Session of the Committee in November 2002, the Committee received a Report summarizing existing legislation on database protection as well as a further submission from the European Community urging early action.

168 *See* WIPO, Report of the Standing Committee on Copyright and Related Rights, SCCR/8/9 ¶ 126(a) (Nov. 8, 2002), *available at* http://www.wipo.org/documents/en/meetings/2002/sccr/pdf/sccr_8_9.pdf (last visited Mar. 31, 2005).

169 WIPO, Report of the Standing Committee on Copyright and Related Rights, SCCR/9/11 ¶ 15 (June 27, 2003) *available at* http://www.wipo.org/documents/en/meetings/2003/sccr/pdf/sccr_9_11.pdf (last visited Mar. 31, 2005):

> The Delegation of Brazil shared the views expressed by the Delegations of India, Senegal and Egypt and questioned the need to maintain the item on the Agenda of the Committee. It had attempted to reach understanding on that subject and to that effect had undertaken consultations with the private sector of its country, which did not display an interest in the issue. There was little agreement at the international level on what kind of protection had to be granted. That showed that

it understood the sentiments of the several delegations about the slow pace of progress, "it continued to attach importance to the subject, and noted that the U.S. Congress was devoting attention to the issue during its current session in order to arrive at suitable legislative solutions to the protection of such databases."[170] The delegation from the E.C. continued to push for resolution of the issue.

The Chairman concluded "the item need not be kept on the Agenda of every session of the SCCR but that some mechanisms would have to be established to ensure appropriate monitoring of developments."[171] Ultimately, the Committee decided to carry the issue forward to the Agenda of the Eleventh Session,[172] to be held in 2004. But continuing its pattern of indecision on the issue, the Standing Committee again deferred action on the matter, this time until late 2005.[173]

C. 105TH CONGRESS – H.R. 2652

After the failure of the *Moorhead Bill* and the proposed *WIPO Database Treaty*, the U.S. Copyright Office held a series

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> the topic was not mature for discussions at the international level, and accordingly the Delegation supported the suggestion to remove the item from the Agenda until a suitable time in the future.
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> *Id.*

170 *Id.* ¶ 16. However, at the time of the Ninth Session, there was no database legislation pending in the 108th Congress.

171 *See supra* note 172, ¶ 22.

172 *Id.* ¶ 130(e).

173 *See* Press Release, WIPO, WIPO Member States Make Significant Headway in Talks on Broadcasters' Rights 386/2004 (June 10, 2004) ("The SCCR also considered the issue of protection of non-original databases. Collections of data, such as telephone directories, which are not sufficiently original to qualify for copyright, may still deserve protection for the significant investment in their creation and maintenance, and to avoid unauthorized copying and dissemination, for example, over the Internet. The Committee decided to revisit the matter in the second half of 2005."), *available at* http://www.wipo.int/edocs/prdocs/en/2004/wipo_pr_2004_386.html (last visited Mar. 31, 2005).

of meetings in March, May and June of 1997 with the various stakeholders in an attempt to reach a common ground on the issue. The meetings were attended by representatives of the library associations, science agencies and organizations, educational groups, and database producers.[174] While the meetings indicated that there was some degree of agreement on basic principles,[175] significant differences amongst the stakeholders persisted "on the adequacy of existing means of protection for databases; whether additional statutory protection or its absence is more likely to diminish access to data or raise its cost; and whether non-competitive uses that may harm the market for a database should be permitted."[176] The Report continued:

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174 *See* COPYRIGHT OFFICE REPORT, *supra* note 63, at 63. According to the Report:

> The meetings were structured to provide an informal environment conducive to focused, productive and open discussion. All were led by Marybeth Peters, the Register of Copyrights, with the assistance of the staff of the Office of Policy and International Affairs. Each participant was given an opportunity to present its specific views, and then an unlimited time period was devoted to general discussion of the issues. While there were no formal presentations or questions, Copyright Office staff occasionally asked questions to clarify facts or positions. The discussions were not transcribed, and written statements were not required, although some participants chose to submit them during or after the meetings.

Id. at 64.

175 "[P]articipants generally agreed on the following points: (1) databases are vulnerable to copying, and adequate incentives are needed to ensure their continued creation; (2) individual facts should not be the subject of private ownership; (3) anyone should be free to obtain facts independently from original sources, even after they have been incorporated in a database; (4) government databases should not be protected; (5) it is important not to harm science, research, education and news reporting; and (6) 'free riding' in the form of substantial copying for commercial, competitive purposes should not be permitted." *Id.* at 65.

176 *Id.*

> Some participants in the Copyright Office meetings held strong views either in favor of new legislation or in opposition. In general, many members of the library and scientific communities, as well as some educational groups, telephone companies and Internet-related businesses, expressed opposition, while a majority of database producers, including producers of a variety of scientific and scholarly databases, and the owner of a major on-line retrieval service advocated legislation.[177]

The Report was inconclusive and did not make any recommendations, stating instead that "we seek only to present the issues to be addressed, and to offer some options for addressing specific concerns. Their resolution will await public hearings and the presentation of evidence."[178]

Notwithstanding the failure of the meetings to reach agreement, a new database bill was reintroduced in October 1997 as H.R. 2652, the *Collections of Information Antipiracy Act*,[179] and like its predecessor, it would have provided the industry with the new proprietary protections they were seeking. The sponsor, Rep. Coble (R-NC), provided introductory remarks that echoed Moorhead: "[t]he bottom line is clear: it is time to consider new federal legislation to protect developers who place their materials in interstate commerce against piracy and unfair competition, and thus encourage continued investment in the production and distribution of valuable commercial collections of information."[180]

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177 *Id.* The Report stressed that "positions were not uniform within all of these communities. Some commercial database producers, including one of the largest in the global marketplace, oppose legislation at this time; many scientific researchers, particularly those working for industry, favor it. The reasons for the differences among those who appear to be similarly situated were not always clear. In some cases, it may simply be that they hold differing perceptions of the law or the potential dangers posed." *Id.*

178 *Id.* at 2.

179 Collection of Information Antipiracy Act, H.R. 2652, 105th Cong. § 1 (1997) (proposed by Rep. Coble).

180 143 CONG. REC. E2000 (daily ed. Oct. 9, 1997) (statement of Rep. Coble).

At the outset, the proponents, clearly wanting to distance themselves from the failed *Moorhead Bill* and *WIPO Database Treaty*, claimed that the new version of the bill was substantially different from its predecessor. The House Judiciary Committee argued that the bill was a balanced proposal, one aimed at market injury from misappropriations of collections of information. By contrasting the bill with the predecessor measure, the language of the Judiciary Committee's Report disputed its characterization as a broad *sui generis* proprietary measure:

> This bill differs significantly in approach and scope of coverage from H.R. 3531, introduced in the last Congress by then-Chairman Carlos Moorhead. H.R. 3531 proposed to enact a new form of *sui generis* exclusive property right in collections of information. In response to the concerns raised by interested parties and outlined in the Copyright Office Report on Legal Protection for Databases, H.R. 2652 adopts a different model for protection. It represents a minimalist approach grounded in the misappropriation branch of unfair competition law, focusing more precisely on the damage that can be done from substantial takings from collections of information. It also contains several additional provisions responsive to concerns of users. [181]

But critics argued that the measure was neither minimalist nor grounded in misappropriation.[182]

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181 H.R. REP. NO. 105-525 at 9 (1998).

182 See dissenting views of Rep. Zoe Lofgren (D-Cal), *id.* at 25 (arguing that "[t]he drafters of H.R. 2652 have attempted to avoid this defect by styling the bill as a Federal 'misappropriation' statute, as though we were not creating a new property right, but establishing a new tort. However, the bill seeks to establish a new property right for 'collections of information,' complete with civil and criminal remedies for unauthorized use, and exceptions for the use of individual items or 'insubstantial parts,' scholarly activity, and news reporting. Such characteristics belie the 'misappropriation' label, and look suspiciously analogous to those of copyright."). *See also* Jonathon Band, *A Preliminary Analysis of H.R. 2652* (1998), *available at* http://www.arl.org/info/frn/copy/bandanalysis.html

In their statement of opposition to H.R. 2652, the Association of Research Libraries (ARL) acknowledged that while the bill contained slight improvements over its predecessor in some respects, it was still objectionable.[183]

The main operative section setting out the terms of the prohibition was similar to the corresponding section of the previous bill. Section 1202 of H.R. 2652 provided:

(last visited Mar. 31, 2005) (arguing that "[a}s this bill is drafted, though, there is little to distinguish it from a sui generis protection bill. Indeed, this bill arguably is worse than the previous database laws we've seen (the Database Directive, the WIPO Database Treaty, and last year's 3531) in that there is no term of protection; it continues so long as there is a market for the product."). Band also noted that the bill was extremely vague because there was no definition provided for operative terms such as "substantial part" or "substantial monetary or other resources." *Id.* On the other hand, Band argued, "information . . . is defined extremely broadly: 'facts, data, works of authorship, or any other intangible material capable of being collected and organized in a systematic way.'" Based on this broad definition of information, Band concluded "an existing compilation protected by copyright would also be protected under H.R. 2652. Moreover, a copyrighted work (e.g., a novel) could be protected because it is a collection of words organized in a systematic way. There would, however, be no term limit under this statute." *Id.*

183 ARL, *Status of Copyright and Intellectual Property Legislation*, (Apr. 16, 1998), *available at* http://arl.cni.org/info/frn/copy/status.html#dcia (last visited Mar. 31, 2005). ARL stated that "[a]lthough the bill has been improved by several amendments, it continues to remain extremely problematic. For example, because the bill is outside the scope of copyright, there are no exceptions such as fair use, preservation, and other exemptions that support education. The exception on behalf of education, linked to 'not harming the actual or potential market' provides little if any, meaningful exemption to education and research, and the problematic 15-year term limit is retroactive for those databases that were created before the Act's date of enactment. ARL continues to oppose the bill with others in the education and commercial sectors including MCI, AT&T, Dun & Bradstreet, AAAS, and the Association for Computing Machinery." *Id.*

> Any person who *extracts, or uses in commerce*, all or a substantial part, measured either quantitatively or qualitatively, of a collection of information gathered, organized, or maintained by another person through the investment of substantial monetary or other resources, so as to cause harm to the actual or potential market of that other person, or a successor in interest of that other person, for a product or service that incorporates that collection of information and is offered or intended to be offered for sale or otherwise in commerce by that other person, or a successor in interest of that person, shall be liable to that person or successor in interest for the remedies set forth in section 1206.[184] (emphasis added)

H.R. 2652 continued to draw strong opposition from the library, education and research communities, because the bill would adversely affect the public's access to information contained in databases, thereby constituting an unwarranted expansion of property protections to the detriment of the public interest.[185] While the House passed the measure on May 19, 1998 by voice vote, it was never reported out of the Judiciary Committee in the Senate.

In August of 1998, the General Counsel of the Department of Commerce issued a letter expressing general administration support for "legal protection against commercial misappropriation of collections of information," but at the same time raising several concerns with the approach being taken by H.R. 2652:

> Given the difficulty of foreseeing how 'substantiality,' 'extraction' and other terms in H.R. 2652 will play out in a complex and rapidly changing environment, we are concerned that H.R.

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184 Compare this language with the corresponding section 4 of H.R. 3531. (proscribing extraction, use or reuse).

185 *See Collections of Information Antipiracy Act: Hearings on H.R. 2652 Before the Subcomm. on Courts and Intellectual Property of the Committee of the House Comm. on the Judiciary*, 105th Cong. (October 23, 1997) (statement of Jerome A. Reichman and James Neal).

> 2652 lacks a balancing mechanism analogous to the fair use doctrine in copyright sufficient to address the wide range of circumstances in which information is aggregated, used, and reused. We are especially concerned that the section 1203(d) exception for non-commercial research and educational uses does not ensure that legitimate non-commercial research and educational activities are not disrupted by the prohibition against commercial misappropriation. Equitable issues of access and use may be especially important in markets exclusively served by a single data producer.[186]

The General Counsel's letter also expressed doubts as to the constitutionality of the measure:

> The Department of Justice has serious constitutional concerns that the First Amendment restricts Congress's ability to enact legislation such as H.R. 2652, and that the Intellectual Property Clause also may impose some constraints on legislation of this sort. We note that those constitutional concerns are closely related, in many instances, to some of the points described above, particularly fair use, the effects on potential markets and transformative uses of data.[187]

This development effectively ensured that the measure would not progress in the Senate. In the final days of the 105th Congress, House proponents added the provisions of H.R. 2652 verbatim as Title V of H.R. 2281, the *Digital Millennium Copyright Act* (DMCA). The lack of support for the database provision in the Senate was reflected in a letter from Sen. Joseph Lieberman (D-CT) to Sen. Patrick Leahy, the ranking Democrat on the Senate Judiciary Committee. Sen. Lieberman was otherwise supportive of the DMCA before the Conference

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186 Letter from Andrew J. Pincus, General Counsel, U.S. Dep't of Commerce, to Hon. Patrick J. Leahy, Ranking Minority Member, Comm. on the Judiciary, U.S. Senate (August 4, 1998), *available at* http://www.acm.org/usacm/copyright/doj-s2291.html (last visited Mar. 31, 2005).

187 *Id.*

Committee but wanted the database provisions removed.[188] The Conference Committee dropped the database language from the final version and the database legislation failed to pass for the second straight Congress.[189]

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188 *See* Letter from Sen. Joseph Lieberman to Sen. Patrick Leahy (Sept. 8, 1998), *available at* http://www.arl.org/info/letters/lieberman.html (last visited Mar. 31, 2005). Lieberman said he believed that if H.R. 2652, were enacted into law, it "would inappropriately and injudiciously grant new monopoly property rights to a handful of publishers at the expense of legitimate users of compiled information including schools, libraries, research institutions, government agencies, and other publishers." *Id.* He argued that it was "anti-competitive and would impede the creation and dissemination of new knowledge," and he requested that the Conference Committee "either excise this unwise database provision from the otherwise excellent WIPO treaty implementation legislation or further amend it along the lines suggested by the National Academy of Sciences and others to address antipiracy concerns without creating new monopoly rights for a privileged class of publishers." *Id.* Lieberman sent a mixed message, as he characterized the WIPO treaty implementation legislation as "otherwise excellent." *Id.* The willingness for policymakers to readily adopt the anti-circumvention measures, while remaining critical of database provisions presents an interesting issue, and more attention needs to be given to what accounts for this disparity. One explanation may be that for legislators, the imperative to comply with supposed obligations set by international treaties to which the United States is committed (such as the WIPO Copyright Treaty), overrides any duty to critically examine the measure. On the other hand, and despite the best efforts of the database industry, it remained readily apparent to legislators that the United States is not a member of the European Union, so what may be called the "international imperative syndrome" did not arise.

189 H.R. REP. NO. 105-796 (1998). A measure substantially similar to H.R. 2651 had been introduced in the Senate in July 1998 (S. 2291), but it died in the Judiciary Committee.

D. 106TH CONGRESS – H.R 354

The proponents of database legislation were not to be dissuaded. Their bill reappeared in substantially the same form in the 106th Congress as H.R. 354 (Coble R-NC), the *Collections of Information Antipiracy Act*. During the time the previous bills were pending, the database industry was also attempting to narrow the scope of the *Feist* ruling in the courts. But in *Matthew Bender & Co. v West Publishing*,[190] the Second Circuit Court of Appeals denied West Publishing's claim of copyright in their page numbering and other factual materials in reported court decisions. When the United States Supreme Court denied West's petition for review in June 1999, it effectively shut the door on West's litigation strategy. This development only intensified the industry's desire for new legislation.

H.R. 354 represented the industry's third attempt to pass a database bill in as many Congresses. Like its predecessors, H.R. 354 would have created a new property right for "collections of information." Rep. Coble's introductory remarks demonstrate the continuity between this bill and those of its predecessors[191] while also emphasizing the misappropriations nature of the measure.[192]

Coble's liberal usage of the term "misappropriations aside," H.R. 354 was firmly rooted in the proprietary approach. Like its predecessors it sought to establish an unprecedented level of rights in collections of information, complete with civil and criminal penalties for unauthorized use, even by individuals who were not competing with the database provider. The

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190 158 F.3d 674 (2d Cir. 1998).

191 145 CONG. REC. E84 (daily ed. Jan. 20, 1999) (statement of Rep. Coble). Rep. Coble stated that "[t]he bottom line is clear: it is time to consider new federal legislation to protect developers who place their materials in interstate commerce against piracy and unfair competition, and thus encourage continued investment in the production and distribution of valuable commercial collections of information." *Id.*

192 *Id.* ("[H.R. 354] would prohibit the misappropriation of valuable commercial collections of information by unscrupulous competitors who grab data collected by others, repackage it, and market a product that threatens competitive injury to the original collection.").

operative prohibition, Section 1402(a), would impose liability based on an unauthorized extraction.[193] Section 1402(b) would extend this liability to an end-user that is extracting material for personal use so long as the either the primary or related market of the producer was harmed. [194] The definition of "primary market"[195] or "related market"[196] remained so broad

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193 Section 1402(a) provided: "Any person who makes available to others, or extracts to make available to others, all or a substantial part of a collection of information gathered, organized, or maintained by another person through the investment of substantial monetary or other resources, so as to cause material harm to the primary market or a related market of that other person… for a product or service that incorporates that collection of information and is offered or intended to be offered in commerce by that other person… shall be liable."

194 Section 1402(b) provides: "Any person who extracts all or a substantial part of a collection of information gathered, organized, or maintained by another person through the investment of substantial monetary or other resources, so as to cause material harm to the primary market of that other person, or a successor in interest of that other person, for a product or service that incorporates that collection of information and is offered or intended to be offered in commerce by that other person, or a successor in interest of that person."

195 Section 1401(3) defines primary market as "all markets: (A) in which a product or service which incorporates a collection of information is offered; and (B) in which a person claiming protection with respect to that collection of information under section 1402 derives or reasonably expects to derive revenue, directly or indirectly."

196 The definition of related market in section 1401(4) goes even further. It includes any market: "(A)(i) in which products or services which incorporate collections of information similar to a product or service offered by a person claiming protection under section 1402 are offered; and (ii) in which persons offering such similar products or services derive or reasonably expect to derive revenue, directly or indirectly; or (B) any market in which a person claiming protection with respect to a collection of information under section 1402 has taken demonstrable steps to offer in commerce within a short period of time a product or service incorporating that collection of information with the reasonable expectation to derive revenue, directly or indirectly."

that it would seem even a relatively small extraction could be construed as substantial.

The objections raised to H.R. 354 were similar to those raised against its predecessors. James Neal's testimony before the House Judiciary Committee[197] on behalf of the library associations[198] summarized the opposition to the bill.[199] Neal claimed the bill was overbroad in scope and departed from the current intellectual property framework that attempts to balance the interests of users and owners,[200] and that it gave content owners excessive control over the subsequent uses of information including downstream, transformative uses of

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197 *Collection of Information Antipiracy Act: Hearing on H.R. 354 Before the Subcomm. on Courts and Intellectual Property of the House Comm. on the Judiciary*, 106 Cong. ___ (1999) (statement of James Neal), *available at* http://judiciary.house.gov/legacy/106-neal.htm (last visited Mar. 31, 2005) [hereinafter *Statement of James Neal*].

198 Neal, then Dean, University Libraries Johns Hopkins University, was speaking on behalf of the American Association of Law Libraries, American Library Association, Association of Research Libraries, Medical Library Association, and the Special Libraries Association. *Id.*

199 *See also Collection of Information Antipiracy Act: Hearing on H.R. 354 Before the Subcomm. on Courts and Intellectual Property of the House Comm. on the Judiciary*, 106 Cong. (1999) (statement of Charles E. Phelps, Provost of the University of Rochester), *available at* http://judiciary.house.gov/legacy/106-phel.htm (last visited Mar. 31, 2005) (speaking on behalf of the Association of American Universities, the American Council on Education, and the National Association of State Universities and Land-Grant Colleges).

200 *Statement of James Neal*, *supra* note 197 (arguing that "[t]he new regime proposed in H.R. 354 constitutes a radical departure from our current system - a regime that would permit the protection of factual information by virtue of the investment made in collecting the data. H.R. 354 would overturn over 200 years of our Nation's information policy which has consistently supported unfettered access to factual information.")

facts.[201] Neal noted that the bill does not adequately deal with the problem of sole-source databases:

> Although the bill permits individuals to collect information independently in order to compete in the commercial marketplace, such independent collection often is virtually impossible or is economically infeasible. Historical data or data for field experiments are two common examples. We understand that tackling this issue is extremely difficult. But by failing to address the sole source issue, the bill could create monopoly control over information of certain kinds.
>
> For libraries and users there would be little recourse. The publisher or database producer is not obligated to permit transformative uses in a license nor is there any leverage in negotiating the license to moderate costs or permit downstream activities.[202]

Other recurring objections included the potential for perpetual protection for dynamic collections,[203] and the

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201 *Id.* ("Researchers need access to *large and small* amounts of data. Yet H.R. 354 prohibits the extraction, or use in commerce, of 'a substantial part, measured either quantitatively or qualitatively, of a collection of information....' By allowing the database producer to prevent reuses of 'qualitatively' substantial parts of a database, the legal standard which is at the heart of H.R. 354, the bill effectively prevents the reuse of any information.")

202 *Id.*

203 *Id.* ("A new provision in H.R. 354 attempts to correct a serious problem identified in its predecessor, H.R. 2652. Proponents argue that the mere maintenance of a database or collection on a server should trigger another 15 year cycle of protection. The new provision in H.R. 354 attempts to correct this serious problem, by making older versions of databases available for use even though newer ones remain protected. The new language, however, falls short of fully addressing our concerns. Where dynamic electronic databases are concerned, the older versions may, as a practical matter, be unavailable - making the right of access recognized in the new language a hollow one.")

narrowness of the exemptions for education and research activities.[204] The measure was also faulted because its remedies were overly punitive, likely to lead to a chilling of legitimate activity,[205] and it also failed to clearly exempt government-generated information from its scope.[206]

This later point was also emphasized by Andrew Pincus, General Counsel for the Department of Commerce. At the House

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204 *Id.* ("H.R. 354 includes a new provision for 'reasonable uses' which did not appear in H.R. 2652. This provision is a modest step in the right direction in addressing a serious concern of the library community, and we do appreciate its inclusion in H.R. 354. Yet, the provision as drafted falls short of what the library and academic communities require to continue to conduct a wide range of research and education activities. Section 1403 states that 'no person shall be restricted from extracting or using information for nonprofit educational, scientific, or research purposes in a manner that does not harm directly the actual market for the product or service.' Very often, however, libraries and educational institutions are, in fact, the *only* market for particular databases or collections. Thus by definition research use of the content of such collections could be held to 'harm directly the actual market' making the exemption of little practical value for the vast bulk of research and educational uses.")

205 In addition to actual monetary damages and injunctive relief, a court may order impoundment of all copies of a violating database. Additional monetary relief up to three times actual damages, costs and attorney's fees costs and attorney's fees may also be assessed. Criminal penalties apply where a willful violation for commercial gain causes damages of $10,000 or more penalties are a maximum fine of $250,000 and/or imprisonment for no more than 5 years; subsequent offenses are punishable by a maximum fine of $500,000 and/or imprisonment for no more than 10 years.

206 *Statement of James Neal*, *supra* note 200. (Neal argued: "Under the terms of this legislation, companies which provide data to the government could exert property rights over this data. Thus some government information would become the intellectual property of private companies. Significant collections of government-mandated information which have been publicly available could become unavailable, available for a fee, and/or available with significant constraints on use and reuse.")

Judiciary Committee hearing on the bill, Pincus argued that "[c]onsistent with Administration policies expressed in relevant Office of Management and Budget circulars[207] and federal regulations, databases generated with Government funding generally should not be placed under exclusive control, *de jure* or *de facto*, of private parties."[208] He stated that, "[i]nstead of trying to draw a distinction between public universities and other government institutions, it might be more appropriate to concentrate on the distinction between *public* research and *privately funded* research at *public* institutions."[209]

Pincus was referring to the exclusion of government-generated data under section 1404(a), which provided:

> Protection under this chapter shall not extend to collections of information gathered, organized, or maintained by or for a government entity, whether Federal, State, or local, including any employee or agent of such entity, or any person exclusively licensed by such entity, within the scope of the employment, agency, or license. Nothing in this subsection shall preclude protection under this chapter for information gathered, organized, or maintained by such an agent or licensee that is not within the scope of such agency or license, or by a Federal or State educational institution in the course of engaging in education or scholarship.[210]

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207 Pincus was referring to OMB Circular A-130. Office of Management and Budget, *Memorandum for Heads of Executive Departments and Establishments*, Circular No. A-130, 58 Fed. Reg. 36068 (1993), *available at* http://www.whitehouse.gov/omb/circulars/a130/a130trans4.html (last visited Mar. 31, 2005). Section 6(h) of the Circular defines the term "government information" as "information created, collected, processed, disseminated, or disposed of by or for the Federal Government." *Id.*

208 *Collections of Information Act of 1999: Hearing on H.R. 354 Before the Subcomm. on Courts and Intellectual Property of the Comm. on the Judiciary*, 106 Cong. (1999) (statement of Andrew J. Pincus, General Counsel, U.S. Dep't of Commerce).

209 *Id.*

210 *Id*

Arguing that this exclusion was too narrow, Pincus said, "we believe that the present language does not adequately cover situations in which the government contracts for or provides grants for information gathering,"[211] and he concluded that "[i]nformation generated with public finances should be treated the same regardless of the vehicle used to generate the information."[212] Other stakeholders addressed the similar concern

Notwithstanding the various objections, the House Judiciary Committee approved H.R. 354 in May 1999,[213] and it appeared headed for House approval. But the emergence of a competing bill, H.R. 1858,[214] seemed to neutralize H.R. 354, and the pair of bills made no further progress in the 106th Congress. In the closing weeks of the first session, backers of H.R. 354 were unsuccessful in their attempt to bring the measure to the House floor. Their attempt to attach it as a rider to the appropriations bill also failed.

The failure of H.R. 354 to be enacted marked the third consecutive Congress in which *sui generis* database legislation was defeated. However, it is seemed likely that the issue would reemerge in future sessions. In a rather acerbic statement issued in October 2000, the sponsor of H.R. 354 (Rep. Howard Coble, R-NC) said:

> [t]his will now be the third Congress in which legislation protecting databases has failed to become law. Over the past years, the opponents of such legislation have done all they can to prevent legislation from moving forward and maintain the status quo so they may pirate the work of others due to the current gap in protection. They first claimed there was no need for legislation. Then subsequently, they admitted there was, in fact, a need as long as they could get a carve-out for themselves. How selfishly convenient. This issue will not go away. Now, more than ever, America's database producers need sufficient protection to ensure the continued investment in developing

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211 *Id.*

212 *Id.*

213 *See* H.R. REP. NO. 106-349, pt. I (1999).

214 *See* section III-D, *infra*.

> these information products. Their vulnerability remains as the pirates still sail without fear. Rest assured, Mr. Speaker, I will do everything I can next session to finally pass legislation which benefits database producers and, therefore, benefits American consumers.[215]

E. 106TH CONGRESS – H.R. 1858: AN ALTERNATIVE APPROACH

In 1999, the opponents of the database bills offered their own alternative. H.R 1858, the *Consumer and Investor Access to Information Act of 1999,* provided additional protection to owners of compilations from commercial misappropriation by competitors.[216] But it did not attempt to restrict the transformative use of facts by end-users. Section 102 of the bill reflected its nature as a misappropriations measure, not as a *sui generis* property right, holding it "unlawful for any person or entity, by any means or instrumentality of interstate or foreign commerce or communications, to sell or distribute to the public a database that—(1) is a duplicate of another database that was collected and organized by another person or entity; and (2) is sold or distributed in commerce in competition with that other database."

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215 146 CONG. REC. H9639 (daily ed., October 11, 2000) (statement of Rep. Coble).

216 It should also be noted that the coalition against H.R. 354 seemed to be growing during the 106th Congress. The New York Times published an anti-354/pro-1858 editorial, "*Fair Use of Databases*" on November 15, 1999, and it was immediately distributed to every member of the House by the library associations. In February 2000, a letter opposing H.R. 354 was sent to every member of Congress. In addition to the usual non-profit educational and library interests, the letter was signed by a broad cross-section of companies in the high-technology sector (including AOL, AT&T, Amazon.com, Lycos and MCI). The list included firms that are part of the information sector (Dun & Bradstreet, Reuters, Bloomberg and Charles Schwab) and even included the U.S. Chamber of Commerce. Letter from AOL et al. to Members of Congress, *available at* http://www.ll.georgetown.edu/aallwash/lt02082000.html (last visited Mar. 31, 2005).

In comparison to the language of the other database bills, this prohibition is clearly limited to the conduct of potential competitors. It does not reach the conduct of end-users. Rather than create a new property right enforceable against anyone, Section 102 prohibits certain conduct in the nature of an unfair business practice. The difference between this measure and the competing bills is also reflected in the remedies section.

Law professor Yochai Benkler summarized the differences between H.R. 354 and H.R. 1858 in terms of impact upon users:

> House Bill 354 is addressed to anyone who distributes information extracted from a database, and to anyone who uses information in a database . . . . . House Bill 1858 does not speak to anyone who uses information . . . for its value as information, as opposed to its value as goods in trade. House Bill 354, on the other hand . . . speaks to consumers of data, as well as to competitors in the market for serving consumers in data.[217]

For end-users of information, the distinction is essential. Benkler explains that H.R 1858 is a true misappropriations measure because it does not create a "property-like entitlement in database producers . . . [but only] addresses . . . a certain subset of competitors, namely those who sell near-identical databases to the database from which they extracted the information."[218] Since its prohibitions only reach to sales in competition with the source, it does not reach the conduct of end-users. Nor does it speak to producers of other databases who add their own information to information they collect from other databases. Another major difference between H.R 354 and H.R. 1858 is in its enforcement mechanisms. While H.R. 354 and its predecessors imposed broad civil and criminal liability, Section 107 of H.R. 1858 vested enforcement authority in the Federal Trade Commission (FTC). The importance of this distinction cannot be over-emphasized. Under H.R. 1858, a database owner does not have the ability to bring an action against an end-user for infringement. Consequently, they also lose their ability to

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217 Yochai Benkler, *Constitutional Bounds of Database Protection: The Role of Judicial Review in the Creation and Definition of Private Rights in Information.*, 15 BERKELEY L. & TECH. J. 535, 578-79 (2000).

218 *Id.* at 602.

threaten to bring such actions. Opponents of *sui generis* legislation are concerned that the threat of civil (and criminal) liability has a substantial chilling effect on the rights of end-users to make the broadest possible use of data. The threat of civil and criminal liability for infringement is an important determinant in the relative power of end-users and owners *vis-à-vis* the utilization of intellectual property. Indeed, the lack of direct sanctions against end-users has been among the strongest objections raised by the information industry against H.R. 1858. The difference in enforcement mechanisms between H.R. 354 and H.R. 1858 also reflects the jurisdictional dispute over database legislation that has arisen between the House Judiciary and Commerce Committees. The courts are within the purview of the Judiciary Committee while the Commerce Committee oversees the Federal Trade Commission.[219]

H.R 1858 offered a less drastic alternative to the industry-backed measure. Yet the provisions of H.R 1858 provide protections against practices that rise to the level of unfair competition without impacting individual end-consumers. The bill was reported out of the House Commerce Committee in August of 1999[220] and the two competing bills were then cross-

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219 The House Commerce Committee has been renamed the Energy and Commerce Committee. The Committee's 2001 Oversight Plan indicates that it intends to expand the ability of the Federal Trade Commission to regulate electronic commerce, while the Federal Trade Commission (FTC) already has authority to protect consumers from deceptive practices and advertising over various mediums, including the Internet and electronic networks. The Committee plans to review the FTC's exercise of its authority in the high tech and e-commerce areas, as well as in other areas within the Committee's jurisdiction, such as energy policy, healthcare policy, and the regulation of food and drugs. COMM. ON ENERGY AND COMMERCE, OVERSIGHT PLAN, 109TH CONG., *available at* http://energycommerce.house.gov/108/pubs/Committee%20on%20Energy%20and%20Commerce%20Oversight%20Plan.pdf (last visited Mar. 31, 2005).

220 *See* H.R. REP. NO. 106-350. The bill reported by the Commerce Committee included an amendment offered by the American Association of Law Libraries (AALL) that would explicitly and unambiguously insure that primary legal materials remain accessible to end-users:

referred (H.R. 354 to Commerce and H.R. 1858 to Judiciary) for possible resolution. Given the basic differences in approach between the two bills, as well as the jurisdictional dispute that had arisen between the two committees, it was not surprising that the competing bills were not reconciled. Neither bill was brought to the floor of the 106th Congress.

F. THE 107TH CONGRESS

Rep. Coble's sharply worded remarks in the October 11, 2000 *Congressional Record* strongly suggested that database legislation proponents planned to continue their efforts into the 107th Congress. In the Spring of 2001, the new House Judiciary Committee Chairman James Sensenbrenner (R-WI) and House Energy & Commerce Committee Chairman Billy Tauzin (R-LA) directed their staff to co-host a series of meetings between the proponents and opponents of database legislation in an attempt to find a common ground between the two divergent approaches represented by HR 354 and HR 1858 from the previous Congress.[221] Much like the discussions hosted by the U.S.

> Section 104(f). Protection under this chapter shall not extend to primary legal materials including court opinions, statutes, codes, regulations, or administrative agency decisions, from any Federal, state, or local jurisdiction, unless such materials were permanently available on an interactive computer network, without restriction, in an official, no-fee, publicly accessible electronic form at the time that the extraction occurred.

221 The meetings were described by Mary Alice Baish on behalf of the American Association of Law Libraries.

> Each session focused on one specific issue, such as the scope of a new protection, ISP liability, exclusions for government data, or transformative uses. It became increasingly apparent to us during these sessions that the proponents are adamant about creating a broad new intellectual property regime that we believe will stifle the growth of e-commerce, as well as scientific and educational research. Rep. Sensenbrenner has already signaled to Rep. Tauzin that he intends to move forward on database fairly quickly, and that this is an intellectual property issue within the Judiciary

Copyright Office in 1997,[222] this round of meetings were unable to reconcile the conflicting positions of the stakeholders, and no database legislation was introduced in either chamber of Congress during the 107th Congress.

G. 108TH CONGRESS: H.R. 3261 AND H.R. 3872

Database legislation finally returned to Congress on October 8, 2003 when Rep. Howard Coble (R-NC) introduced H.R. 3261, the *Database and Collections of Information Misappropriation Act*.[223] The bill is cosponsored by Reps. James Sensenbrenner, (R-WI), Billy Tauzin (R-LA), James Greenwood (R-PA), David Hobson (R-OH), and Lamar Smith (R-TX).[224] In its

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> Committee's jurisdiction. Staff of the Commerce Committee view database legislation as an e-commerce issue and therefore very much within their own committee's jurisdiction.

AALL Issue Brief (July 2001), *available at* http://www.ll.georgetown.edu/aallwash/ib0720012.html (last visited Mar. 31, 2005).

222 *See infra* 174-178 and accompanying text.

223 Staff of the House Judiciary Subcommittee on Courts, the Internet and Intellectual Property and the Energy and Commerce Subcommittee on Commerce Trade and Consumer Protection had previously prepared a Discussion Draft and the two subcommittees held a joint hearing on the draft on September 23, 2003. *See* Discussion Draft (Aug. 28, 2003), *available at* http://www.bespacific.com/mt/resources/2003.09.08.database.pdf (last visited Mar. 31, 2005). *See also Energy and Commerce Committee Hearing Outline*, *at* http://energycommerce.house.gov/108/Hearings/09232003hearing1086/hearing.htm; Judiciary Committee Hearing Outline, *at* http://judiciary.house.gov/Oversight.aspx?ID=57 (last visited Mar. 31, 2005).

224 It should be noted that all of the initial co-sponsors are Republican, in contrast to the broad bipartisan sponsorship of H.R. 354 in the 106th Congress. Rep. Sensenbrenner is the chair of the House Judiciary Committee, and Rep. Tauzin is chair of the House Committee on Energy and Commerce. Rep. Smith is Chair of the House Judiciary Committee Subcommittee on Courts, the Internet, and Intellectual Property and Rep. Greenwood is a member of the House Committee on Energy and

current reincarnation, the new *sui generis* database legislation does not contain the explicit extraction and reutilization rights, as had its predecessors. Instead, the measure prohibits the "making available in commerce" a substantial portion of a database under certain conditions. Section 3(a) provides that:

> Any person who makes available in commerce to others a quantitatively substantial part of the information in a database generated, gathered, or maintained by another person, knowing that such making available in commerce is without the authorization of that person (including a successor in interest) or that person's licensee, when acting within the scope of its license, shall be liable for the remedies set forth in section 7 if-
>
> (1) the database was generated, gathered, or maintained through a substantial expenditure of financial resources or time;
>
> (2) the unauthorized making available in commerce occurs in a time sensitive manner and inflicts injury on the database or a product or service offering access to multiple databases; and
>
> (3) the ability of other parties to free ride on the efforts of the plaintiff would so reduce the incentive to produce the product or service that its existence or quality would be substantially threatened.[225]

The language of this section bears some similarity to the decision in *National Basketball Association v. Motorola, Inc.*,[226] but there are significant differences. The *Motorola* test, which

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Commerce. Rep. Coble is a member of the House Judiciary Committee, previously served as Committee Chair, and was the principal sponsor of H.R. 354 in the 106th Congress and H.R. 2652 in the 105th Congress. Rep Hobson is on the House Appropriations Committee and serves as Assistant Majority Whip.

225 The language of this section bears some similarity to the decision in *Nat'l Basketball Ass'n v. Motorola, Inc.*, 105 F.3d 841 (2d Cir. 1997).

226 *Id.*

included five prongs,[227] was more exacting than the requirements listed in the three parts of section 3(a). First, and in addition to these three requirements, *Motorola* requires a showing that "a defendant's use of the information constitutes free-riding on the plaintiff's efforts."[228] The Bill does not contain this specific requirement with respect to the conduct of the particular defendant, since subsection 3(a)(3) places the issue of free riding in a much broader context; the free riding by any *other* party will suffice. Second, *Motorola* requires a showing that "the defendant is in direct competition with a product or service offered by the plaintiffs."[229] While the bill contains this requirement with respect to the exemption for news reporting,[230] the requirement of direct competition is noticeably absent in section 3(a). Both of these omissions are significant and would nullify any assertion that the bill is a misappropriations measure based upon the *Motorola* standard.

In addition to these facial shortcomings, the standard contained in section 3(a) is not quite as exacting when read in the full context of the entire bill. Section 9(b) provides:

> No person shall be liable under section 3 for making available in commerce after the date of the enactment of this Act of a quantitatively substantial part of the information in a database in violation of that section, when the information was lawfully extracted from the database before the date of the enactment of this Act, by that person or by that person's predecessor in interest.[231]

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227 *Id.* The five prongs of the *Motorola* test are: "(i) a plaintiff generates or gathers information at a cost; (ii) the information is time-sensitive; (iii) a defendant's use of the information constitutes free-riding on the plaintiff's efforts; (iv) the defendant is in direct competition with a product or service offered by the plaintiffs; and (v) the ability of other parties to free-ride on the efforts of the plaintiff or others would so reduce the incentive to produce the product or service that its existence or quality would be substantially threatened." *Id.* at 11-12.

228 *Id.*

229 *Id.*

230 H.R. 108-3261, section 4(d).

231 *Id.* § 9(b).

By inserting the qualification of lawful extraction, the drafters cast doubt on whether the "time-sensitivity" limitation in Section 3(a)(2) has any real meaning. If the extracted portion of the database consists of material that is not "time-sensitive," the language in Section 9(b) suggests that a defendant would incur liability if the extraction were done unlawfully. This test of whether the previous extraction was "lawful" would by definition be made without reference to the constraints of the act, as they were not in effect at the time of the extraction. Presumably then, unlawful extraction could be showed as resulting from a violation of a contractual provision in effect at the time of the extraction, and it is highly unlikely that a contractual license for a database contained language that limited liability for extraction to materials that were still time-sensitive. The characterization of what constitutes a "lawful" or "unlawful" extraction from an existing database will be particularly problematic and will turn on interpreting contractual provisions most likely drafted by the database owner on very restrictive terms. The same problem is present with respect to the language in Section 4(a), which purports to create an exclusion from liability for independent collection of the data, stating the bill does "not restrict any person from independently generating or gathering information obtained by means other than extracting it from a database generated, gathered, or maintained by another person and making that information available in commerce."[232] Placed in positive terms, this section *does* restrict a person from generating or gathering the information by means of extraction from a covered database, even a sole-source database, but the restriction is not limited to time-sensitive data. Both Sections 9(b) and 4(a) could reasonably be read as creating independent grounds for liability, separate and apart from section 3, and the limitation on time sensitivity is not included under either of these potential heads of liability.

To return to the discussion of Section 3(a), all three of the enumerated conditions must be met for liability to attach. The first requirement, that "the database was generated, gathered, or maintained through a substantial expenditure of financial resources or time" adopts the "sweat of the brow" standard, subject to the limitations of the second and third requirements. The second requirement is that the unauthorized making

232 H.R. 108-3261 § 4(a). In an albeit indirect manner, this section reintroduces the extraction right even though it is not mentioned in Section 3.

available occur in a "time sensitive manner," and in a way that "inflicts injury" on the database. Section 3(b) defines such an injury as one "serving as a functional equivalent in the same market as the database in a manner that causes the displacement, or the disruption of the sources, of sales, licenses, advertising, or other revenue." For purposes of determining whether the unauthorized making occurs in a time sensitive manner, Section 3(c) provides that, "[i]n determining whether an unauthorized making available in commerce occurs in a time sensitive manner, the court shall consider the temporal value of the information in the database, within the context of the industry sector involved."[233] This language creates a rather open-ended standard, prompting the library associations to argue that they are unduly confusing and vague:

> The provision in the draft legislation relating to time sensitivity is confusing and vague, providing the courts with little guidance. The provision needs to state explicitly that the value of the information in the database must be highly time-sensitive and that the unauthorized making available of information occurred before sufficient time has elapsed for the value to diminish significantly. Without that, almost every making available could be said to occur in a time sensitive manner.[234]

Another serious problem with the bill is that it duplicates coverage already existing under copyright law. The bill defines a database as "a collection of a large number of discrete items of information produced for the purpose of bringing such discrete items of information together in one place or through one source so that persons may access them."[235] But in defining the exclusions, the bill further provides that a database does not include, "[a] work of authorship, other than a compilation or a

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233 *Id.* § 3(c).

234 Letter from American Association of Law Libraries (AALL) et al., to Chairmen Sensenbreinner and Tauzin, Discussion Draft Database Protection Bill (September 4, 2003), *available at* http://www.ll.georgetown.edu/aallwash/lt09042003.html (last visited Mar. 31, 2005) [hereinafter *Joint Library Association Letter*].

235 H.R. 108-3261 § 5(A).

collective work."[236] This excluson is problematic because is means that a compilation or collective work does constitute a database for purposes of the bill. This inclusion creates a double layer of coverage for these works because compilations and collective works are already protected under the *Copyright Act*.[237] But under the *Copyright Act*, the scope of coverage of these works is limited by the fair-use doctrine, [238] the first sale doctrine,[239] and by limitations on the duration of the copyright.[240] None of these limitations are present in the database bill, prompting the library associations to comment:

> For the first time, the draft bill now explicitly encompasses periodical issues, which are themselves covered under the Copyright Act. This raises fundamental questions about the relationship between this bill and the copyright law. It appears that if this draft were to become law, the very same action (such as an interlibrary loan) would be lawful under the Copyright Act but a potential violation of the draft database legislation. This new approach will cast a shadow over all of the exemptions currently in the Copyright Act, thus necessitating a re-litigation of those provisions and a court-provided clarification of which law governs when.[241]

Notwithstanding the general prohibition of section 3, and the broad scope of the definition of database, a series of four

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236 *Id.* § 5(B)(i).

237 *See* 17 U.S.C. § 101 (defining a "collective work" as "a work, such as a periodical issue, anthology, or encyclopedia, in which a number of contributions, constituting separate and independent works in themselves, are assembled into a collective whole," and defining a "compilation" as "a work formed by the collection and assembling of preexisting materials or of data that are selected, coordinated, or arranged in such a way that the resulting work as a whole constitutes an original work of authorship. The term 'compilation' includes collective works."). Section 103(a) explicitly provides that the subject matter of copyright includes compilations.

238 17 U.S.C. § 107.

239 17 U.S.C. § 109(a).

240 17 U.S.C. §§ 302-05.

241 *Joint Library Association Letter*, *supra* note 234.

permitted acts are set forth in the section 4. First, the bill does "not restrict any person from independently generating or gathering information obtained by means other than extracting it from a database generated, gathered, or maintained by another person and making that information available in commerce."[242] By so qualifying the exemption for independent collection, the measure continues to pose particularly acute limitations in the case of sole-source databases.

The second permitted act pertains to the activities of non-profit educational, scientific, and research institutions:

> The making available in commerce of a substantial part of a database by a nonprofit educational, scientific, and research institution, including an employee or agent of such institution acting within the scope of such employment or agency, for nonprofit educational, scientific, and research purposes shall not be prohibited by section 3 if the court determines that the making available in commerce of the information in the database is reasonable under the circumstances, taking into consideration the customary practices associated with such uses of such database by non-profit educational, scientific, or research institutions and other factors that the court determines relevant.[243]

This exclusion is virtually meaningless, much for the same reasons as similar exclusions in the predecessor bills.[244] In a joint letter sent to chairs of the House Judiciary Committee and Energy and Commerce Committee, the library associations argue:

> The provision that purports to exempt non-profit educational, scientific, or research institutions seems wholly inadequate to meet the needs of those institutions. Among other things, the

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242 H.R. 108-3261, § 4(a). In an albeit indirect manner, this section reintroduces the extraction right even though it is not mentioned in Section 3.

243 *Id.* § 4(b).

244 *See supra* note 204 and accompanying text for a discussion of the same concerns raised with respect to H.R. 354 in the 106th Congress.

> determination of what such institutions are allowed to do is made post-facto and only when they have already been forced into a court under an allegation of misappropriation and a threat of quadruple damages. In addition, the standard to be applied is so vague that it offers no guidance at all - only what is customary and reasonable under the circumstances, again to be determined after the fact in the courtroom. There seems to be little doubt that this lack of legislative guidance on what research and educational institutions can and cannot do will have a chilling effect on the very research it claims to protect.[245]

The United Kingdom-based Royal Society has suggested that an appropriate exemption of this nature should provide that "extraction and/or re-utilization for the purposes of scientific research or illustration for teaching is allowed without the authorization of its maker for any database which is made available to the public in whatever manner."[246] The *Joint Library Associations Letter* also argues that the bill "is strikingly at odds with how the research and education communities are increasingly engaging in scientific and research discovery."[247]

The third permitted act pertains to hyperlinking, stating that the act does not "restrict the act of hyperlinking of one online location to another or the providing of a reference or pointer (including such reference or pointer in a directory or index) to a database."[248] Deep-linking is a concern in the context of database legislation because some European courts have held that deep-linking violates the database right enacted under the *EU Database Directive*.[249] In the United States, even without

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245 *Joint Library Associations Letter*, *supra* note 234.

246 Royal Society, Letter to the Patent Office, *supra* note 108.

247 *Joint Library Association Letter, supra* note 234.

248 H.R. 108-3261 § 4(c).

249 For example, in July 2002, a Danish court ruled that a news aggregator website's deep linking to individual articles on commercial newspaper websites violated the newspapers' rights under Denmark's implementation of the European Union Database Protection Directive. Danish Newspaper Publishers' Association v. Newsbooster.com ApS, 7

the adoption of *sui generis* database legislation, many website owners have similarly taken the position that deep linking to their sites is prohibited without their consent.[250] If the intention of this section is to protect deep linking from liability, it should be stated so in a more explicit manner. To "another location" or to "another database" could well be construed as connoting the entry point or home page of the information service containing the database. In order to avoid the deep-linking liability issue, explicit language should be used making it clear that deep linking does not constitute grounds for liability.[251]

ELECTRONIC COMMERCE & LAW REPORT 28 (BNA), July 17, 2002. A German court reached a similar result based on the German implementation of the Directive. *See* Michelle Delio, *Deep Linking Takes Another Blow*, WIRED NEWS (July 25, 2002), *available at* http://www.wired.com/news/politics/0,1283,54083,00.html (last visited Mar. 31, 2005). For a compilation of materials on deep-linking controversies, see the *Link Controversy Page*, maintained by Stefan Bechtold at http://www.jura.uni-tuebingen.de/~s-bes1/lcp.html (last visited Mar. 31, 2005). While the ultimate legal status of deep-linking remains to be clarified by the European courts, it is clear that many website owners read the Directive's extraction right very broadly, and such an interpretation has been accepted, at least by lower courts.

250 *See* American Library Association, *Deep-Linking*, http://www.ala.org/alaorg/oif/deeplinking.html (last visited Mar. 31, 2005). *See also* http://www.dontlink.com/ (last visited Mar. 31, 2005) (containing listings of "stupid linking policies" complete with links to the subject terms and conditions pages). Some of the entities that have objected to deep-linking to their sites include the Dallas Morning News, National Public Radio, Runners' World Magazine, KPMG International, the American Cancer Society, Shell Oil, Verizon Wireless, Motorola, Martindale-Hubbell, Harcourt School Publishers, and the City of Colorado Springs.

251 The practice of deep-linking has become pervasive on the World Wide Web as designers have utilized power of hypertext to direct users to particular pages within remote sites. The inability of web designers to engage in the practice of deep linking would have profound consequences for the utility of the Web as a research tool. In the event of any vagueness in terms of

Finally, with respect to news reporting, the act does not restrict:

> [a]ny person from making available in commerce information for the primary purpose of news reporting including news and sports gathering, dissemination, and comment, unless the information is time sensitive and has been gathered by a news reporting entity, and making available in commerce the information is part of *a consistent pattern engaged in for the purpose of direct competition*.[252]

The emphasized language in this section pertaining to a "consistent pattern engaged in for the purpose of direct competition" is the only instance where the bill approaches the misappropriation standard. This language should be generalized throughout the bill to narrow its reach only to such direct competitors. The inclusion of this language in just one limited section provides evidence of a Congressional intent that this reasonable standard not be applied in other situations. Herein lies the major failure of the bill if its drafters actually aspired to craft a true misappropriations measure.

In addition to these four permitted acts, section 5 sets forth additional exclusions for certain government information and for certain computer programs. With respect to government information, the act does not extend to "a database generated, gathered, organized, or maintained by a Federal, State, or local governmental entity, or by an employee or agent of such an entity, acting within the scope of such employment or agency."[253] The bill also would not apply to "a database generated, gathered, or maintained by an entity pursuant to and to the extent required by a Federal statute or regulation requiring such a database."[254]

However, these exemptions would not apply in the case of "a database gathered, organized, or maintained by an employee or agent of [a government entity] acting outside the scope of

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what type of linking could incur liability, the chilling effects on webpage development could be significant.

252 H.R. 108-3261, section 4(d) (emphasis added).

253 *Id.* § 5(a)(1)(A).

254 *Id.* § 5(a)(1)(B).

such employment or agency, or by a Federal, State, or local educational institution, or its employees or agents, in the course of engaging in education, research, or scholarship."[255] In these cases, the resulting database would be covered by the prohibitions of the bill, and research generated under the terms of a government grant or contract would be fully subject to the limitations on usage contained in the measure. Subjecting the data generated through federally subsidized research to the constraints of the bill is one of its crucial shortcomings.[256] The library associations argue that these exemptions for government information are wholly inadequate:

> The draft bill contains no exemption for legal information and the exemption concerning government information requires greater clarity. For example, the bill contains no provision to ensure that legal and government information will remain in the public domain. It is true that the government cannot protect its information, but someone else can assert that protection. If a federal research grantee that generates a database is not considered an 'agent' of the granting agency, the grantee could exercise proprietary control over the government-funded database. Similarly, a publisher that incorporates legal or government information into its database could prevent others from making available that information, even if it is not available from any other source. We urge the Committees to keep public domain information public and to ensure that legal and/or government information not be granted protection under this discussion draft bill unless that information is also permanently available from a public domain accessible website.[257]

The measure does not "extend to computer programs, including any computer program used in the manufacture, production, operation, or maintenance of a database, or to any

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255 *Id.* § 5(a)(2).

256 *See infra* notes 206-212 and accompanying text for a discussion of the same concerns raised with respect to similar language in H.R. 354 in the 106th Congress.

257 *Joint Library Associations Letter*, *supra* note 234.

element of a computer program necessary to its operation."[258] However, a database that is otherwise subject to protection "is not disqualified from such protection solely because it resides in a computer program, so long as the collection of information functions as a database within the meaning of this Act."[259]

While the bill contains a provision purporting to preempt state measures that prohibit or otherwise regulate conduct that is subject to the bill,"[260] this preemption clause is so substantially qualified so that various forms of database legislation may still be enacted by states.[261]

Section 7 provides for the usual remedies in the form of monetary damages,[262] and injunctive relief,[263] impoundment,[264] and costs and attorney's fees.[265] H.R. 3261 omits a section that

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258 H.R. 108-3261, § 5(b)(1).

259 *Id.* § 5(b)(2).

260 *Id.* § 6(b)(1).

261 Section 6(b)(2) provides that the pre-emption does not apply to "actions under State law against a person for taking actions that— (A)(i) disrupt the sources of data supply to a database; or (ii) substantially impair the perceived accuracy, currency, or completeness of data in a database by inaccurate, untimely, or incomplete replication and distribution of such data; and (B) do not involve the person making available in commerce the data from such database in competition with such database." This later clause leaves open a wide range of subject area for state regulation.

262 Subsection 7(c)(1) provides for actual damages and 7(c)(2) provides for discretionary treble damages.

263 Subsection 7(b) allows for temporary and permanent injunctions to prevent or restrain a violation or attempted violation of Section 3.

264 Under subsection 7(d), a court "may order the impounding, on such terms as it deems reasonable, of all copies of contents of a database made available in commerce or attempted to be made available in commerce potentially in violation of section 3, and of all masters, tapes, disks, diskettes, or other articles by means of which such copies may be reproduced." As part of a final judgment, the court may also order a remedial modification or destruction of all copies of contents of the violating database.

265 Subsection 7(e) permits the discretionary award of reasonable costs and attorney's fees to the prevailing party.

had appeared in the Discussion Draft that contained broad provisions for the issuance of subpoenas. This section would have permitted the issuance of a subpoena against a "covered entity" for the "identification of a person alleged to have violated section 3," [266] without any requirement of prior judicial review. Under the deleted provision, the clerk would be directed to issue the subpena so long as the application is in proper form.[267] "Upon receipt of the issued subpoena, the covered entity shall expeditiously disclose to the person who is injured by a violation of section 3 or the person authorized to act on that person's behalf the information required by the subpoena, notwithstanding any other provision of law."[268] The *Joint Library*

Such costs and fees are mandatory if the court determines that an action was brought or a defense was raised in bad faith.

266 Discussion Draft, § 7(h)(1). The request may be made by filing with the clerk "a proposed subpoena" (subsection 7(h)(2)(A)) along with "a sworn declaration to the effect that the purpose for which the subpoena is sought is to obtain the identity of a person alleged to have violated section 3 and that such information will only be used for the purpose of preventing a violation under section 3." § 7(h)(2)(B).

267 Discussion Draft, § 7(h)(4) provided: "If the proposed subpoena is in proper form and the accompanying declaration is properly executed, the clerk shall expeditiously issue and sign the proposed subpoena and return it to the requester for delivery to the covered entity."

268 Discussion Draft, § 7(h)(5). The range of "covered entities" is very broad, defined by Section 2(4) as a legal entity that is— (A) a telecommunications carrier engaged in the provision of a telecommunications service; (B) a person engaged in the business of providing an Internet access service; (C) a person engaged in the business of providing an Internet information location tool; and (D) a person similarly engaged in the transmission, storage, retrieval, hosting, formatting, or translation (or any combination thereof) of a communication made by another person, without selection or alteration of the content of the communication, except that such person's deletion of a particular communication or material made available in commerce by another person in violation of section 3 shall not constitute such selection or alteration of the content of the communication. The terms "Internet access service" and "internet information location tool" are further defined in subsections 2(10) and 2(11), respectively. Under these broad

Association Letter argued that the provisions were overbroad and lacked adequate safeguards against abuse:

> We believe that the subpoena provision in the draft database bill is an invitation to a flood of frivolous lawsuits by database owners on a fishing expedition for possible infringers. The provision provides for no judicial oversight and no finding of harm before the subpoena is issued - only that the court papers be completed properly and submitted to the clerk. A person requesting a subpoena under this bill does not even have to provide a statement that the person has a good faith belief that the use of the material is not authorized, such as is required by the Digital Millennium Copyright Act. And only the copyright owner or his agent can request a DMCA subpoena, while any person supposedly harmed by a violation could request a database subpoena.[269]

Covered entities are themselves subject to liability under the section 3, subject to certain limitations. A covered entity shall not be liable for a section 3 violation unless one of three conditions is met. First a covered entity may incur liability if "the person who made the database available in commerce in violation of section 3 is an officer, employee, or agent of the covered entity acting within the scope of the actor's duties or agency."[270] Second, a covered entity may incur liability if "an officer, employee, or agent of the covered entity, acting within the scope of the actor's duties or agency, actively directs or induces the act of making available in commerce in violation of section 3 by another person, or acts in concert with the person who made the database available in commerce in violation of section 3."[271] Third, a covered entity may incur liability if they receive a financial gain or benefit that is both directly attributable to the making available in commerce of the database in violation of section 3, and also is in excess of the ordinary compensation for the rendering of the services they

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definitions, non-profit educational institutions and libraries would be considered "covered entities" subject to the broad subpoena provisions.

269 *Joint Library Association Letter*, *supra* note 234.

270 H.R. 108-3261 § 7(i)(1).

271 *Id.* § 7(i)(2).

provided.[272] The broad liability faced by "covered entities" under this section only underlines the fragility of the purported exemption for non-profit institutions under section 4(b).[273]

The bill also includes provisions providing for oversight by the Patent and Trademark Office and by the Federal Trade Commission,[274] but there is no sunset provision contained in the bill. The bill also does not include any indication of the duration of the term of protection for a covered database, so it would likely be presumed as perpetual.

At first glance, H.R. 3261 appears to be a moderate measure compared to its predecessors such as H.R. 354. Styled as a "Misappropriations Act" in its title, the extraction and reutilization rights that had proven so controversial are eschewed in favour of a "making available in commerce" standard. Yet a thorough analysis of the bill demonstrates that the differences are more symbolic than real, and that the new measure poses most of the same problems that have been raised in reference to earlier bills. The broad scope of the making available right will extend to the conduct of end-users as well as the libraries and educational institutions that provide them with information resources, and the vague exemptions offered to these institutions will be of little practical value. In addition, as "covered entities," libraries and educational institutions should expect to incur the additional costs of responding to the wide range of subpoenas authorized by the bill seeking information about their patrons, students, and employees. In their initial assessment of the bill, the library associations reiterate the foundational point that there has been no evidence presented pointing to the need for further database legislation:

> We have yet to see any serious evidence of the need for legislation that provides additional protections to databases. Congress has been discussing database legislation since 1996, and in all that time, there has been little if any evidence that the database industry has faced uncertainty in the courts or has been harmed in the marketplace. There is no evidence that selected database

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272 *Id.* § 7(i)(3).

273 *Id.* § 4(b). *See also infra* notes 243-244 and accompanying text.

274 H.R. 108-3261 § 7(i)(2).

> producers have suffered any serious harm as a result of the kind of activity addressed in the current draft proposal. Indeed, the industry appears to be thriving.[275]

On October 16, 2003, the House Judiciary Committee's Subcommittee on the Courts, the Internet, and Intellectual Property approved an amended version of the measure by the vote of 11-4 and sent it to the full Judiciary Committee. The full Judiciary Committee approved the bill by a vote of 16-7 on January 21, 2004,[276] and also referred it to the House Committee on Energy and Commerce, which issued an adverse Report on March 11, 2004.[277] In addition to issuing an unfavourable report on H.R. 3261, members of the Energy and Commerce Committee have again proposed an alternative bill, sounding in misappropriations. H.R. 3872.[278] While the measure was reported out of the Committee on March 16, 2004,[279] it has not been brought to the House floor. Once again, competing measures from the Judiciary and Commerce Committees have resulted in an apparent deadlock similar to the situation in 2000 between H.R. 354 and 1858. With the adjournment of the 108th Congress in December 2004 without H.R. 3261 moving to the

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275 *Joint Library Association Letter*, *supra* note 234.

276 *See* H.R. REP. NO. 108-421 pt. I (2004), *available at* http://frwebgate.access.gpo.gov/cgi-bin/getdoc.cgi?dbname=108_cong_reports&docid=f:hr421p1.108.pdf) (last visited Mar. 31, 2005).

277 *See* H.R. REP. NO. 108-421, pt. II (2004), *available at* http://frwebgate.access.gpo.gov/cgi-bin/getdoc.cgi?dbname=108_cong_reports&docid=f:hr421p2.108.pdf) (last visited Mar. 31, 2005).

278 The Consumer Access to Information Act of 2004, introduced by Rep. Cliff Stearns on March 2, 2004 "prohibits the misappropriation of a database by classifying such misappropriation as an unfair method of competition and an unfair or deceptive act or practice in commerce under the Federal Trade Commission Act . . . [and] [e]xempts from liability under this Act the provider of an interactive computer service that makes available information provided by another content provider." Summary of H.R. 3872, *available at* http://thomas.loc.gov/cgi-bin/bdquery/z?d108:HR03872:@@@L&summ2=m&#summary (last visited Mar. 31, 2005).

279 *See* H.R. REP. NO. 108-437 (2004).

floor, the proponents of *sui generis* database legislation have once again failed to gain the necessary support to pass their proposed legislation.

IV. ASSESSING *SUI GENERIS* DATABASE LEGISLATION

A. ASSESSING THE PROPONENT'S ARGUMENTS: THE KASTENMEIER TEST

Sui generis database legislation has been on the Congressional agenda for eight years now, with no apparent resolution of the matter in sight. It is useful to reflect on the merits of the arguments advanced by its proponents in light of standards that have been applied in the past to arguments for new forms of statutory protection. In an often-cited article chronicling the enactment of the *Semiconductor Chip Protection Act of 1984*,[280] Robert Kastenmeier[281] and Michael Remington argued that "[i]n a constantly changing society... the legal system must be continually restructured to reflect larger changes that occur outside the law."[282] But they condition the exercise of this legislative power on the need to meet specific standards. They crafted a specific four-prong standard that Congress should apply before enacting any new intellectual property laws. Under this standard, the proponents of any new protectable interest must show that:

1) the interest can fit harmoniously within the existing legal framework without violating existing principles or basic concepts;[283]

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280 Pub. L. No. 98-620, tit. III, 98 Stat. 3335 (codified at 17 U.S.C. 901-914). This Act was considered a form of *sui generis* legislation as it added a new form of intellectual property protection to the statutes.

281 Kastenmeier was the Chairman of the House Committee on the Judiciary Subcommittee on Courts, Civil Liberties and the Administration of Justice (the predecessor to the Subcommittee on Courts and Intellectual Property now chaired by Rep. Coble.)

282 Robert W. Kastenmeier & Michael J. Remington, *The Semiconductor Chip Protection Act of 1984: A Swamp of Firm Ground?*, 70 MINN. L. REV. 417, 438 (1985).

283 *Id.* at 440.

2) the new interest must be explained with a reasonably clear and satisfactory definition; [284]

3) an honest analysis of all the costs and benefits has been presented;[285] and

4) given that additional protection to an interest will enrich or enhance the public domain, the aggregate public benefit should outweigh the proprietary gains.[286]

The case for *sui generis* database legislation does not pass muster under these standards. Extending copyright-type rules to facts and compilations departs from the originality requirement, a central component of the existing copyright framework. This departure from the originality requirement also raises questions about the constitutionality of the measure. Nor has the proposed new *sui generis* interest been defined with reasonable clarity. One of the recurring objections to this type of legislation has been the imprecise and broad nature of prohibiting the extraction of a "material portion" of a database as well as the seemingly boundless definition of "economic harm" to the owner of a database. As drafted, previously proposed legislation does not place the user of a database on reasonable notice of the limits of lawful activity. This problem would leave users to act at their peril or risk civil and criminal liability, a condition that is likely to chill the exercise of otherwise lawful activity.

Sui generis proponents have also failed to demonstrate the full costs of the proposed legislation. The legislative record is devoid of any significant policy analysis that attempts to show the full costs of restricting access to data. The most substantial piece of evidence proffered by the proponents to date has been the Tyson-Sherry Report[287] commissioned by Reed-Elsevier and the Thompson Corporation in support of H.R. 2652. But as Pamela Samuelson has argued, the Report itself is devoid of serious economic analysis, it is based on a misunderstanding of the law, and it overemphasizes the threat of the EC Directive:

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284 *Id.* at 441.
285 *Id.*
286 *Id.* at 440-41.
287 *See supra* note 80.

> First, it "reflects a substantial misunderstanding of some basic principles of intellectual property law and policy. Second, it significantly understates the harm to competition that an exclusive property rights regime to protect the contents of databases would likely produce. Third, it is almost entirely devoid of empirical data in support of its proposal to grant exclusive property rights in database contents . . . . Fourth, . . . the Tyson-Sherry report has rung a premature alarm about the need for Congressional action arising from the material reciprocity provision in the European Directive on the Legal Protection of Databases. Fifth, the Tyson-Sherry report does not meet the standard for sui generis intellectual property legislation articulated by former House Subcommittee Chair Robert Kastenmeier who shepherded the Semiconductor Chip Protection Act of 1984 through Congress.[288]

Samuelson concluded her rebuttal of the Tyson-Sherry Report by encouraging the Committee to "actively seek out comments on database legislation from a wide variety of American companies and industry associations, as well as scientific, educational, and research organizations, that would be affected by it, rather than relying principally on assertions of need from British and Canadian publishing giants, Reed Elsevier, Inc. and Thomson Corp., who paid for the Tyson-Sherry report, and their allies."[289]

The costs and unintended consequences of database legislation have been studied by the National Research Council[290] and discussed by various authors.[291] Stephen Maurer's identification of three negative unintended consequences of the *EU Database Directive*, excessive monopoly, disruption of data aggregation, and increased transactions costs,[292] exemplifies the type of extended policy analysis that needs to be incorporated into the policy making process itself. And the detailed commentary proffered by the participants in the 1999 NRC

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288 Samuelson, *supra* note 83.

289 *Id.*

290 *See supra* note 7.

291 *See* Reichman & Uhlir, *supra* note 8; Maurer, *supra* note 26.

292 Maurer, *supra* note 26.

Workshop and the resulting analysis in the NRC Report stand in stark contrast to the paucity of the evidence provided by the proponents. *Sui generis* proponents have failed to show that there will be a net aggregate public benefit through enactment of the proposed legislation. Their arguments about the broad public interest are thin; and as argued in the following section, they are merely rhetorical devices. They fail to address the three general areas of concern raised by Maurer: excessive monopoly, disruption of data aggregation, and increased transactions costs. In marking-up and reporting to the floor the legislation in the 105th, 106th , and 108th Congresses, the House Judiciary Committee failed to engage in the sort of sustained and serious policy analysis called for by Rep. Kastenmeier, the previous subcommittee chair.

B. PROPRIETARY DATABASE LEGISLATION AS AN OBSTACLE TO RESEARCH

In addition to failing to meet the burden of showing the need for *sui generis* legislation, the proponents fail to acknowledge the serious social costs of their proposals. To summarize the argument that *sui generis* database legislation would act as an obstacle to science and research, it is useful to return to Stephen Maurer's identification of three negative unintended consequences of the *EU Database Directive*; excessive monopoly, increased transactions costs, and interference with data aggregation.[293] The argument that new database restrictions would unduly fetter scientific and other research activities can be made on any of the three grounds, but it is strongest with respect to the interference with data aggregation.

The problem of excessive monopoly would make it more difficult for new players to enter the field, thereby solidifying the position of the established predominant firms. As Reichman and Uhlir point out, "[b]ecause many data providers are sole-source and an exclusive property right would greatly strengthen the legal and economic protection of these mini-monopolies, the proposed legislation seems likely to raise the costs of data

293 *Id.*

acquisitions to researchers and educators generally, not to mention other consumers."[294]

Yet even if monopoly power were adequately checked through heightened anti-trust and unfair competition law enforcement, the new database rights would still restrict access to and use of databases. The short run problem of monopoly control would still be significant. Even if a monopoly position were only temporary, the results would be significant, as the rapid pace of scientific research would nonetheless be slowed.

On the problem of transactions costs, Reichman and Uhlir caution that under a *sui generis* database regime, "[s]cientists and engineers will have to defray increased transactional and administrative costs engendered by the need to enforce the different legal restrictions on newly obtained data, to institute new administrative guidelines regulating institutional acquisitions and uses of such data, and by associated legal fees."[295] But the problem of increased transaction costs is most evident in the case where a database is derived from multiple contributors. While it could be possible to implement collective licensing arrangements that would ease the severity of transaction costs, and such arrangements could no doubt be facilitated by technological controls, the short-term implications of transaction costs are still sufficiently problematic to warrant concern. In a sense, the monopoly and transaction costs arguments are only a refraction of the contradictions underlying database protection. They are problems that are readily solvable within the existing framework of efficiency analysis, but such solutions do not address the underlying issue of the enclosure of previously common resources.

The problem of interference with data aggregation is more significant, and not as prone to longer-term palliatives. The need for database users to interact with and transform databases in the course of their research, and how the database rights would disrupt this pattern of usage has been discussed in Section I.

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294 Reichman & Uhlir, *supra* note 8, at 816.

295 *Id.* at 815. They add the observation that "[b]ecause universities and government agencies are inherently conservative, risk-averse institutions, they will err on the side of caution and place additional limits on what researchers and educators can do in acquiring and using data in order to avoid the possibility of costly litigation." *Id.*

Unlike the problems of monopoly or transactions costs, there is no feasible means to work around this problem. Once the contents of a database are enclosed through the application of *sui generis* proprietary extraction and reutilization rights, access and use are thereby limited. Defining the legal prohibition in terms of "making available in commerce" instead of as an extraction or reutilization right creates the same potential for enclosure. The problem for researchers is not simply the increased costs of paying for databases that were previously available at little or no cost. That problem could perhaps be ameliorated through increased funding or the reallocation of resources, although it is unlikely that purchasing power would actually keep pace. The real problem is much deeper, going to the ability to actually use the database to its highest potential, that is, in an interactive and transformative manner. Once data is placed in a proprietary database that is subject to the extraction, reutilization, or making available right, the data becomes, in a sense, tainted. The broad ability of the data to be used in productive ways has been dissolved by its new statutory protection. The user is reduced to a mere consumer of a product that may be accessed and read only on a pay-per basis. The former ability to reutilize the data, combine it with other data, and store it for later use is lost. Characterizing a measure as a *Misappropriations Act* with a broad "making available in commerce" right neither changes this dynamic nor mitigates the interference with the transformative uses of databases

An additional problem resulting from the creation of *sui generis* database rights is the phenomenon of crowding-out. There are two aspects to this problem. The first is that the private sector will resist efforts on the part of the public sector to offer products or services that compete with them. The second aspect is that *sui generis* database legislation will force non-profit database providers to emulate commercial models in order to survive. Both instances involve the creation of pressures against the creation and maintenance of publicly supported or non-profit databases that are openly accessible to the public.

First, as they have repeatedly demonstrated, the private database industry is not willing to "peacefully co-exist" with the public provision or support of common pool data resources. The database industry has consistently taken the position that the government should not be acting in competition with the offerings of the private sector. A position statement of the

Software and Information Industry Association requesting that the U.S. Department of Energy discontinue its provision of PubSCIENCE, a popular Internet portal, provides a case in point:

> The Department of Energy (DOE), through the Office of Scientific and Technical Information (OSTI) Web site, provides free, worldwide access to an extensive array of scientific and technical information. . . .
>
> PubSCIENCE, one of ten Internet-based information initiatives offered by OSTI, is of great concern to the information industry because it: (1) enters into commerce, and (2) provides access to a database of bibliographic information that duplicates and competes with databases made available by private sector publishers.
>
> PubSCIENCE facilitates a transaction between the user and the publisher for access to full text of information, a service similar to many products that were extant prior to the development of PubSCIENCE. These products were, and continue to be offered by multiple organizations as BIOSIS, Chemical Abstracts Services, Cambridge Scientific Abstracts, Reed Elsevier, the Institute for Scientific Information and the Institution of Electrical Engineers. However, the competition provided by PubSCIENCE makes it increasingly difficult for these private-sector companies (including both for-profit and not-for-profit) to continue offering their products. . .
>
> Current law and policies mandate agencies to take into consideration products and services already being provided within the private sector, and to utilize all dissemination channels, including the private sector, to perform information dissemination functions. SIIA urges DOE to review the OSTI Internet information products and resources, and to make changes accordingly to bring these efforts into compliance with existing policy. *Specifically, we request that PubSCIENCE be discontinued, and that other DOE products are*

> *reviewed to ensure that they do not provide similar unnecessary duplication of private sector activity*. (emphasis added).[296]

In August 2002, the Department of Energy responded by proposing to discontinue the service. Their statement emphasized the incompatibility between public and private provision of portal services:

> Since its inception in 1999, PubSCIENCE has provided researchers and science-attentive citizens access to bibliographic records of peer-reviewed journal literature relating to DOE-supported work, addressing the need for a searchable gateway for the Department's Web patrons. Based on an extensive public/private sector collaboration, PubSCIENCE has covered journals of participating science publishers, including hyperlinks to the full text on publishers' servers.
>
> More recently, private sector information products have emerged that freely offer bibliographic records to Web patrons. Provider systems such as Scirus and Infotrieve have progressively increased the availability of freely searchable citations, and this trend is anticipated to continue. A recent comparison of the content between PubSCIENCE and Scirus and Infotrieve showed that 90% of the journal literature in the scope of PubSCIENCE was covered by these two products. Taken as a whole,

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296 Software and Information Industry Association, *Clearing Up the Myths About PubSCIENCE* (2001), *available at* http://www.siia.net/sharedcontent/govt/issues/ip/07-01pubscience.html (last visited Mar. 31, 2005) According to text on its former website, since discontinued: "PubSCIENCE provides users the capability to search across a large compendium of citations including abstracts of peer reviewed journal literature with a focus on the physical sciences and other disciplines of concern to the Department of Energy (DOE). PubSCIENCE is another tool developed by DOE's Office of Scientific and Technical Information and made available to the American public in partnership with the U.S. Government Printing Office (GPO)." *Available at* http://pubsci.osti.gov/ (last visited Aug. 20, 2002, site since discontinued).

> they provide coverage of information for DOE Web patrons.
>
> As a result of these findings, *DOE is hereby proposing to discontinue PubSCIENCE.*[297]

This development represents a marked change of DOE policy from when PubSCIENCE was unveiled at a ribbon-cutting ceremony in DOE's office in October 1999. Three months after the opening, Walter Warnick, then director of DOE's Office of Scientific and Technical Information made the following comments:

> Today, almost all basic research is funded by the Federal government. But what good is basic research unless the resulting information is accessible and used? This is the driving factor in our push to make STI more accessible. A vision has emerged of the great potential that advanced digital technologies offer. By tapping into the Information Age, we can place STI right at the desktop, ready for use by DOE scientists and program managers to fuel the Department's science mission. Secretary Richardson stated, 'For science to rapidly advance at the frontiers, it must be open. And shared knowledge is the enabler of scientific progress.' . . .
>
> PubSCIENCE is the culmination of an agency's lifetime tradition of scientific and technical information dissemination that now is bringing information to the desktop. It was developed to facilitate searching and accessing peer-reviewed journal literature in the physical sciences and other energy-related disciplines to meet the researcher's growing need for scientific information at the desktop.[298]

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297 *Notice*, *available at* http://pubsci.osti.gov/notice.html (last visited August 20, 2002, site since discontinued) (emphasis added). It is worth noting that Scirus is owned by Reed-Elsevier.

298 Walter Warnick, *PubSCIENCE: A Cutting-Edge Component for a National Digital Library,* Presentation at

Later in the presentation, Warnick spoke of his agency's vision for expanding the portal and ultimately of plans for a National Digital Library that "not only fosters the dissemination of information, but its preservation as well. It would be the surest way to promote permanent public access to government information. Additionally, the term National Digital Library announces to the world that the agency has information resources of which it is proud."[299] But within a year, plans were being made to dismantle the project. In June 2001, the House Appropriations Committee targeted PubSCIENCE for funding cuts,[300] and Robin Peek reported that the proposal to cut PubSCIENCE's funding resulted from lobbying efforts by the Software and Information Industry Association (SIIA).[301] She added, "[i]t's expected that SIIA, which represents member companies such as Reed Elsevier and ISI, will next go after the National Library of Medicine's PubMed. Although it seems unlikely that the group could dismantle the widely supported PubMed, it could attempt to limit its growth."[302]

The second aspect to the crowding-out problem is the effect that *sui generis* database legislation could have on other non-profit database providers. Once *sui generis* database rights are in place, it may be increasingly difficult for non-profits to maintain open access databases, and the danger is that they may be induced to adopt a mimetic response to commercialization. Stephen Maurer recognized this problem as an additional potential consequence of database legislation:

National Federation of Abstracting & Information Services, Annual Conference, February 21, 2000, Philadelphia, PA, *available at* http://www.osti.gov/speeches/nfais.html (last visited Mar. 31, 2005).

299 *Id.*

300 ALAWON: American Library Association Washington Office Newsline, Volume 10, Number 53 (July 5, 2001) *available at* http://www.lib.msu.edu/dickso15/ALAWON.htm (last visited Mar. 31, 2005).

301 Robin Peek, *PubSCIENCE Under Threat*, *Information Today* (July 9, 2001) *available at* http://www.infotoday.com/newsbreaks/nb010709-1.htm (last visited Mar. 31, 2005).

302 *Id.*

> Current legislative proposals are designed to encourage commercial production. These incentives cannot be limited to traditional entrepreneurs. This means that new legislation will *also* encourage nonprofit and volunteer databases to go commercial. Over time, this could lead to a kind of avalanche in which new databases could no longer afford to buy startup data except by going commercial themselves.[303]

Proprietary database legislation would not merely create inconveniences for researchers, or marginally increase the cost of research activities. There is ample evidence to assert that the changes brought about by *sui generis* database legislation would not simply be quantitative or marginal; they would represent a qualitative shift in how the scientific and research enterprises would function.

Changes in intellectual property laws, like other changes in laws governing the ordering of social relationships, do not arise in a vacuum but are instead embedded in an historical, political, social and economic context. The perspective that the *Feist* decision, the *EU Database Directive*, and technological change have provided the impetus for the drive to enact *sui generis* database legislation is a fundamentally sound description. But it presents an incomplete analysis as there are additional processes at work under the surface. The drive towards *sui generis* database legislation is a component of a broader strategy to develop an information policy regime that construes information and information technology in a manner compatible with the logic of commodification. The proponents of *sui generis* database legislation adopt an approach to the construction of information that emphasizes the quantifiable aspect of data. The user of information resources becomes a passive consumer, no longer able to interact with the data, change it, add to it, or to engage in any number of transformative activities with it. The qualitative aspects of the utilization of data, that is how the data interacts with other

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303 Stephen M. Maurer, *Coping with Change: Intellectual Property Rights, New Legislation, and the Human Mutation Database Initiative*, 15 HUMAN MUTATION 22, 25. (2000) (citations omitted).

information resources and people in the process of producing new knowledge, is marginalized.[304]

Sui generis proponents implicitly adopt an instrumentalist theory[305] of technology and their arguments often lapse into a form of technological determinism.[306] In the process of urging passage of their legislation, they promote the idea that technological change is an autonomous and

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304 *See* Michael K. Buckland, *Information as Thing*, 42 JOURNAL OF THE AMERICAN SOCIETY FOR INFORMATION SCIENCE 351 (1991) (characterizing three aspects of information as information as thing, information as process, and information as knowledge). To use Buckland's terminology, *sui generis* proponents understand and promote "information as thing," but not "information as process," and certainly not "information as knowledge." And their construction of "information as thing" is limited to a particular type of thing, that is, a commodity capable of exchange on the market.

305 *See* ANDREW FEENBERG, CRITICAL THEORY OF TECHNOLOGY (1991). Feenberg describes the *instrumental theory of technology* in which technology, as an instrumental tool, is devoid of intrinsic evaluative content; it can be used for whatever ends desired by the user. Feenberg notes that under the instrumental theory, an unreserved commitment to the employment of a particular technology is the typical response if it suits an instrumental purpose. If someone takes exception to the employment of a particular technology on moral or ethical grounds, it will be, so the instrumentalist argument goes, at the price of reduced efficiency. *Id.* at 6. In contrast, a normative theory views technology as a reflection of other social, cultural, economic and political relations. Rather than privilege technology as an independent determinant of other social processes, normative theorists see it as but one of several mutually dependent factors that influence social change. One's viewpoint on the question concerning the neutrality of technology is directly relevant to the ongoing discourse surrounding information policy. The question of design of technological systems cannot be divorced from their political, economic and social effects.

306 Technological determinism is a viewpoint that sees information technology not only as an important enabling factor for social, economic and political transformations, but as the crucial independent variable that acts on other processes, structures and institutions to cause change.

independent variable, one that only needs to be followed by an appropriate policy response. They argue that advances in information technology enable increased "piracy" of digital goods, thereby warranting a change in the law to keep up with technology. Such claims have been widely exaggerated, and the resulting legislation generally overshoots the goal of preventing unfair competition. Advances in information technology are so rapid, under this position, that society has entered a qualitatively new type of era, one that demands the implementation of new "protections" for intellectual property as a matter of urgency. The possibility that advances in information technology might actually *lessen* the need for such new measures are not acknowledged in the policy discourse.

The drive toward *sui generis* database legislation, as a particular instance of the general expansionary tendency of contemporary intellectual property policy is misdirected. Speaking to copyright policy in general, Jessica Litman made the point that an expansion of current copyright rules in the direction of greater protection serves the interests of current market leaders and makes it more difficult for new players to emerge.[307] In contrast, Litman asked how the question of copyright policy might be approached if viewed from the point of view of encouraging new technology and innovation. In such a case, a policymaker would "recognize that copyright shelters and exemptions have, historically, encouraged rapid investment and growth in new media of expression."[308] Her general observations are equally applicable to the assessment of *sui generis* database legislation. If the goal of public policy were to protect the position of the dominant commercial database producers at the expense of newcomers, then *sui generis* legislation would be an appropriate response, and such a result is exactly what the dominant database producers seek.

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307 JESSICA LITMAN, DIGITAL COPYRIGHT 172 (2001) ("If our goal in reforming current law were to make things more difficult for emerging technology, in order to protect current leaders against potential competition from purveyors of new media, then cleaving to old rules would be a satisfactory, if temporary, solution. . . . It would probably delay the moment at which the current generation of dominant players in information and entertainment markets were succeeded by a new generation of dominant players in different information and entertainment market.").

308 *Id.*

As information and knowledge-based resources constitute an expanding portion of society's productive forces, efforts to increase the proprietization of these forces at the expense of their open use to scientists, researchers, educators, and librarians, acts as an obstacle on the further development of the research enterprise. The centrality of information in the automated production process helps explain the pressures for an expansionary intellectual property regime, particularly in the area of forms of information that are, in Teresa Morris-Suzuki's words, "churned out by corporate enterprises almost as routinely and monotonously as cars flowing from an assembly line."[309] Such industrial-type information is found in the form of raw data contained in databases, the very type of information that existing copyright law, with its requirement of originality, does *not* protect. Morris-Suzuki highlights the importance of intellectual property law to the process of production. She notes that the development of copyright and patent laws "were crucial because the special properties of knowledge (its lack of material substance; the ease with which it can be copied and transmitted) mean that it can only acquire exchange value where institutional arrangements confer a degree of monopoly power on its owner."[310]

The centrality of knowledge in the production process is also emphasized by David Teece who describes the "development and astute deployment and utilization of intangible assets, of which knowledge, competence, and intellectual property are the most significant" as the new source of competitive differentiation and basis for wealth creation.[311]

Information resources that are internal to a firm, including databases, may be protected through trade secret law. But one of the requirements for trade secret protection is that the firm takes reasonable steps to maintain the confidentiality of the information itself. In the case of trade secrets, the protected information presents a use-value for the firm, that is, the information may be employed within the production process. But the requirement of confidentiality, or non-disclosure,

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309 Tessa Morris-Suzuki, *Robots and Capitalism*, *in* CUTTING EDGE: TECHNOLOGY, INFORMATION CAPITALISM AND SOCIAL REVOLUTION 13, 19 (Jim Davis et al. eds., 1997).

310 *Id.* at 16-17.

311 DAVID TEECE, MANAGING INTELLECTUAL CAPITAL: ORGANIZATIONAL, STRATEGIC AND POLICY DIMENSIONS 3 (2000).

removes the protected information from the realm of free-exchange, thereby compromising its potential marketability as a separate commodity. While trade secrets have the potential of unlimited duration, they are fragile interests with significant limitations on transferability as well as disclosure through publication.[312] Patent protection may be available for certain processes, but like trade secrets, there are serious limitations on this form of protection. Patent protection would not apply to the data or information itself. And the inability of copyright law, with its requirement of originality, to reach individual data elements has been discussed at length.

Hence the move towards *sui generis* database legislation.[313] Unlike trade secret protection, database legislation

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312 The firm holding a trade secret may disclose the secret to persons outside the firm if the external party is somehow connected to the production or distribution process, as in the case of a joint venture or partnership. However, such a sharing of information would be wrapped tightly in a non-disclosure agreement. In order for the information itself to become fully marketable, the trade secret status would be materially compromised. The firm may still take the value of the trade secret into account for purposes of stating its assets and the existing rights may be transferred to another firm. In addition, if the trade secret is properly protected, it could form the basis for a subsequent patent application, assuming all of the other requirements of patentability are present. One such limitation on patentability would be the subsequent disclosure (either through published research or within the specifications of a patent) by an unrelated party of the same information independently derived.

313 Other areas of intellectual property are implicated here as well. Stronger enforcement of industrial trade secrets and an expanded scope of patent protection for processes containing elements of computer programs are two examples. But as the previous discussion illustrates, these other intellectual property devises will either not reach the data elements themselves, or do so in a way that hampers their ability to be exchanged. Also, this analysis, which centers on the production process, should not detract from the fact that database producers also need to extract as much value from payments from consumers as they possibly can. Extending the statutory copyright monopoly to databases in a manner that reaches the end-user performs this function as well.

enhances the ability of information to be exchanged on the market, separate and apart from its own internal utility. But not all branches of the "high-tech" industry stand in the same relationship to the information commodity as a component of the production process. In respect to the distinction between databases as an end consumer product and as an intermediate component in the production process, Morris-Suzuki is referring to the second instance. A high-tech firm that utilizes data as a component in its own production process would be likely to resist database legislation as part of its constant effort to keep the costs of capital down.

This divergence between the particular interests of different firms helps explain why different sectors of the information technology industries have taken contradictory positions on the database legislation issue. In the diffuse information technology industry, for one company, the database is viewed as something of intrinsic value because it presents some utility in the production process. But for another, it is viewed primarily as an object of commerce, produced not for the satisfaction of an internal need, but for the purpose of exchange on the market.

V. CONCLUSION

The enactment of *sui generis* database legislation has now been on the policy agenda in the United States, Europe and internationally, for well over a decade. Despite early adoption of a database extraction right in the European Union, efforts to enact a similar measure in the United States and through a separate WIPO treaty have ground to a standstill. In the United States, it seems as if the protagonists have had their positions incorporated as standing policy of two Committees in the House. The House Judiciary Committee and the House Energy and Commerce Committee both claim database legislation as part of their jurisdiction, and their positions have become consistent, entrenched, and indeed predictable. While the Judiciary Committee favors a rights based approach, albeit with a misappropriations twist to various degrees, the Energy and Commerce Committee favors a true misappropriations approach that would not reach the conduct of end users and institutions such as libraries and universities. In a similar manner, the issue seems joined at the WIPO Copyright Committee where the European Union and the United States persistently press for

consideration of a new WIPO Database Treaty, while a growing bloc of developing countries are just as steadfast in their opposition to a new diplomatic conference on the matter.

As the burden to change the status quo rests with the proponents, perhaps such institutionally entrenched deadlocks can be thought to favor the opponents. Yet, there is something troubling about the persistent efforts of the proponents. They only need to win once; the opponents need to defeat measures each and every time they are advanced. In the courts, there is a definite end to litigation at some point in time, but there is no such limitation in the legislative or diplomatic arenas. One can only expect that a revised version of *sui generis* database legislation will appear again in the 109th Congress and that the matter will be continuously pressed through WIPO channels. But as the evidence mounts that such legislation will have a deleterious affect on scientific research, as database vendors continue to prosper even without *sui generis* legislation, and as other pressing issues claim the attention of intellectual property policy makers, it appears as if there is no end in sight to the stalemate.