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Life After Feist: Facts, the First Amendment, and the Copyright Status of Automated Databases

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NOTES

LIFE AFTER *FEIST*: FACTS, THE FIRST AMENDMENT, AND THE COPYRIGHT STATUS OF AUTOMATED DATABASES

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INTRODUCTION

In *Feist Publications, Inc. v. Rural Telephone Service Co.*,[1] the Supreme Court took time from deliberating more weighty constitutional matters to tend to some statutory housekeeping. Specifically, the Court set out to clean up the Copyright Act of 1976 by clearing up the long-standing confusion surrounding the copyright status of directories, databases,[2] and other factual compilations. This confusion stems from two apparently contradictory provisions in United States copyright law. On one hand, the law permits the copyrighting of factual compilations.[3] On the other hand, the law prohibits the copyrighting of facts—including the facts that comprise factual compilations.[4]

The *Feist* Court attempted to resolve this contradiction by showing that there really was no contradiction. Writing for a unanimous Court, Justice O'Connor posited that copyright law actually "treats facts and factual compilations in a wholly consistent manner."[5] To O'Connor and the Court, the key to this consistency is the concept of *originality*. Pointing to originality in creation and expression as the "*sine qua non* of copy-

1. 499 U.S. —, 111 S. Ct. 1282 (1991).

2. This Comment discusses the copyright status of automated databases. The U.S. Copyright Office defines an automated database as "a body of facts, data, or other information assembled into an organized format suitable for use in a computer." U.S. Copyright Office, Library of Congress, Circular 65, Copyright Registration for Automated Databases 2 (1987) [hereinafter Circular 65]. More specifically, much of the discussion that follows focuses on "on-line" automated databases—compilations of data that are stored on one or more central "host" computers. Subscribers to on-line automated database services communicate with the host computer through a terminal or personal computer that is connected to the host through conventional telephone lines or dedicated data cables. LEXIS and WESTLAW, the two most popular computerized legal information services, are examples of on-line automated databases.

3. The Copyright Act of 1976 specifies that "[t]he subject matter of copyright . . . includes compilations." 17 U.S.C. § 103(a) (1988). The Copyright Act defines "compilation" as "a work formed by the collection and assembling of preexisting material or of data." *Id.* § 101. Interpreting the Act, the Supreme Court has concluded that "it is beyond dispute that compilations of facts are within the subject matter of copyright." *Feist*, 111 S. Ct. at 1287.

4. *See* Harper & Row, Publishers, Inc. v. Nation Enters., 471 U.S. 539, 556 (1985) (citing 17 U.S.C. § 102(b)).

5. Feist Publications, Inc. v. Rural Tel. Serv. Co., 111 S. Ct. 1282, 1290 (1991). Although *Feist* was a unanimous decision, Justice Blackmun concurred only in the judgment. He did not file a separate opinion.

right,"[6] Justice O'Connor noted that "copyright protection may extend only to those components of a work that are original to the author."[7] It follows, then, that facts may not be copyrighted, because "[f]acts, whether alone or as part of a compilation, are not original"[8] creations of the author. However, a compilation containing uncopyrightable facts can be copyrighted "if it features an original selection or arrangement of facts," but the copyright protection is "limited to the particular selection or arrangement. In no event may copyright extend to the facts themselves."[9]

Under these guidelines, then, the test of whether a database, directory, or other factual compilation qualifies for copyright protection is whether the author or creator has displayed sufficient originality in selecting and arranging the facts that comprise the compilation. If the selection or arrangement is sufficiently original, the author can copyright the work as a whole. As the Supreme Court was careful to point out, however, the copyright on the whole work will not "extend to the facts themselves."[10] As a result, although the authors of copyrighted compilations can prevent others from copying their original selection or arrangement of facts, "a subsequent compiler remains free to use the facts [themselves] . . . to aid in preparing a competing work, so long as the competing work does not feature the same selection and arrangement."[11]

In *Feist*, the Court found that the compilation in question—a white pages directory published by Rural Telephone Service—failed the originality test. First, the Court determined that the raw data contained in the directory did not satisfy the originality requirement, since the list of telephone subscribers and their telephone numbers did not " 'owe its origin' " to Rural.[12] Second, the Court found that because Rural simply alphabetized the entire list of telephone subscribers, its selection and arrangement of the data lacked the "modicum of creativity necessary to transform mere selection into copyrightable expression."[13] In the Court's view, this absence of copyright protection for Rural's telephone directory left Feist Publications free to do what it did—to copy the subscriber names and telephone numbers from Rural's white pages in creating its own, competing directory.

If the impact of *Feist* was limited to the world of telephone directories, this case might seem like "no more than . . . [a] row of no importance."[14]

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6. *Id.* at 1287.
7. *Id.* at 1289.
8. *Id.* at 1290.
9. *Id.*
10. *Id.*
11. *Id.* at 1289.
12. *Id.* at 1296 (quoting Burrow-Giles Lithographic Co. v. Sarony, 111 U.S. 53, 58 (1884)).
13. *Id.* at 1296.
14. Jeweler's Circular Publishing Co. v. Keystone Publishing Co., 281 F. 83, 97 (2d Cir.) (Hough, J., dissenting), *cert. denied*, 259 U.S. 581 (1922).

In truth, however, *Feist* has very direct and important implications for a critical new segment of the United States economy—the electronic information industry.[15] Through *Feist*, the Supreme Court made clear what many members of the information industry had already feared—that copyright law affords them little protection from "second comers" who would filch facts from existing databases to build competitive information services. This realization has sent information providers scrambling to find other ways to secure their database services.[16] It has also left many legal scholars and practitioners wondering whether the current copyright law provides adequate protection and incentive to an industry that promises to play an increasingly important role in furthering the "Progress of Science and useful Arts"[17]—the fundamental constitutional goal that U.S. copyright law was intended to promote.[18]

This Comment begins with a review of the historical goals of United States copyright law and the interaction between copyright law and the first amendment. Part I also discusses the varied, often contradictory judicial efforts at defining the copyright status of factual compilations that culminated in *Feist*. Part II analyzes the special challenges that automated databases pose to traditional conceptions of copyright. Part III examines life after *Feist* and options for developing a new copyright framework that assures both adequate protection for the information industry and adequate access to information for the American public. Finally, Part IV recommends two legislative strategies through which Congress might achieve this goal.

I. COPYRIGHT AND THE FIRST AMENDMENT: INFORMATION, INCENTIVE, AND THE FREE MARKET OF IDEAS

The first amendment and copyright often seem to make for uneasy constitutional bedfellows. On one hand, by guaranteeing freedom of speech and a free press, the first amendment promotes a "free market in ideas" through which members of the public can gain ready access to the knowledge needed to function as fully informed citizens in a democratic society.[19] On the other hand, by granting to authors "the exclusive

15. For an overview of the information industry, see U.S. Congress Office of Technology Assessment, Intellectual Property Rights in an Age of Electronics and Information 157-84 (1986) [hereinafter OTA Report].

16. *See Facts are Not Copyrightable*, 4 Software L. Bull. 73, 79 (May 1991).

17. U.S. Const. art. I, § 8, cl. 8.

18. For a pre-*Feist* analysis of this issue, see Note, *Copyright and Computer Databases: Is Traditional Compilation Law Adequate?*, 65 Tex. L. Rev. 993, 1019-26 (1987) [hereinafter *Copyright and Computer Databases*].

19. For a particularly literate and lucid discussion of this "free market" approach to free expression, see Abrams v. United States, 250 U.S. 616, 628-31 (1919) (Holmes, J., dissenting). *See also* Virginia State Bd. of Pharmacy v. Virginia Citizens Consumer Council, 425 U.S. 748, 763-64 (1976) ("free flow of commercial information" to public protected by first amendment); Lamont v. Postmaster Gen., 381 U.S. 301, 306-07 (1965) (first amendment right to receive information and ideas).

Right to their respective Writings,"[20] copyright places restrictions on this free flow of information. As one observer has noted, this "tension between copyright law and the first amendment's protection of free exchange of ideas is particularly acute in the area of factual compilations, which involve by their very nature public domain facts whose free dissemination is constitutionally protected."[21]

A. *Copyright, The First Amendment, and Public Policy*

Article I, Section 8 of the United States Constitution grants Congress the power "[t]o promote the Progress of Science and useful Arts, by securing for limited Times to Authors and Inventors the exclusive Right to their respective Writings and Discoveries."[22] As this language suggests, the framers of the Constitution saw copyright as an incentive plan that would benefit both authors and society. By granting authors the right to own and profit from their writings, copyright legislation would encourage authors to produce original works. By producing such works, authors would in turn confer a benefit on society by contributing, through their works, to the "Progress of Science and useful Arts."[23]

Underlying this incentive approach to copyright is the private enterprise, natural-law notion that authors, like all producers of goods, should own and control the fruits of their labors.[24] Copyright law provides authors with this opportunity by granting them the exclusive right to reproduce their works, to distribute copies, and to prepare derivative works.[25] Of course, these ownership rights also give authors the right *not* to distribute copies of their writings—a right which, if exercised, would work to undercut the public benefit that copyright law is intended to promote. However, because dissemination is the primary means through which authors profit from the works, the incentive *to* disseminate is likely to prove the more compelling force for most authors.

On first review, these basic provisions of copyright law do not appear to conflict with the first amendment ideal of a free market of ideas. In fact, by providing incentive for authors to create works that advance the "Progress of Science and useful Arts,"[26] copyright law would seem to promote the "advance[ment of] knowledge and discover[y of] truth"[27]—a goal that has been identified as one of the four basic values that under-

20. U.S. Const. art. I, § 8, cl. 8.

21. Haungs, *Copyright of Factual Compilations: Public Policy and the First Amendment*, 23 Colum. J.L. & Soc. Probs. 347, 364 (1990).

22. U.S. Const. art. I, § 8, cl. 8.

23. *Id.*

24. *See* Denicola, *Copyright in Collections of Facts: A Theory for the Protection of Nonfiction Literary Works*, 81 Colum. L. Rev. 516, 519 (1981).

25. 17 U.S.C. § 106 (1988).

26. U.S. Const. art. I, § 8, cl. 8.

27. Emerson, *Toward a General Theory of the First Amendment*, 72 Yale L.J. 877, 881 (1963).

lie the first amendment.[28] The conflict, when it does appear, occurs when the ownership rights that copyright grants to authors as an incentive to produce works become a barrier to subsequent authors who seek to contribute, through their own works, to the "advancement of knowledge and discovery of truth." The Supreme Court considered this conflict in *Sony Corp. of America v. Universal City Studios, Inc.*,[29] concluding that any judicial effort to interpret the scope of copyright "involves a difficult balance between the interests of authors . . . in the control and exploitation of their writings . . . on the one hand, and society's competing interest in the free flow of ideas, information, and commerce on the other hand."[30] In other words, by granting authors exclusive ownership rights in their works, copyright can also create the danger that authors might use these rights to monopolize the free market of ideas.

To reduce this risk, copyright law places several restrictions on an author's ownership rights in his or her works. First, the law limits an author's ownership interest to a defined period of time—currently the author's life plus 50 years for most works.[31] At the end of this term, a copyrighted work falls into the public domain, and others are free to copy it and to copy from it. Second, in certain limited circumstances, copyright law permits the "fair use" of copyrighted material without requiring the user to obtain permission from the author.[32] Third, and most

28. The other basic first amendment values identified by Professor Emerson are: individual self-fulfillment through the right to develop and express one's own beliefs and opinions, informed public participation in social and political decision making, and maintaining a balance between change and stability in a democratic society. *See id.* at 878-79; Haungs, *supra* note 21, at 365.

29. 464 U.S. 417 (1984).

30. *Id.* at 429.

31. The copyright term is the author's life plus 50 years for works created by individual authors. *See* 17 U.S.C. § 302(a) (1988). For works by joint authors, the term extends for the life of the last surviving author plus 50 years. *See id.* § 302(b). For anonymous works, pseudonymous works, and works made for hire, copyright extends for 75 years from the year of first publication or 100 years from the creation of the work, whichever expires first. *See id.* § 302(c). The Copyright Act of 1976 defines "work made for hire" as a "work prepared by an employee within the scope of his or her employment" or a "work specially ordered or commissioned for use as a contribution to a collective work, as a part of a motion picture or other audiovisual work, as a translation, as a supplementary work, as a compilation, as an instructional text, as a test, as answer material for a test, or as an atlas, if the parties expressly agree in a written instrument signed by them that the work shall be considered a work made for hire." *See id.* § 101.

32. Section 107 of the Copyright Act of 1976 sets out four factors that determine whether an unauthorized use of a copyrighted work constitutes "fair use." Those factors are:

> (1) the purpose and character of the use, including whether such use is of a commercial nature or is for nonprofit educational purposes;
> (2) the nature of the copyrighted work;
> (3) the amount and substantiality of the portion used in relation to the copyrighted work as a whole; and
> (4) the effect of the use upon the potential market for or value of the copyrighted work.

17 U.S.C. § 107 (1988). Applying these guidelines, an unauthorized copying from a

important for this discussion, the law limits the subject matter of copyright, drawing a distinction between the ideas and information contained in a work and "the particular form or collocation of words in which the writer has communicated"[33] that information. As examined more fully below, courts have concluded that the latter is appropriate subject matter for copyright, while the former is not.

B. *Originality and the Copyright Status of Facts*

In *Feist*, Justice O'Connor identified originality as the "*sine qua non* of copyright."[34] In doing so, she followed a long line of Supreme Court decisions that have limited copyright protection to the "original intellectual conceptions of the author."[35] As these holdings have established, "[o]riginality is a constitutional requirement."[36] Article I, section 8, clause 8 of the Constitution authorizes Congress to grant "Authors" the exclusive right to their "Writings." In an 1884 decision, the Supreme Court defined "author" as " 'he to whom anything owes its origin; originator; maker.' "[37] In an 1879 decision, the Court construed "writings" to mean "only such [works] as are *original*, and are founded in the creative powers of the mind."[38] The Supreme Court has held to these definitions ever since, insisting that to qualify for copyright protection, "a work must be original to the author"[39] and that "copyright protection may extend only to those components of a work that are original."[40]

To be sure, even though the Supreme Court insists that works must be original to receive copyright protection, "the requisite level of creativity is extremely low,"[41] and most creative works and components of creative works "make the grade quite easily."[42] However, one type of work does not make the grade so easily—those works that consist primarily or exclusively of factual information. This is because facts are not "original" to an author, in the sense that "facts do not owe their origin to an act of

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copyrighted work stands the best chance of being considered a "fair use" if the use is for educational or other nonprofit purposes, if the work being copied is a reference or other non-fiction work, if the use involves copying a relatively small portion of the work, and if the use has little or no effect on the potential market for the copyrighted work.

33. International News Serv. v. Associated Press, 248 U.S. 215, 234 (1918).

34. Feist Publications, Inc. v. Rural Tel. Serv. Co., 111 S. Ct. 1282, 1287 (1991).

35. Burrow-Giles Lithographic Co. v. Sarony, 111 U.S. 53, 58-60 (1884). *Cf.* Goldstein v. California, 412 U.S. 546, 561-62 (1973) (interpreting "author" as "originator"); International News Serv. v. Associated Press, 248 U.S. 215, 234 (1918) (copyright protection not available to factual, unoriginal elements of newspaper article); The Trade-Mark Cases, 100 U.S. 82, 94 (1879) ("originality is required" for work to qualify as copyrightable expression).

36. *Feist*, 111 S. Ct. at 1288.

37. *Burrow-Giles*, 111 U.S. at 57-58.

38. The Trade-Mark Cases, 100 U.S. 82, 94 (1879) (emphasis in original).

39. Feist Publications, Inc. v. Rural Tel. Serv. Co., 111 S. Ct. 1282, 1287 (1991).

40. *Id.* at 1289.

41. *Id.* at 1287.

42. *Id.*

authorship."[43] In other words, an author does not create or originate facts—he or she "merely discover[s their] existence."[44] Because facts are not original to authors, they are outside the scope of copyright. The Supreme Court made this clear in *Harper & Row, Publishers, Inc. v. Nation Enterprises*,[45] stating emphatically that "[n]o author may copyright his ideas or the facts he narrates."[46]

There is a "pragmatic justification for [this] refusal to recognize a property interest in individual facts"[47]—a justification rooted in first amendment concerns for the free trade of ideas and the "advanc[ement of] knowledge and discover[y of] truth."[48] Although granting authors the right to copyright statements of fact would certainly provide incentive to create factual works, conferring this right would also allow authors to prevent others from making use of the facts contained in their copyrighted statements. As Professor Denicola has observed, the resulting "impairment of scientific and artistic progress and damage to basic first amendment rights present too high a price for increased incentive."[49]

C. *Copyrighting Compilations*

The premise that facts are not copyrightable is "[t]he most fundamental axiom of copyright law."[50] At the same time, copyright law permits the copyrighting of factual works. As mentioned earlier, the Supreme Court has attempted to resolve this contradiction by finding elements that meet the copyright requirement of originality within fact-based works. In factual narratives such as biographies, the copyrightable element is the original manner in which the author has expressed the facts.[51] In factual compilations such as databases and directories, the copyrightable element is the original manner in which the facts have been selected and arranged.[52]

Assuming that a factual compilation displays this element of original selection and organization, the compilation as a whole is eligible for copyright protection. However, "the copyright is limited to the particular selection or arrangement. In no event may copyright extend to the

43. *Id.* at 1288.
44. *Id.*
45. 471 U.S. 539 (1985).
46. *Id.* at 556.
47. Denicola, *supra* note 24, at 525.
48. Emerson, *supra* note 27, at 881.
49. Denicola, *supra* note 24, at 525 (footnote omitted).
50. Feist Publications, Inc. v. Rural Tel. Serv. Co., 111 S. Ct. 1282, 1287 (1991).
51. *See* Harper & Row, Publishers, Inc. v. Nation Enters., 471 U.S. 539, 556-57 (1985); *see also* Hoehling v. Universal City Studios, Inc., 618 F.2d 972, 974 (2d Cir.) ("[T]he scope of copyright in historical accounts is narrow indeed, embracing no more than the author's original expression of particular facts and theories already in the public domain."), *cert. denied*, 449 U.S. 841 (1980).
52. *See Feist*, 111 S. Ct. at 1289.

facts themselves."[53] As the Supreme Court has acknowledged, "[t]his inevitably means that the copyright in a factual compilation is thin."[54] In particular, limiting the copyright in a compilation to the selection and arrangement of facts means that a subsequent compiler is free to use the facts from an existing compilation in creating a competing work "so long as the competing work does not feature the same selection and arrangement."[55]

Prior to *Feist*, some federal courts had tried to thicken the copyright protection available to factual compilations by applying a standard known as "industrious collection" or, more poetically, "sweat of the brow."[56] The seminal expression of this standard came in *Jeweler's Circular Publishing Co. v. Keystone Publishing Co.*,[57] a 1921 Second Circuit decision that upheld the copyright of a trade directory containing the addresses and trademarks of jewelers:

> The right to copyright a book upon which one has expended labor in its preparation does not depend upon whether the materials which he has collected consist or not of matters which are publici juris, or whether such materials show literary skill or originality, either in thought or in language, or anything more than industrious collection. The man who goes through the streets of a town and puts down the names of each of the inhabitants, with their occupations and street numbers, acquires material of which he is the author. He produces by his labor a meritorious composition, in which he may obtain a copyright, and thus obtain the exclusive right of multiplying copies of his work.[58]

Under this approach, then, it is the effort that a compiler expends in collecting information, rather than the originality expressed in selecting or arranging the information, that qualifies a compilation for copyright protection.

Although the industrious collection doctrine has never been embraced by the majority of federal courts,[59] it has demonstrated considerable staying power. As recently as 1986, for example, the Eighth Circuit held that West Publishing Company was entitled to copyright the pagination system used in its system of legal reporters primarily because West had used "sufficient talent and industry" in compiling the cases contained in the reporters.[60] But the Second Circuit, which was so instrumental in estab-

53. *Id.* at 1290.
54. *Id.* at 1289.
55. *Id.*
56. *Id.* at 1291.
57. 281 F. 83 (2d Cir.), *cert. denied*, 259 U.S. 581 (1922).
58. *Id.* at 88.
59. *See, e.g.*, Feist Publications, Inc. v. Rural Tel. Serv. Co., 111 S. Ct. 1282, 1291 (1991) ("Most courts . . . understood from this Court's decisions that there could be no copyright without originality.").
60. West Publishing Co. v. Mead Data Cent., Inc., 799 F.2d 1219, 1226 (8th Cir. 1986), *cert. denied*, 479 U.S. 1070 (1987).

lishing the industrious collection standard in *Jeweler's Circular*, has since backed away. In a 1986 decision, the Second Circuit refused to grant copyright to a collection of financial data, holding that the copyright claim was "based merely on the 'sweat of the author's brow' "[61] in compiling the information. In language that reflected first amendment concerns for the free flow of information, the court concluded that granting a copyright claim based solely on the author's labor in compiling a set of facts "would risk putting large areas of factual research material off limits and threaten the public's unrestrained access to information."[62]

In *Feist*, the Supreme Court showed that it could not agree more with the Second Circuit's reassessment. The Court used *Feist* as an opportunity to wage war on the industrious collection doctrine, asserting that it "flouted basic copyright principles" by establishing "proprietary interests in facts and [by declaring] that authors are absolutely precluded from saving time and effort by relying upon the facts contained in prior works"[63] when "[i]n truth, '[i]t is just such wasted effort that the proscription against the copyright of ideas and facts . . . [is] designed to prevent.' "[64] While appearing to acknowledge that the "sweat of the brow" doctrine evolved from a natural instinct to protect authors from unfair competition, the Court insisted that granting " 'copyright protection on this basis alone distorts basic copyright principles in that it creates a monopoly in public domain materials.' "[65] Through this unequivocal language, the Court left little doubt that the industrious collection standard is no longer a viable legal doctrine.

Where does this leave the copyright status of factual compilations? While *Feist* marked a clear defeat for the industrious collection doctrine, it marked an equally unequivocal victory for the Supreme Court's preferred test—the "originality" or "original selection and arrangement" standard.[66] The Court found statutory support for this standard in section 101 of the Copyright Act of 1976, which defines "compilation" as "a work formed by the collection and assembling of preexisting . . . data that are selected, coordinated, or arranged in such a way that the resulting work as a whole constitutes an original work of authorship."[67] As interpreted by the Court, this section of the statute sets out:

> three distinct elements and requires each to be met for a work to qualify as a copyrightable compilation: (1) the collection and assembly of pre-existing material, facts, or data; (2) the selection, coordination, or arrangement of those materials; and (3) the creation, by virtue of the

61. Financial Information, Inc. v. Moody's Investors Serv., Inc., 808 F.2d 204, 207 (2d Cir. 1986), *cert. denied*, 484 U.S. 820 (1987).

62. *Id.*

63. Feist Publications, Inc. v. Rural Tel. Serv. Co., 111 S. Ct. 1282, 1292 (1991).

64. *Id.* (quoting Rosemont Enter., Inc. v. Random House, Inc., 366 F.2d 303, 310 (2d Cir. 1966), *cert. denied*, 385 U.S. 1009 (1967)).

65. *Id.* (quoting M. Nimmer & D. Nimmer, Copyright § 3.04, at 3-23 (1990)).

66. *See supra* notes 52-55 and accompanying text.

67. 17 U.S.C. § 101 (1988).

> particular selection, coordination, or arrangement, of an 'original' work of authorship.[68]

All factual compilations pass the first test, since any compilation is, by definition, an "assembly of pre-existing material, facts, or data." But not all compilations will satisfy the second and third requirements which, taken together, require that the selection, coordination, or arrangement of the data display a degree of originality that is sufficiently creative to qualify the compilation as an "original work of authorship."[69]

Significantly, *Feist* fails to provide explicit guidelines for evaluating whether a compilation satisfies the original selection and arrangement standard, leaving this for lower courts to determine on a case-by-case basis. If three cases decided in the months following *Feist* are an accurate indication, the lower courts will find it difficult to reach this determination with any degree of consistency. In *Bellsouth Advertising & Publishing Corp. v. Donnelley Information Publishing, Inc.*,[70] the Eleventh Circuit struggled to locate "elements of originality"[71] in material appropriated by Donnelley from Bellsouth's yellow pages, finally finding originality in the "coordination of informational components"[72] in the business listings and the "selection of categories"[73] used to arrange the listings. In contrast, the Second Circuit confessed to some "unease" in finding originality in a form used to predict the performance of baseball pitchers. Reluctantly concluding that the form might "display enough selectivity to satisfy the requirements of originality,"[74] the court remanded the case to the district court to determine whether the selection of the nine statistical categories used in the form "displayed the requisite degree of creativity."[75] However, in a decision issued just two days later, the Second Circuit quickly concluded that there was neither originality nor creativity in published charts that purport to help bettors predict winning combinations in New York's illegal "numbers games," since the creator of the charts "exercises neither selectivity in what he reports nor creativity in how he reports it."[76] As a result, the court found that the charts did not qualify for copyright protection.[77]

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68. Feist Publications, Inc., v. Rural Tel. Serv. Co., 111 S. Ct. 1282, 1293 (1991).
69. *Id.*
70. 933 F.2d 952 (11th Cir. 1991).
71. *Id.* at 959.
72. *Id.*
73. *Id.*
74. Kregos v. Associated Press, 937 F.2d 700, 704 (2d Cir. 1991).
75. *Id.*
76. Victor Lalli Enters., Inc. v. Big Red Apple, Inc., 936 F.2d 671, 673 (2d Cir. 1991).
77. *See id.* More recently, in a case involving two competing business directories, the Second Circuit acknowledged that the copying of the "arrangement of categories and . . . selection of businesses" from the original directory could constitute copyright infringement. *See* Key Publications, Inc. v. Chinatown Today Publishing Enters., Inc., No. 91-7235, 1991 U.S. App. LEXIS 22250, at *16 (2d Cir. Sept. 23, 1991). But the court found no actual infringement here, since neither the arrangement of categories nor selection of

The fact that many compilations might fail the *Feist* originality test did not seem to concern the Supreme Court, which concluded that "the statute envisions that there will be some fact-based works in which the selection, coordination, and arrangement are not sufficiently original to trigger copyright protection."[78] Further, even when a factual compilation passes the Court's tripartite test and qualifies for copyright, the protection that it receives is the "thin" sort of copyright described earlier—copyright protection that extends only to the compiler's original selection or arrangement of the facts, and not to the facts themselves. As discussed in the section that follows, this thinness of copyright protection raises particular problems when the factual compilation in question is a computerized database.

II. COPYRIGHT AND AUTOMATED DATABASES

A recent *New York Times* article highlighted two important developments in the marketplace of ideas: the growing significance of computerized databases as information sources, and the increasing confusion and concern surrounding the copyright status of the information stored on those databases.[79] The *Times* article touted the impending introduction of a "nationwide data network that will allow personal computer users to tap sources as large as the Library of Congress or receive their own personalized electronic newspaper."[80] At the same time, the article cautioned that the electronic information industry "has yet to settle on ways to protect . . . intellectual property in a computer network where information can be copied instantly."[81] While purporting to settle the doctrinal dispute over the copyright status of factual compilations, the *Feist* decision has not resolved this fundamental issue. In fact, by focusing on originality as the "*sine qua non* of copyright,"[82] *Feist* may have raised many more questions than it has resolved.

A. *The Nature of Automated Databases*

To understand why databases present special copyright concerns, it helps to have a fundamental understanding of what online databases are and how they work.[83] An automated database, in its most basic sense, is

businesses displayed in the second, competing directory was substantially similar to that displayed in the first. *See id.* at *18-19.

78. Feist Publications, Inc. v. Rural Tel. Serv. Co., 111 S. Ct. 1282, 1294 (1991).

79. Markoff, *For Shakespeare, Just Log On: Large PC Libraries Are Being Developed,* N.Y. Times, July 3, 1991, at D1, col. 3.

80. *Id.* at D1, col. 5.

81. *Id.*

82. Feist Publications, Inc. v. Rural Tel. Serv. Co., 111 S. Ct. 1282, 1287 (1991).

83. The general description of databases that follows is drawn from the author's eight years of experience in the computer industry. For a more technical overview of computer information systems, see C. Salton, Automatic Text Processing: The Transformation, Analysis, and Retrieval of Information by Computer (1989) [hereinafter Salton]; P. Zorkoczy, Information Technology: An Introduction 121-24 (1982).

simply a "body of facts, data, or other information assembled into an organized format suitable for use in a computer."[84] For example, most lawyers are familiar with the two leading legal database services: LEXIS and WESTLAW. At the core of each of these services is a compilation containing, in digital form, the complete text of many recent state and federal court decisions, all recent Supreme Court decisions, federal and state codes, and a variety of other legal research materials.

Once information is transformed into digital data, it can be stored on, and searched and retrieved by, a computer. The digital information that comprises a database is stored on one or more "host" computers situated at one or more locations. If the data are stored on more than one "host" computer, the computers are connected through telephone, high speed cable, or satellite links. This means that subscribers to the services can, if necessary, search more than one computer for the answer to a particular research question or "query." Subscribers communicate with the host computer through a terminal or personal computer that is equipped with data retrieval software.

Subscribers build search queries on their terminal or computer screens by identifying the particular category of information that they want to search and the specific information that they want to locate.[85] Then, once the subscriber presses the appropriate key, the query is sent over telecommunication lines to the host computer. The host machine analyzes the request to determine what information is being sought, searches its database for that data and, assuming that the search is successful, sends the information back to the subscriber.

B. *The Economy of Databases*

As the preceding description suggests, there are three categories of expense associated with building an automated database: equipment or "hardware" costs, software costs, and data costs. The major equipment expense is the cost of acquiring the host computer or computers. For commercial databases that employ large "mainframe" computers as host machines, this cost can reach into the millions of dollars, particularly if the system is served by more than one host computer.[86]

The "software cost" category includes expenses for creating and maintaining two types of software: the retrieval software that resides on the terminals or personal computers through which subscribers communicate with the host computer, and the database software that organizes the data that is stored on the host. Like equipment expenses, these costs can be substantial, with the typical database system incurring both a large initial outlay for developing the software and substantial ongoing

84. Circular 65, *supra* note 2, at 2.
85. *See* Salton, *supra* note 83 at 229-31.
86. *Id.* at 18-19.

charges for maintenance and upgrades.[87] Maintenance and upgrade costs can be especially high when there are directly competing information services such as LEXIS and WESTLAW, since the competition places constant pressure on the services to upgrade their software to improve the speed, accuracy, and ease of use of their systems.

The "data cost" category also includes two types of expense: the costs of acquiring the information that will reside on the host computer, and the expenditures required to convert the information to digital form. Data acquisition costs will vary widely, depending on whether the company that is constructing the database already has the information available in print form or whether it must acquire the information from other parties. Some companies that "publish" databases are also conventional print publishers that have converted to digital form information that they already possess in print form. Others are database publishers that lack or have only limited information resources and that, as a result, have had to purchase or obtain data from outside sources. Of the two leading publishers of legal databases, West Publishing Company, which owns and operates WESTLAW, fits the first type, while Mead Data Central, Inc., which owns and operates LEXIS, fits the second.

Regardless of how the database publisher obtains its information, the information must usually be converted from print to digital form—a process that, despite some technical advances, still tends to be expensive and labor intensive.[88] In the case of information that exists only in print form, the process usually involves either re-typing the data at a computer keyboard or using an electronic scanner to "read" the information into the computer. However, with the growing popularity of electronic publishing and computerized typesetting technology, much text and data that is published in print form is also available on computer disks. When this is the case, it is much faster, and much less costly, for database publishers to convert the information for use on their systems. This is particularly true if the database company is also the print publisher of the information, since this permits the company to make sure that information is prepared, from the start, in a manner that will make it "publishable" in both print and computer form.

C. *Costs vs. Benefits*

As the preceding section indicates, the start-up and operational costs for commercial databases can be substantial. But the rewards can also be substantial. As anyone who has used a properly designed database can attest, conducting research by computer offers distinct advantages over

87. Because most database publishers treat information about their operating expenses and procedures as proprietary, precise figures that document these software development costs are not available. The very general analysis offered here is based on the author's experience in the computer industry. *See also supra* note 83 (referring to more technical descriptions of the information industry).

88. *See* Salton, *supra* note 83, at 29-31.

conventional methods. Responding to a research query, a computer can search extensive collections of information in just a few seconds, returning only that information that satisfies the criteria specified by the researcher. The early experience of the electronic information industry shows that subscribers are willing to pay for this speed and convenience, particularly if they are confident that the database is reasonably complete and up to date.[89] In fact, sales of online database services already exceed sales of informational books and journals published in print form,[90] with one 1990 estimate placing total yearly revenues from online services at nearly $9 billion.[91]

In addition to providing private companies with substantial profit potential, databases and other electronic information services offer several important public benefits. First, by speeding up access to information, databases and other computerized research tools promise to turbocharge the pace of "progress [in] Science and the useful Arts"[92] and the "advance[ment of] knowledge and discover[y of] truth"[93]—the two goals shared by copyright and the first amendment. Second, in an era when many segments of the United States economy are struggling, studies by the Congressional Office of Technology Assessment and the President's Commission on Industrial Competitiveness have pointed to the information industry as an important new source of revenues, employment, and economic growth:

> Information and information-based products and services are not only valuable economic commodities in and of themselves; their use also increasingly affects the performance of other economic sectors. The application of information technology is responsible for vast increases in productivity in manufacturing industries, offices, financial services, and scientific research. Because they have become not only an important component in the U.S. economy, but also a significant productivity factor in many industrial sectors, information and information-based products and services have become an extremely crucial element in the U.S. economy and its overall international competitiveness.[94]

As this passage indicates, "information and information-based products and services"[95] have already had important and far-reaching effects on the American economy, and analysts are expecting an even broader and more substantial impact in the future.

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89. *See* OTA Report, *supra* note 15, at 157-84.

90. *See* M. Fleming, J. Silverstein, C. Elwell, R. Kelly, B. Simpson & L. Fleming, Information Industry Factbook 4 (1990/91 ed. 1991).

91. *See* C. Elwell, Online Services: 1990 Review, Trends & Forecast 20 (1991). Note that this estimate combines revenue figures for online brokerage, financial news/research, credit, legal/regulatory, professional, end user/consumer, and marketing services.

92. U.S. Const. art. I, § 8, cl. 8.

93. Emerson, *supra* note 27, at 881.

94. OTA Report, *supra* note 15, at 225 (footnote omitted).

95. *Id.*

D. *The Copyright Status of Databases*

Whether the electronic information industry can carry its share of these expectations will depend, to great extent, on whether the industry can "settle on ways to protect . . . intellectual property in a computer network where information can be copied instantly."[96] Of course, it will in all probability be the federal courts or Congress, rather than the information industry, that will "settle" this issue, since the degree of intellectual property protection available to automated databases is dependent on judicial interpretations of copyright law. An ideal interpretation would further the interests of both the information industry and the public, "stimulating the creation of new [databases] while ensuring freedom to use existing ones."[97]

From the perspective of the information industry, the copyright protection that is currently available to automated databases falls far short of this ideal. First, because the law treats databases "as a form of compilation,"[98] the copyright standard that applies to databases is the *Feist* "original collection and arrangement"[99] standard that governs all factual compilations. This standard permits the copyrighting of the "particular selection, coordination, or arrangement"[100] of the information in a compilation, but not the information itself. However, as *Feist* makes clear, not just any sort of selection and arrangement will do. Instead, for the compilation as a whole to qualify for copyright protection, the selection and arrangement of facts must display a sufficient degree of originality.[101]

In *Feist,* the Supreme Court held that the white pages directory published by Rural Telephone Service failed to satisfy the original selection and arrangement requirement, pointing to the fact that Rural's method of simply selecting the names of all telephone subscribers and arranging them in alphabetical order "could not be more obvious."[102] Under this sort of scrutiny, most automated databases would also fail to qualify for copyright protection. First, the "original selection" part of the *Feist* test assumes that the compiler of a factual collection has exercised some subjective, creative effort in deciding what information to include and what to leave out.[103] But automated databases, like most large compilations, "stand out for their exhaustiveness and usually contain components selected on the basis of objective, not subjective, criteria."[104] In other words, because they strive to be comprehensive, most databases do not display the "selectivity that goes into winnowing a potentially large com-

96. Markoff, *supra* note 79, at D1, col. 5.
97. Haungs, *supra* note 21, at 358.
98. Circular 65, *supra* note 2, at 2.
99. Feist Publications, Inc. v. Rural Tel. Serv. Co., 111 S. Ct. 1282, 1290 (1991).
100. *Id.*
101. *See id.* at 1294.
102. *Id.* at 1296.
103. *Id.*
104. *Copyright and Computer Databases, supra* note 18, at 1006.

pilation into a smaller one [that] is considered the necessary mark of subjectivity."[105]

The "original arrangement" portion of the *Feist* test presents similar problems for automated databases. In a conventional print compilation, the information "exists" as text on a printed page that the compiler has arranged and displayed "in a manner thought to be the most intelligible and useful to others."[106] In contrast, the information in a database exists as bits of data stored on tape or disk, where it is both invisible and unintelligible to humans without the intervention of search and retrieval software. With this in mind, it seems "senseless" to speak of "a specific, fixed arrangement of data"[107] in an automated database. Instead, there is "simply a collection of information stored in an electronic memory—information that can be arranged and retrieved in variations limited only by the capabilities of the computer and the sophistication of the retrieval program."[108] This leads to the conclusion that, because there is no fixed organization of data in an automated database, "there is no particular arrangement to protect."[109]

Keeping all of this in mind, the current copyright status of databases becomes quite clear. Because they satisfy neither the original selection nor original arrangement portion of the *Feist* test, most databases have no copyright status. To be sure, it is only the collection of factual information that constitutes the core of the database that is left completely unprotected by copyright law. The law does allow a database publisher to copyright the retrieval software through which users communicate with the database, since this is typically an original software program that is distinct from the core compilation of factual data.[110] However, the fact that the retrieval software is copyrighted will not prevent a competing company from using that software to gain access to the data, copying all of the data to a second computer, and then creating its own front end. In doing so, the second-comer will have succeeded in creating a competing database without having had to incur the cost of collecting the data and without violating copyright law.[111] Needless to say, "given

105. *Id.*

106. *Id.* at 1013.

107. Denicola, *supra* note 24, at 531.

108. *Id.*

109. *Id.*

110. The Copyright Act of 1976 does not expressly identify computer software programs as copyrightable subject matter. *See* 17 U.S.C. § 102(a) (1988). However, section 101 of the Act was amended to include a definition of "computer program" in 1980. *See* Computer Software Copyright Act of 1976, Pub. L. No. 96-517, 94 Stat. 3015, 3028 (1980). The 1980 amendment also added a new section 117 that defines specific contexts in which the copying of computer programs does *not* constitute copyright infringement. *See id.* These changes led courts to conclude, quite quickly, that "the copyrightability of computer programs [was] firmly established after the 1980 amendment to the Copyright Act." Williams Elecs., Inc. v. Artic Int'l, Inc., 685 F.2d 870, 875 (3d Cir. 1982).

111. There is no copyright infringement in this example because, although the second-comer *used* the copyrighted front-end software to gain access to the data, the second-

the ease with which computers may copy and reorganize information,"[112] this is a frightening prospect for "first comers"—those publishers of existing databases who are seeking ways to protect the substantial investment that they have made in collecting and compiling factual information.

III. LIFE AFTER *FEIST*: BALANCING INDUSTRY INCENTIVE AND THE PUBLIC INTEREST

Although the prospect of second-comers copying data to create competing works may frighten members of the information industry, *Feist* made it clear that the members of Supreme Court do not scare so easily. While conceding that "[i]t may seem unfair that much of the fruit of the compiler's labor may be used by others without compensation,"[113] the Court concluded that the copyright law purposely "encourages others to build freely upon the ideas and information conveyed by a work."[114] To the Court, "[t]his result is neither unfair nor unfortunate. It is the means by which copyright advances the progress of science and art."[115]

Of course, many members of the information industry would disagree with this analysis. These industry "first comers" would contend that the *Feist* originality test *is* unfair and unfortunate, since it works to deprive them of the property rights that provide the incentive to invest in the construction and expansion of automated databases. A number of scholars and legal practitioners concur in this industry view, arguing that the law must provide "a [more] meaningful incentive to production"[116] that also protects the public interest in access to information. Some of these analysts argue for a revision of copyright law that will result in "the greatest production of works by first authors, as well as by second authors borrowing from their predecessors."[117] Others contend that it is not necessary to change the law, since the relief that the information industry seeks is readily available through existing legal remedies. Both of these views are explored in more detail below.

A. *Leaving the Law Alone: Seeking Remedies Outside the Copyright Statute*

There are several good reasons for database publishers not to look to modifications to the copyright statute to provide the increased protection

comer did not *copy* the front-end software. Only the factual data itself was copied, and facts are not protected by copyright under the *Feist* standard.

112. Ginsburg, *Creation and Commercial Value: Copyright Protection of Works of Information,* 90 Colum. L. Rev. 1865, 1907 (1990).

113. Feist Publications, Inc. v. Rural Tel. Serv. Co., 111 S. Ct. 1282, 1289 (1991).

114. *Id.* at 1290 (citing Harper & Row, Publishers, Inc. v. Nation Enters., 471 U.S. 539, 556-57 (1985)).

115. *Id.*

116. Ginsburg, *supra* note 112, at 1907.

117. *Id.* at 1909.

that they seek. First, because the *Feist* originality standard cuts to "the essence of copyright,"[118] modifying the statute to provide added incentive to database publishers would require making fundamental changes to the scope and subject matter of copyright.[119] This is not a task that Congress is likely to embrace quickly or willingly, particularly considering that it took nearly fifteen years of research and debate to complete the last substantial revision of copyright law.[120] Second, and perhaps most important, there are a number of existing (and far easier) legal options that would appear to provide at least part of the protection that the information industry is seeking. Several of these options, including the option to "do nothing," are discussed below.

1. Doing Nothing: Letting the Market and the Current Copyright Law Provide

One option is to take no new legislative or judicial steps and to rely, instead, on market forces and existing copyright law to distinguish and protect competing information services. As the electronic information industry has evolved, competing databases have begun to be distinguished less by the amount of data that they contain and more by the scope of research services that they provide and the ease with which they allow subscribers to locate and retrieve data. Because these aspects of a database are defined by its front-end software, and because this software can be copyrighted under the existing law, publishers are already in a position to protect what is becoming the most distinctive feature of their database systems.

The "do nothing" option is attractive because it would not necessitate changing the copyright status of factual information or placing any new restrictions on the public's access to that information. In fact, because the do-nothing option would put added pressure on database publishers to improve the scope and "look and feel" of their data services, the "accessibility" of information on databases could actually improve. This option is unlikely to resolve the unfair competition concerns of the information industry, however, since second-comers will still gain an advantage by not having to pay for data. In theory, this will allow second-

118. Feist Publications, Inc. v. Rural Tel. Serv. Co., 111 S. Ct. 1282, 1290 (1991) (quoting Harper & Row, Publishers, Inc. v. Nation Enters., 471 U.S. 539, 589 (1985) (Brennan, J., dissenting)).

119. Any effort to modify the Copyright Act of 1976 must also confront the fact that the Supreme Court has determined that "[o]riginality is a constitutional requirement" for copyright protection. *Feist*, 111 S. Ct. at 1288. Thus, a modified statute that provides copyright protection for materials that do not satisfy this requirement could be susceptible to challenge on constitutional grounds. For an extended discussion of this issue, see *infra* text accompanying notes 175-93.

120. For an overview of the legislative history behind the Copyright Act of 1976, see Patry, *Copyright in Compilations of Facts (or Why the "White Pages" Are Not Copyrightable)*, 12 Comm. & L. 37, 52-57 (1990).

comers to invest even more heavily in their own front-end software—the one component of databases that copyright law clearly protects.

However, there is at least one type of database for which the "do nothing" option would almost always seem to provide sufficient protection—those databases that consist of highly time-sensitive information such as stock or commodities quotations. There is little incentive for second-comers to copy this sort of data, since it loses most of its value very quickly.[121] Because this is the case, there is also little incentive for publishers to take special measures to deter copying.

2. Unfair Competition and Misappropriation

At the core of the dispute surrounding the copyright status of databases is the fundamental issue of fairness. As the Supreme Court begrudgingly acknowledged in *Feist,* the fact "that much of the fruit of the compiler's labor may be used by others without compensation"[122] does not seem to be a very fair outcome of copyright law. Some seventy years before *Feist*, the Supreme Court confronted a comparable fairness concern in *International News Service v. Associated Press,*[123] a case in which the Associated Press (AP) sought to enjoin International News Service (INS), a direct competitor, from copying and retransmitting AP news stories as its own. While conceding that the informational content of news reports is primarily *publici juris*, the Court concluded that it did not really need to consider "the general question of property in news matter at common law, or the application of the copyright act, since it seems . . . the case must turn upon the question of unfair competition in business."[124] In other words, as a matter of equity, the Court was willing to go outside copyright law to find a way to protect the labor and expense that the Associated Press had invested in compiling and transmitting its news reports. As the Court explained:

> The parties are competitors in this field; and, on fundamental principles, applicable here as elsewhere, when the rights or privileges of the one are liable to conflict with those of the other, each party is under a duty so to conduct its own business so as not necessarily or unfairly to injure that of the other.[125]

After determining that International News Service had in fact breached this duty, the Court affirmed the District Court's award of an injunction that restrained INS from continuing to misappropriate the AP reports.

Some observers have suggested that the courts consider reviving the *International News* approach as a way to prevent second-comers from gaining an unfair competitive advantage over the original publishers of

121. Ginsburg, *supra* note 112, at 1921.
122. Feist Publications, Inc. v. Rural Tel. Serv. Co., 111 S. Ct. 1282, 1289 (1991).
123. 248 U.S. 215 (1918).
124. *Id.* at 234-35.
125. *Id.* at 235-36 (citing Hitchman Coal & Coke Co. v. Mitchell, 245 U.S. 229, 254 (1917)).

databases and other factual compilations.[126] Under such a revived misappropriation theory, an author or publisher who is filing an unfair competition complaint against a second-comer would need to show the "creation of a product through extensive labor and skill or money, unauthorized use of the intangible elements of the product in competition with its author at minimal expense to the user (a 'free ride'), and resulting commercial damage."[127] Once the court was convinced that these elements were present, it could award the complaining party damages, an injunction against the "free rider," or both.

Although this would seem to be a fair way to remedy the second-comer problem, the misappropriation approach suffers from two potential limitations. First, because misappropriation has been a matter of state law since *Erie R.R. v. Tompkins,*[128] any misappropriation theory applied in a copyright context raises the possibility of federal preemption under section 301(a) of the Copyright Act, which provides that:

> [A]ll legal or equitable rights that are equivalent to any of the exclusive rights within the general scope of copyright . . . are governed exclusively by this title. . . . [N]o person is entitled to any such right or equivalent right in any such work under the common law or statutes of any State.[129]

Second, since the misappropriation approach "bases protection on a limited property right arising from the [compiler's] investment of labor and expense,"[130] courts might shy away from it as seeming too closely related to the industrious collection doctrine that the Supreme Court rejected so vehemently in *Feist.*

3. Contract Remedies

A database publisher may also "endeavor to prevent . . . copying by constraining users to a protective contract."[131] The contract would protect the publisher by requiring each subscriber to warrant that it would not download data for resale or for the purpose of constructing a competing service. The contract could also specify other conditions governing use of the database, including a rule that would prevent the subscriber from allowing non-subscribers to use the system in a manner that contravenes the protective purposes of the agreement.

Because policing this sort of agreement requires the publisher to keep

126. *See* Note, *Copyright Protection for Factual Compilations—Reviving the Misappropriation Doctrine,* 56 Fordham L. Rev. 933, 949-50 (1988); *see also* Gorman, *Copyright Protection for the Collection and Representation of Facts,* 76 Harv. L. Rev. 1569, 1571 (1963)(suggesting that the law of unfair competition/misappropriation may provide the most apt means of protecting factual works from infringement).

127. Note, *supra* note 126, at 950 (footnote omitted).

128. 304 U.S. 64 (1938).

129. 17 U.S.C. § 301(a) (1988).

130. Note, *supra* note 126, at 949.

131. Ginsburg, *supra* note 112, at 1918.

track of each client's use of the system, the contract option would seem particularly well-suited to protecting automated databases, most of which already track, for billing and market research purposes, the time that clients spend on the system and the amount of data that they download.[132] However, it is not always easy for the database publisher "to distinguish between subscribers accessing the data for personal use and subscribers intending to repackage and resell the data."[133] As a result, the publisher "may have to choose between setting a high price to cover uncompensated resales of information (but also discouraging subscriptions from private users), or setting a price attractive to general users (but incurring the risk of uncompensated resale)."[134]

This last problem points to a more general concern with the contract approach to data protection. In the increasingly competitive information marketplace, the pressure will be on publishers to reduce, rather than to add to or formalize, the restrictions that they place on access to and use of their systems. When there are competitive options, potential subscribers tend to shop around, searching for those "low hassle" services that place the fewest contractual conditions on users. In fact, it is not too far-fetched to envision a scenario in which a "stealth" subscriber signs up to one of these low-hassle services specifically intending to take advantage of the absence of contractual restrictions to copying. This subscriber then uses large blocks of data copied from the system as the foundation for a competing service—a service that in turn promotes itself as the most hassle-free of the alternatives.

Another market development that poses problems for the contract approach to data protection is the increasing use of free-standing media such as CD-ROM to deliver electronic information to users. When the delivery mechanism is a conventional "online" database, subscribers must "sign up" with the publisher. This allows publishers to require users to sign a subscription contract as a precondition to using the service. However, when the data is delivered on CD-ROM or some other free-standing medium sold at retail, there is no subscription agreement. The publisher must rely, instead, on a "shrink wrap license" included in the package a form of adhesion contract that "may not, absent a validating statute, constitute an enforceable contract."[135]

132. For example, both LEXIS and WESTLAW maintain records for each research session that indicate, at a minimum, how long the session lasted and how many searches were executed.

133. Ginsburg, *supra* note 112, at 1918.

134. *Id.* at 1918-19.

135. *Id.* at 1920; *see also* Step-Saver Data Sys., Inc. v. Wyse Technology and The Software Link, Inc. No. 90-1859, 1991 U.S. App. LEXIS 16526 (3d Cir. July 29, 1991) (holding that Uniform Commercial Code provisions control, disclaimers contained in shrink-wrap license not valid when buyer learns of license only after contract to purchase is formed).

B. *Changing the Law*

The options discussed so far are mostly patchwork measures that can provide database publishers with some quick relief in the absence of changes to, or changed judicial interpretations of, copyright law. The most attractive feature of these measures—that they are available immediately—stems from the fact that most are contract or tort remedies that are outside copyright law. But this is also their greatest limitation, since it is only through changes to the copyright statute itself that database publishers can secure the level of protection necessary to justify the high cost of establishing and expanding automated information services.

This section reviews two options for extending the degree of data protection available under the Copyright Act of 1976. The first option involves both a shift in focus away from the selection and arrangement standard and an expanded application of the fair use doctrine. The second involves a more radical solution—a new and distinct copyright status for databases and other factual compilations.

1. Fair Use and a Shift in Focus

As established earlier, the original selection and arrangement standard leaves most automated databases with little or no copyright protection.[136] This in turn leaves compilers and publishers with little incentive under copyright law to produce new or expanded compilations. To remedy this situation, Professor Denicola has proposed a shift away from the current emphasis on original selection and arrangement toward a standard that "find[s] authorship in the act of aggregating isolated pieces of information."[137] As Denicola explains, "it is the effort of collecting that must be rewarded in order to preserve incentive and safeguard the author's investment of time and money, not the act of placing Abbott before Baker."[138] Although Denicola does not go so far as to say that authors or publishers would fully "own" the data that they collect, he does state that, under his proposed approach, "[t]he particular collection of data would . . . itself be a work of authorship"[139] (emphasis omitted) and that copyright protection "must of necessity attach to the assemblage of information itself."[140]

This raises the immediate concern that, once copyright was attached to the factual collection itself, the copyright owner would be in a position to place restrictions on public access to the information that comprises the collection. Acknowledging this concern, Professor Denicola suggests that this risk of restricted access can be reduced through the application

136. *See supra* notes 98-111 and accompanying text.
137. Denicola, *supra* note 24, at 530.
138. *Id.* at 528.
139. *Id.* at 530.
140. *Id.* at 531.

of two traditional copyright concepts, "substantial similarity" and "fair use:"

> Since the collection of data as a whole represents the protected work of authorship, an appropriation of facts that does not amount to a substantial taking of the collection will not infringe on the copyright. The latitude thus permitted later authors would appear sufficient to prevent any significant intrusion on first amendment interests. Even more substantial takings may be permitted under the fair use doctrine, provided they do not seriously impair the copyright owner's economic incentive.[141]

To Denicola, then, the fact that the copyright would attach to the work as a whole is a key consideration, since this would leave subsequent compilers free to use the information contained in the collection so long as their use did not result in a second work that is substantially similar "as a whole" to the original.[142] This should, in turn, satisfy any first amendment concerns, since the "objectives of our constitutional commitment to free speech will not often require the freedom simply to repackage and resell another's contributions."[143]

Like the misappropriation theory discussed earlier, Denicola's approach targets larger scale appropriations of information that result in "economic detriment" to the original compiler,[144] rather than isolated instances of unauthorized use by individual subscribers. By drawing this distinction, both approaches seek to preserve public access to information while at the same time protecting original compilers from unfair competition. But there is an important difference between the two theories. While the misappropriation theory applies a tort concept to business conduct, Professor Denicola's approach necessitates a reinterpretation and refocusing of copyright law. Writing in 1981, Denicola might have hoped that this refocusing could be accomplished through the federal courts. Ten years later, in the wake of *Feist*, this seems highly unlikely.

As Professor Denicola points out, his theory requires "[t]he express recognition of a property interest in collections of facts"[145] as a means of rewarding a compiler's labor in collecting data. Given that *Feist* expressly prohibits both "proprietary interests in facts"[146] and the application of labor-based copyright theories,[147] a federal judge would have to

141. *Id.* at 541.

142. This is consistent with the concept of fair use as delineated in § 107 of the Copyright Act of 1976. Fair use principles provide, generally, that an unauthorized use of copyrighted material will be more likely to be considered fair use when "the effect of the use upon the potential market for or value of the copyrighted work" is minimal. 17 U.S.C. § 107 (1988).

143. Denicola, *supra* note 24, at 541.

144. *Id.* at 539.

145. *Id.* at 542.

146. Feist Publications, Inc. v. Rural Tel. Serv. Co., 111 S. Ct. 1282, 1292 (1991).

147. *Id.*

be feeling especially feisty to find that Denicola's approach can be accommodated under the current copyright canon. Assuming that the Supreme Court will not change its *Feist* position, this leaves only one real option for effecting Denicola's doctrine—lobbying Congress to have it written into a revised copyright statute. However, if the information industry and other interested parties plan to lobby for a legislative solution, it would seem to make more sense to push for a more comprehensive statutory revision like that put forth by Professor Ginsburg.

2. Back to the Future: Establishing A New Type of Copyright

Professor Ginsburg has proposed what is perhaps the most radical solution to the problems posed by the original selection and arrangement standard: the establishment of a separate copyright category for databases and other factual compilations. To Ginsburg, these fact-based, "low authorship" works have suffered from the copyright law's "imposition of a unitary, personality-based conception of authorship"[148] that favors fiction, musical compositions and other "high authorship" works. Through a thorough historical analysis, Ginsburg shows that this near-total emphasis on originality is a relatively recent development. She argues that, to provide the creators of low-authorship works with sufficient incentive, we must "return to our prior, and longer standing, understanding of copyright as concerning both—or either—authorial presence, and labor and investment."[149]

Writing one year before *Feist* but seeming to anticipate the direction in which the Supreme Court was heading, Ginsburg recognized that the federal courts could not be counted on to bring copyright back to these better days. She argues, instead, for a change to the Copyright Act of 1976 that would "restore the sweat/investment concept of authorship, by stating that a compilation can be an 'original work of authorship' by virtue either of its 'selection' and 'arrangement' *or* of its collection or gathering of information."[150] This truly would fly in the face of the Court's holding in *Feist* that "sweat of the brow" or "industrious collection" theories of copyright "flouted basic copyright principles" by establishing "proprietary interests in facts."[151]

In fact, if Ginsburg stopped here, her approach would not seem to differ greatly from the theory advanced by Professor Denicola or, for that matter, from the industrious collection doctrine as expressed in *Jeweler's Circular Publishing Co. v. Keystone Publishing Co.*[152] All three approaches would reward the labor and investment that an author has put into compiling a fact-based work by granting the author a proprietary interest in the body of facts contained in the work. Of course, if Gins-

148. Ginsburg, *supra* note 112, at 1916.
149. *Id.* at 1917.
150. *Id.* at 1927 (emphasis added).
151. Feist Publications, Inc. v. Rural Tel. Serv. Co., 111 S. Ct. 1282, 1292 (1991).
152. 281 F. 83, 88 (2d Cir.), *cert. denied*, 259 U.S. 581 (1922).

burg stopped here, her theory would also suffer from the same limitation that incurred the Supreme Court's wrath in *Feist*—the concern that, by granting authors a property interest in facts, the copyright law would risk restricting the free flow of information by "creat[ing] monopol[ies] in public domain materials."[153]

But Professor Ginsburg does not stop with her recommendation for reinstituting the sweat/investment concept of authorship. Instead, she couples this proposal with a second recommendation—a plan for the compulsory licensing of the factual material that would win copyright protection under the first part of her proposal. Like the compulsory licensing provision that is already in place for certain musical works,[154] Ginsburg's plan would require the copyright owner to make the material available, for a fee, to second-comers who are interested in making commercial use of the information.[155] As Ginsburg explains it, the purpose of the compulsory license is "to reduce the extent to which copyright ownership of the covered work conveys monopoly power, so that the copyright owner must make the work available to all who wish to access and exploit it."[156] Ginsburg believes that this approach should satisfy any first-amendment based concerns that her plan would restrict public access to information, since "[t]he effect of a compulsory license is to grant open access to the covered material, subject to an obligation to pay the owner for the use."[157]

As Ginsburg admits, however, her two-pronged solution is far from perfect. It is, instead, a compromise—a middle ground between granting no copyright protection at all for fact-based works, which would fail to provide the information industry with sufficient incentive, and granting full copyright protection, which would fail to protect the public's interest in access to information.[158] One imperfect aspect of this compromise is that compulsory licensing, the critical second prong of the Ginsburg proposal, requires a form of price regulation that runs "contrary to copyright's overall free market philosophy."[159] To ease these concerns, the law could simply require licensing and leave the price setting to market forces, but this modified free-market approach would also leave copyright owners free to restrict access to their materials by setting arbitrarily

153. *Feist*, 111 S. Ct. at 1292.

154. The Copyright Act of 1976 limits exclusive ownership rights in musical works by stipulating that "[w]hen phonorecords of a nondramatical musical work have been distributed to the public in the United States under the authority of the copyright owner, any other person may . . . obtain a compulsory license to make and distribute phonorecords of the work." 17 U.S.C. § 115 (1988). To obtain this license, the licensor must comply with a number of requirements and formalities, including the payment of royalties to the copyright owner. *See id.* § 115(c). The procedures for payment are administered by the Copyright Royalty Tribunal. *See id.* § 801.

155. Ginsburg, *supra* note 112, at 1925.

156. *Id.* at 1926.

157. *Id.* at 1925.

158. *Id.* at 1922-25.

159. *Id.* at 1924.

high prices. Although this problem could be curtailed, to some extent, by having the statute set a "ceiling" price that leaves room for bargaining,[160] this alternative would require instituting some system for adjusting the ceiling price and policing abuses. The need for such a system points to the more likely, and much more cumbersome, approach to administering a compulsory licensing scheme—a governing group akin to the current Copyright Royalty Tribunal[161] that would regulate prices, administer payments, and police abuses of the process.

These concerns notwithstanding, Professor Ginsburg's proposal should please the majority of database publishers. As discussed earlier, most database publishers are already in a position to establish licensing agreements through subscriber contracts and the computer's ability to track subscriber activities.[162] The one major problem that a database publisher might have with Ginsburg's plan—that, even with license fees, it would give second-comers a relatively inexpensive means to create competing services—is taken care of in another part of her proposal, where she suggests that "as an initial proposition, the compulsory license should apply to the right to create derivative works, but not to the right of reproduction."[163] Ginsburg illustrates this proposition by explaining that, under it, a database publisher

> could continue to obtain injunctive relief against a third party who might reproduce a data base by such means as 'downloading' substantial portions of the collected information, thereby creating a substantially similar database. By contrast, the compulsory license regime would deprive the producer [publisher] of the right to prevent copying and reshuffling of data in the creation of a different data base.[164]

Through this part of her plan, Professor Ginsburg addresses the "fairness" concern that is so central to the "misappropriation" remedy and to Professor Denicola's proposal—the concern that second-comers should not, as a matter of fair business practice, be allowed to use information downloaded from a predecessor to create a second, directly competing database.[165] But this issue, and Ginsburg's initial treatment of it, will require reexamination in light of the Supreme Court's ruling in *Feist*, where the Court allowed Feist Publications to use Rural Telephone's ex-

160. *Id.* at 1932.

161. The Copyright Royalty Tribunal was established as a central service to administer the payment and disbursal of royalties due to copyright owners under § 111 (secondary transmission of broadcast television programs by cable systems), § 115 (compulsory license to distribute phonorecords), § 116 (license to perform phonorecords in coin-operated record players), and § 118 (use of certain works in connection with non-commercial broadcasting) of the Copyright Act of 1976. *See* 17 U.S.C. § 801 (1988). Along with administering the collection and payment of royalties required under these sections of the Copyright Act, the Copyright Royalty Tribunal has the authority to adjust royalty rates within the paramaters set by the statute. *Id.*

162. *See supra* text accompanying note 132.

163. Ginsburg, *supra* note 112, at 1930.

164. *Id.*

165. *See supra* text accompanying notes 122-27, 144.

isting directory in its entirety in building a competing directory.[166]

Many other issues raised by Ginsburg's proposal also require reexamination or resolution. For example, if Congress in fact created a distinct copyright category for "low authorship" works, in what ways other than the compulsory licensing provision would this type of copyright differ from "full" copyright? Should the protection afforded to low-authorship works extend for a shorter term than the period for high-authorship works, on the premise that the law "recognizes a greater need to disseminate factual works than works of fiction or fantasy?"[167] Or should protection extend for the standard statutory period,[168] on the assumption that compulsory licensing would ensure adequate access and dissemination? Also, once a second-comer had acquired data under a compulsory license and "reshuffled" it in creating a new database, would the second-comer then be free to resell the acquired data to a "third-comer?" If second-comers were free to resell data in this way, the original copyright owners could find themselves with few takers, since their data would quickly become available from multiple vendors in the resale market. Conversely, if the revised copyright statute prohibited this sort of reselling, the law would be faced with the nearly impossible task of policing illicit reselling by tracking information from database to database. These would be among the many issues that Congress would need to examine and resolve before adopting a legislative solution based on all or part of the Ginsburg plan.

IV. RECOMMENDATIONS

Under the *Feist* "original selection and arrangement" standard, compilations that display original selection or arrangement can be copyrighted, and any second-comers who copy that selection or arrangement can be held liable for copyright infringement.[169] But *Feist* makes it equally clear that the factual data that forms the core of a compilation cannot be copyrighted.[170] As a result, second-comers who take only factual data without copying the selection and arrangement cannot be held liable for infringement under the current copyright law. To the Supreme Court, this is the end of the statutory story. Period.

But should the story stop here? Are the interests of either the public or the information industry truly served by a copyright standard that provides such a low level of protection for automated databases and other factual compilations? Industry interests are certainly not served if the *Feist* standard results in inadequate incentive to invest in this important new information technology. Nor is the public interest served if in-

166. Feist Publications, Inc. v. Rural Tel. Serv. Co., 111 S. Ct. 1282, 1296-97 (1991).
167. Harper & Row, Publishers, Inc. v. Nation Enters., 471 U.S. 539, 563 (1985).
168. The duration of copyright is discussed *supra* note 31.
169. *Feist*, 111 S. Ct. at 1290.
170. *Id.* at 1287.

sufficient industry investment works to deprive the nation of the many benefits that the new data services promise to provide—benefits that include an increased ability to access and analyze information, improved industry competitiveness and economic growth,[171] and a heightened pace of progress in "Science and useful Arts."[172]

If the original selection and arrangement standard leaves databases and other factual compilations with too little copyright protection, and if this in turn leaves important industry and public interests unserved, there clearly is a problem. The question then becomes how best to reach a resolution. The federal courts will be of little assistance, since *Feist* mandates strict adherence to the original selection and arrangement test. The tort and contract remedies described earlier provide no real recourse, either,[173] since they are at best limited measures that can provide a degree of damage control until some more comprehensive solution comes along.

Ultimately, that more comprehensive solution must be a change to the law itself. Although many observers may question whether *Feist* sets the correct course for the copyright protection of factual compilations, few would suggest that the Court's reasoning was based on an incomplete or inaccurate interpretation of the current copyright law. The Supreme Court *did* interpret the copyright law correctly in *Feist*, and therein lies both the problem and the solution. The problem is that the current copyright law, as properly interpreted, provides too little protection for automated databases and other fact-based compilations. The only true solution, then, is to change the law.

A. *Legislative Roadblocks*

Of course, changing copyright law is a solution that is easy to suggest but far from easy to achieve. The first challenge will be to convince Congress that this is a legislative task worth undertaking. The 1986 report by the Congressional Office of Technology Assessment could help here, since it shows that Congress's own research arm is already convinced that the issue of intellectual property rights in information is of vital national concern.[174] The second challenge will be to build a legislative proposal that balances the industry's interest in copyright protection with the public's interest in maintaining the free flow of factual information. This will not be a simple task, either, since any proposal that provides for any level of proprietary interest in facts will run counter to the originality standard on which the current copyright law is built. Moreover, because the Supreme Court has determined that originality is a constitutional re-

171. OTA Report, *supra* note 15, at 225.
172. U.S. Const. art. I, § 8, cl. 8.
173. *See supra* text accompanying notes 122-35.
174. OTA Report, *supra* note 15.

quirement,[175] any change to the statute that bases copyright protection on anything other than original expression, selection, or arrangement risks being found unconstitutional. Ultimately, this constitutional concern may be the most formidable roadblock facing any legislative effort to thicken the level of copyright protection available to databases and other factual compilations.

B. *Hoping for the Best*

One option for Congress is simply not to concern itself with this potential constitutional obstacle during the legislative process and to hope for a favorable ruling from the Court once a revised copyright statute is signed into law. In *Feist*, the Supreme Court chastised those lower courts that adhered to the "sweat of the brow" standard, going to great lengths to show how this standard was derived from an unconstitutional interpretation of the copyright statute.[176] But chastising Congress for exercising its constitutional authority to enact copyright legislation in an unconstitutional manner would be a different matter, particularly if the statute as modified did display a carefully considered balance between the incentive interests of the information industry and the public's interest in maintaining unrestricted access to factual information. As the Second Circuit has pointed out, "[i]t is not for the courts to second-guess"[177] Congress on such matters, especially when the statute in question was subjected to extensive debate and analysis during the legislative planning process.[178]

Given that it presents one such balanced and carefully considered approach, Professor Ginsburg's proposal[179] would be an appropriate starting point for this legislative planning. By granting database publishers a heightened level of copyright protection, legislation based on Ginsburg's plan would provide the information industry with increased incentive to produce new and original compilations. At the same time, by compelling publishers to license data to second-comers, a revised copyright statute based on Ginsburg's model should provide the public with sufficient access to the facts contained in copyrighted compilations. But Ginsburg's recommendation that second-comers who license data should be prevented from creating competing works could prove problematic, since this means that the licensed data would come with proprietary strings attached, and since the Court expressly allowed a second-comer to create just such a directly competing work in *Feist*. Assuming that this noncompete provision is not present in the copyright statute as revised, information publishers would need to find solace in the fact that they would at least be compensated, through licensing fees, for these competing uses.

175. *See supra* text accompanying notes 34-40.
176. *See supra* text accompanying notes 63-65.
177. Authors League of Am., Inc. v. Oman, 790 F.2d 220, 224 (2d Cir. 1986).
178. *Id.* at 224.
179. *See supra* text accompanying notes 150-57.

Although many publishers might consider this to be small consolation, it would certainly be both greater consolation and greater compensation than that provided by the current copyright law following *Feist*.

C. *Alternate Authority: Calling on the Commerce Clause*

Rather than simply hoping for a favorable response from the Court, Congress could take a second, more preemptive approach to the constitutional questions raised by legislative efforts to broaden the protection available to compilations under the copyright statute. As established earlier, these concerns exist because the Supreme Court has determined that originality is a requirement under Article I, Section 8, Clause 8 of the Constitution—the copyright and patent clause on which legislative authority for the current copyright law is founded.[180] It would seem to follow, then, that Congress could avoid this constitutional confrontation altogether by basing its authority on one of the other legislative powers enumerated in Article I. For this strategy to work, however, Congress must find a second source of constitutional authority that would make the enactment of an alternative copyright statute a legitimate exercise of legislative power. The second source that seems most capable of filling this bill is Article I, Section 8, Clause 3 of the Constitution—the commerce clause.

1. The Commerce Clause as Second Source

Professor Nimmer has suggested that using the commerce clause as a second source of constitutional authority for federal copyright protection is a legislative strategy that might well work. Noting that "most of the copyright industries are either engaged in interstate commerce, or directly affect such commerce,"[181] Nimmer has concluded that "[u]nless it were held (as seems unlikely) that the express authority of the Copyright Clause by implication precludes Congress from enacting copyright legislation based upon another constitutional authority, it seems most probable that the commerce clause could offer an authoritative basis for copyright legislation."[182] Although there are no precedents that establish express "authority . . . for this proposition,"[183] there is some Supreme Court dicta that has at least opened the door.[184] The most recent and most explicit support comes from the Second Circuit, which criticized the plaintiff's argument in a 1986 case for "fail[ing] to acknowledge that the copyright clause is not the only constitutional source

180. *See supra* notes 34-40 and accompanying text.

181. M. Nimmer & D. Nimmer, Nimmer on Copyright § 1.09, at 1-61 (1991).

182. *Id.*

183. *Id.*

184. "Where the need for free and unrestricted distribution of a writing is thought to be required by the national interest, the Copyright Clause and the Commerce Clause would allow Congress to eschew all protection." Goldstein v. California, 412 U.S. 546, 559 (1973).

of congressional power"[185] for justifying the scope of copyright legislation, and for failing to note that the commerce clause may serve as an alternate source of that power.[186]

2. Reaching Automated Databases Through the Commerce Clause

The commerce clause provides Congress with the power "[t]o regulate Commerce with foreign Nations, and among the several States."[187] The Supreme Court has held that this power is "plenary and complete in itself"[188] and that it "may be exercised to its utmost extent, and acknowledges no limitations other than are prescribed in the Constitution."[189] Given this broad mandate, Congress would appear to face little difficulty finding sufficient authority to regulate the automated information industry under the commerce clause. Automated databases certainly seem to operate like a form of interstate commerce, with most large systems engaging in the direct sale and shipment of data over interstate telephone lines. In fact, through the use of satellite and international telephone links, the information from automated databases often crosses international boundaries, bringing automated databases within congressional authority "[t]o regulate Commerce with foreign Nations."[190] In addition, the electronic information industry has already assumed a critical and far-reaching role within the United States economy,[191] giving Congress all the more reason and justification to promote the continued growth of the industry through appropriate legislation.

3. Regulating the Copyright Status of Automated Databases Through the Commerce Clause

The preceding section suggests that Congress should have no trouble using the commerce clause as an alternate authority for enacting copyright legislation. But what would a *sui generis* copyright law based on this alternate authority look like? Freed from the limiting language of the copyright and patent clause, Congress could conceivably run wild, granting authors and creators complete, perpetual property interests in their works. In the case of legislation aimed at automated databases, such an extreme approach might result in database publishers obtaining total exclusivity over the data that they have collected and compiled.

Although such an extreme legislative solution is certainly a possibility, several considerations suggest that Congress would be much more likely to travel a more moderate path. First, for many of the same policy reasons that underlie the restrictions on copyright scope and duration con-

185. Authors League of Am., Inc. v. Oman, 790 F.2d 220, 224 (2d Cir. 1986).
186. *See id.* at 224.
187. U.S. Const. art. I, § 8, cl. 3.
188. United States v. Wrightwood Dairy Co., 315 U.S. 110, 119 (1942).
189. *Id.*
190. U.S. Const. art. I, § 8, cl. 3.
191. OTA Report, *supra* note 15, at 225.

tained in the current copyright law,[192] Congress would probably conclude that granting exclusive, perpetual rights in intellectual properties is simply not a good idea. This is especially true when the intellectual property in question is a factual compilation, since Congress and the courts have historically "recognize[d] a greater need to disseminate factual works than works of fiction or fantasy."[193] Second, any legislation that provided such comprehensive property interests in data would invite strong constitutional challenges, particularly challenges based on first amendment, "free flow of information" concerns.[194]

Assuming that it decides against pursuing an extreme legislative solution, there are a number of more moderate approaches that Congress could take to granting database publishers extended protection against second-comers. For example, Congress could simply codify the misappropriation or unfair competition remedies discussed earlier,[195] providing database publishers with direct relief in federal court against second-comers who use stolen data to construct competing services. Alternatively, Congress could employ its authority under the commerce clause to enact a version of Professor Ginsburg's plan, coupling limited copyright protection with compulsory licensing. In adopting either of these or any other approach, the goal of Congress's legislative efforts should always be the same: providing database publishers with increased incentive to produce new and expanded compilations while at the same time protecting public access to factual information.

CONCLUSION

Feist is, above all, a Supreme Court edict that anoints the original selection and arrangement standard as the only true judicial measure for determining the copyright status of automated databases and other factual compilations. But because many automated databases do not display a degree of original selection and arrangement that is sufficient to satisfy this standard, *Feist* has left many databases unprotected from second-comers who would appropriate data to create competing services. This in turn has left many database publishers with little incentive under the current copyright law to produce new or expanded works.

Given the increasingly critical role that the electronic information industry will play in the nation's economy, it is in the public interest to construct a copyright framework that provides this incentive. While tort remedies such as misappropriation and unfair competition may perhaps provide publishers with some degree of protection against data theft, these are limited measures at best. Ultimately, a more comprehensive solution must be founded on changes to the copyright law itself.

192. *See supra* text accompanying notes 31-33, 47-49.
193. Harper & Row, Publishers, Inc. v. Nation Enters., 471 U.S. 539, 563 (1985).
194. *See supra* note 19 and accompanying text.
195. *See supra* text accompanying notes 122-30.

But changing the law will not be easy, particularly since the Supreme Court has determined that original selection and arrangement is a constitutional requirement under the copyright and patent clause. With this in mind, Congress may be better off basing a statutory solution on the alternate authority available through the commerce clause. In any event, the legislative solution pursued by Congress must display a careful balance between the incentive interests of the information industry and the public's interest in maintaining unrestricted access to factual information. Given that it would protect both of these competing interests, a legislative proposal that combines an increased level of copyright protection with compulsory licensing may provide just such a solution.