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THE JOURNAL OF APPELLATE PRACTICE AND PROCESS

THE EVOLUTION OF RESEARCH

TECHNOLOGICAL DEVELOPMENTS IN LEGAL RESEARCH

Lynn Foster* and Bruce Kennedy**

This article will describe how new technologies have made possible new types of legal research and new means of access to the law. The focus will be on appellate decisions. The article will trace the history of the publication of appellate decisions in the United States and their conversion to electronic form, the subsequent changes in the nature of legal research, and the debate over who owns the different forms of case law. The authors will speculate on the future of the dissemination of appellate decisions and legal research.

I. THE WORD ON PAPER

The first "technology" to produce common law decisions was that of judges' or scriveners' hands wielding pens.[1]

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1. For a good historical anthology of selections concerning the history and reasoning behind legal research publishing, see generally *Legal Research: Historical Foundations of the Electronic Age* (George S. Grossman ed., Oxford U. Press 1994).

Decisions recognizable as ancestors of those of today were first published in the English "Year Books"—manuscript books so called because the cases were grouped by regnal years—beginning in the thirteenth century. The first "technological revolution"—the invention of the printing press in the fifteenth century—enabled judges' decisions to be printed and widely disseminated for the first time.[2] The entrepreneurs who gathered, edited, annotated, published and sold the decisions of judges are referred to today as the "nominative reporters," as are the sets themselves. The institution of the nominative reporter crossed the Atlantic and took hold in America, and our earliest state appellate decisions appeared in sets published by nominative reporters.[3] By the mid-nineteenth century, however, the various series of nominative reports had been superseded in most states by "official" reports, edited by state-employed reporters of decisions and published under the auspices of state governments. However, official reports were often slow to be published because it took a year or two for a court to issue enough decisions to fill a volume.

In 1879, a young law book salesman turned publisher, John B. West, listened to the complaints of attorneys and decided to publish a multi-state "regional" reporter, the first of its kind, containing the decisions of five states—Iowa, Minnesota, Michigan, Nebraska, Wisconsin, and the Dakota Territory. By 1887, regional and federal reporters, all published by West, provided attorneys access to all state and federal appellate decisions deemed publishable by the courts.[4]

Reporters alone were not sufficient to perform research in case law. Because reporters lacked comprehensive subject

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2. See generally M. Ethan Katsh, *The Electronic Media and the Transformation of Law* (Oxford U. Press 1989) for a discussion of how the technology of printing changed the nature of law.

3. See Frederick C. Hicks, *Materials and Methods of Legal Research* 130-38 (3d rev. ed., Lawyers Coop. Publg. Co. 1942) for a discussion of the beginning of law reporting in the United States. *The Bluebook: A Uniform System of Citation* (17th ed., Harvard L. Rev. Assn. 2000) lists nominative reporters in Table 1. While not every state had them, they are cited in Alabama, Connecticut, Delaware, the District of Columbia, Illinois, Indiana, Iowa, Kansas, Kentucky, Massachusetts, Michigan, Mississippi, New York, North Carolina, Pennsylvania, South Carolina, Tennessee, Vermont, Virginia, and Wisconsin.

4. See generally William W. Marvin, *West Publishing Co.: Origin, Growth, Leadership* 23-49 (1969) for the history of the formation of West's enterprise and a chronology of the National Reporter System.

indexes, lawyers turned to separate sets called "digests" when seeking cases by subject. West offered digests, as well as reporters, based on West's indexing "key number system" of over 400 topics and approximately 100,000 subdivisions or "key numbers."[5] The first volume of West's *Century Digest*, covering all state and federal cases from 1658 to 1896, was "the sensation" of the 1897 annual meeting of the American Bar Association.[6]

As the volume of cases grew by leaps and bounds during the nineteenth century, lawyers found it more and more difficult to keep track of the precedential value of cases themselves. Having found a relevant case, attorneys next needed to determine whether it was still "good law." Had it been, best of all, cited as precedent by subsequent cases? Had it never been cited at all by subsequent cases? Or had it been distinguished, or, worst of all, overruled by a later case? In 1873, an enterprising vendor named Frank Shepard made available gummed strips—"annotation pasters"—that could be pasted into volumes of *Illinois Reports*.[7] The strips evolved into the red volumes of Shepard's citators, which are found in every law library. These books allowed researchers to look up the citation of a case and see where, if anywhere, it had been cited and how it had been treated. Shepard's Publishing Company published case and statutory citators for all American jurisdictions.

Thus, two publishers, West and Shepard's, covered the "waterfront" of appellate case law publication, providing the full text of cases, subject indexing of case law, and an updating service. From our vantage point today, it seems as though this system, which worked well for almost a century, sprang into being fully formed from the foreheads of John B. West and Frank Shepard. But it is important to note that the decades of stable legal research tools were preceded by a period of volatility, from which only a comparative few publishers with national coverage survived. It took decades for this new framework to evolve.

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5. *West's Analysis of American Law: With Key Number Classifications* v (West Publg. Co. 1994).

6. Marvin, *supra* n. 4, at 73-74.

7. Thomas A. Woxland & Patti J. Ogden, *Landmarks in American Legal Publishing: An Exhibit Catalog* 43 (West Publg. Co.).

For example, during the 1870s and 1880s, other publishers also released sets that combined judicial opinions from groups of states—the *West Coast Reporter*, the *Eastern Reporter*, and the *Central Reporter*, to name a few.[8] Eventually, West won the competition, obtaining the subscription lists of its failed competitors in the process.[9] From the 1850s through the 1870s, Little, Brown & Company published a comprehensive digest of American case law, the *United States Digest of Decisions*. However, West could produce a digest at less cost because it was already indexing the cases published in its reporters. Thus, the appearance of West's new digest resulted in the expiration of the *United States Digest*.[10] Even Shepard's faced competition from two Texas attorneys, who were the first to publish a citator in book form. In 1894, the Texans agreed to compile a National Reporter Citator for West Publishing Co., but it failed after only three volumes.[11]

Given the rapidly increasing amounts of case law in the United States, some publishers sought to provide only selected "leading cases" with commentary as the chief method of legal case law publishing. One such set was "a revision and compilation of our American reports, from which will be rejected obsolete, overruled and merely local cases, and a selection made of authoritative, well-considered cases of general importance, with a careful and accurate statement of the points actually decided."[12] *American Law Reports*, published by Lawyers Co-operative, is a modern descendant of that philosophy. The intent was that selective sets could serve for coverage outside of one's own state, instead of the comprehensive West sets. Ultimately, both the West "comprehensive" approach and the Lawyers Co-op "selective" approach proved to be successful, and neither caused the demise of the other.

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8. Marvin, *supra* n. 4, at 40-41.

9. *Id.*

10. *Id.* at 69.

11. Woxland & Ogden, *supra* n. 7, at 43-44.

12. Grossman, *supra* n. 3, at 70 (quoting Object of the "American Decisions," 1 Am. Dec. v-x (1878)).

By the beginning of the twentieth century, the paradigm of appellate case law research for the next seven decades was set.[13] Yet, even so, some research questions were completely beyond the capacity of existing tools. Could a researcher find all cases argued by a particular attorney or all majority opinions written by a particular judge? Not unless the researcher wished to pull all of the reporter volumes that could possibly contain such decisions and check each case. These types of questions were essentially unanswerable. Others were difficult to research easily, such as decisions in new areas of the law not yet classified in the digest indexing system or decisions in areas that fell among two or more widely separated key numbers.

II. DIGITIZING THE WORD

By the 1960s, the computer began to make inroads into legal publishing and research. The first efforts to put case law into machine-readable form were carried out by United States government agencies. The first such database was Finding Legal Information Through Electronics ("FLITE"), which was created in 1963 by the United States Air Force and which contained the full text of United States Supreme Court cases back to 1937.[14] By 1971, the Department of Justice had created the Justice Retrieval and Inquiry System ("JURIS"), which included the FLITE decisions, among others. Neither of these databases was available to the public, however.[15]

LEXIS, created by the Mead Data Corporation, began in 1973 to offer the first commercial full-text case service. Westlaw was introduced two years later, as a headnotes-only database that was soon transformed to contain the full text of decisions. The addition of data and software capabilities

13. See Robert C. Berring, *Collapse of the Structure of the Legal Research Universe: The Imperative of Digital Information*, 69 Wash. L. Rev. 9 (1994) for an argument as to how strong, yet comparatively invisible, this paradigm was.

14. James H. Wyman, *Freeing the Law: Case Reporter Copyright and the Universal Citation System*, 24 Fla. St. U. L. Rev. 217, 254 (1996). The decisions are available today on the Internet. *See generally* FLITE, *Supreme Court Decisions, 1937-1975* <http://www.fedworld.gov/supcourt/index.htm> (last updated July 26, 2000).

15. *See* William G. Harrington, *A Brief History of Computer-Assisted Legal Research*, 77 L. Lib. J. 543 (1984-85). For a discussion of the later history of these databases, see Wyman, *supra* n. 14, at 254-58.

followed the same general progression in both LEXIS and Westlaw:

- *Full text of primary authority*: first cases, then statutes, and, finally, administrative law.
- *Rivals to Shepard's*: first LEXIS's AutoCite, then Westlaw's InstaCite. For two decades Shepard's was available on both LEXIS and Westlaw, but now it is available solely on LEXIS.[16] Westlaw now offers KeyCite, its substitute.
- *Full text and searchability* of large numbers of unpublished appellate decisions.
- *Full text of secondary authority*, beginning with law review articles and followed with selected treatises and looseleaf services.
- The ability to *automatically run searches* (Eclipse on LEXIS and PDQ on Westlaw).
- The availability of large databases of *non-legal materials*, from NEXIS (LEXIS) and DIALOG (Westlaw). Eventually these non-legal components have grown into vast quantities of data containing public records, business information, and medical information.
- *Hypertext*[17] capability, linking the reader to the full text of sources cited in the search results.

16. Shepard's Citator has been an interesting skirmish line in the larger business war between LEXIS/NEXIS and The West Group. In July 1998, Reed Elsevier completed the purchase of Shepard's for its LEXIS/NEXIS subsidiary. At that time, Shepard's citator was a staple service on both LEXIS and Westlaw. Foreseeing the end to its access to Shepard's, West developed Keycite as a competing information product, and it launched it before the license to use Shepard's in Westlaw expired on July 1, 1999. After the license expired, if a researcher using the web version of Westlaw clicked on the Shepard's icon to access the citator, the researcher was informed that Shepard's was no longer available on Westlaw and then the researcher was seamlessly transported to Keycite. LEXIS successfully obtained a temporary restraining order against The West Group to prevent use of Shepard's trademarks to lead customers to West's competing product. *See Shepard's Co. v. The Thompson Corp.*, No. C-3-99-318, 1999 U.S. Dist. LEXIS 21051 (S.D. Ohio, July 15, 1999); *see also LEXIS-NEXIS and Shepard's Granted Temporary Restraining Order Against The West Group*, Bus. Wire (July 15, 1999) (available in LEXIS, News library, CURNWS file).

17. Hypertext is one of the chief differences between printed text and electronic text. It allows electronic text to become "three-dimensional" because, by clicking on a citation, the reader can "jump" to another document.

- *"Natural word" searching*: the capability of using a built-in thesaurus and no longer having to frame a search within the parameters of Boolean logic.[18]
- The *upgrading of the West digest capabilities*, so that not only the headnotes but also the full hierarchical structure of the West key number system is searchable and hyperlinked.

The race between the two products continues today, and both LEXIS and Westlaw have evolved into important legal research tools that have replaced books in many a legal office. Their size is vast. For example, today LEXIS-NEXIS contains 11,400 databases, adds 8.7 million documents each week, and has 2.1 million subscribers worldwide.[19]

At the same time that these massive online databases grew, beginning in the late 1980s, publishers began to introduce first, secondary authority, and later, primary authority on CD-ROM disks. These disks were less expensive than online access, faster, and offered hyperlink ability as well, but they were obviously hampered by the amount of data they could hold. LOIS[20] was the first publisher to issue primary authority (current statutes and several decades of cases), by state, on CD-ROM disks. In jurisdictions with a relatively "small" amount of law, both the statutes and several decades worth of case law could fit onto a single disk.

During the 1990s, the invention and development of the World Wide Web ("Web") opened the Internet to widespread use by governments, educational institutions, businesses, and private citizens worldwide. The Internet became another electronic medium for legal publishing. LOIS, LEXIS, and

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18. George Boole invented Boolean logic. Consisting of the connectors AND, OR, and NOT, and the ability to "nest" multiple connectors in the same search, it is used by most computer search engines. For a good brief explanation of Boolean logic on the Internet, see University at Albany Libraries, *Boolean Searching on the Internet: A Primer in Boolean Logic* <http://www.albany.edu/library/internet/boolean.html#primer> (last updated Aug. 2000).

19. LEXIS-NEXIS, *The Famous LEXIS-NEXIS Database* <http://www.lexis-nexis.com/lncc/about/company.html> (accessed Sept. 24, 2000).

20. LOIS is based in Van Buren, Arkansas; it first introduced its CD-ROM disks in 1989. LOIS, *Loislaw.com: The Electronic Law Library* <http://www.corporate-ir.net/ireye/ir_site.zhtml?ticker=lois&script=2100&layout=12> (accessed Sept. 24, 2000). LOIS is on the Web. *See generally* LOIS, *Loislaw.com: The Electronic Law Library* <http://www.loislaw.com> (accessed Sept. 24, 2000).

Westlaw moved to the Web, accompanied by most print legal publishers. In addition, courts themselves began to host their own free websites. We are beginning to see some legal information published *solely* in electronic form, available *solely* on the Internet.[21] It is clear that we are once again in period of volatility, caused by the conversion of legal information to electronic form.

III. THE TRANSFORMATION OF LEGAL RESEARCH

Legal information has not just been converted; it is in the process of being transformed. The transformation, thus far, has several aspects. The first is clearly *speed of access*. Where the attorney once walked from digest to reporter volume to reporter volume to Shepard's, and carried on research surrounded by a pile of books, she can now sit at the computer and gain access to databases larger than most law libraries. A click of the mouse takes her to the text of a case cited by the one she is reading. Another click reveals the status of the case as precedent. An issue typed in verbatim from the draft of a brief retrieves twenty cases directly on point. Real property records used to be accessible only by contacting the courthouse of the county where the property was located. Now this information is available to someone on the other side of the world, within seconds of the request.

A secondary advantage, as mentioned above, is the *ability to acquire information previously inaccessible*. By using Westlaw, LEXIS, or similar databases, an attorney due to appear before a panel of judges in, say, an employment discrimination case can discover how each of these judges has ruled in previous employment discrimination cases. Or a researcher running a subject search on a computer will retrieve unpublished as well as published cases. These unpublished cases were completely

21. *See e.g.* Electronic Law Journals Project at the University of Warwick, *Journal of Information Law and Technology* <http://elj.warwick.ac.uk/jilt/default.htm> (accessed Sept. 24, 2000); Indiana University School of Law—Bloomington, *Indiana Journal of Global Legal Studies* <http://www.law.indiana.edu/glsj/glsj.html> (last updated Mar. 6, 2000); The Intellectual Property and Technology Forum, *The Intellectual Property and Technology Forum at Boston College Law School* <http://infoeagle.bc.edu/bc_org/avp/law/st_org/iptf/index.html> (accessed Sept. 24, 2000).

inaccessible in the past, when they were undisseminated and unindexed.[22]

However, the picture is not quite as rosy as the previous paragraphs might suggest. Most of these features are only available on the two major national online services, LEXIS and Westlaw. From the beginning, some of the founders of automated legal research held it out as a tool that would be used by solo and small firm practitioners, thus leveling the playing field between them and large firms and thereby benefiting middle- and lower-income clients.[23] However, LEXIS and Westlaw were so expensive originally that only larger firms used them. Different pricing plans have been slow to develop, and not until recently have vendors such as LOIS, VersusLaw,[24] and, most recently, Quicklaw,[25] entered the market specifically aimed at solo and small practitioners, putting pressure on Westlaw and LEXIS to keep their prices lower.[26]

IV. WHO OWNS THE LAW?

Who owns the law? These four words launch a story with as many twists and turns as the *Odyssey*. It begins in 1834 with

22. For example, a search of *prisoner and habeas corpus and date after 1/1/1998* in the United States Court of Appeals for the Eighth Circuit on LEXIS retrieves seventy-seven decisions, of which fifteen are unpublished.

23. *See* Harrington, *supra* n. 15, at 549 n. 3; Diana Fitch McCabe, *Automated Legal Research: A Discussion of Current Effectiveness and Future Development*, 54 Judicature 283 (1971).

24. VersusLaw was originally founded in 1985 and migrated to the Web in 1995. VersusLaw, *VersusLaw Company History* <http://www.versuslaw.com/Global/background.asp> (accessed Sept. 24, 2000).

25. Quicklaw is Canada's legal research database. It has recently added American law and moved into the American market, and, as of this writing, was announcing a partnership with the Chicago Law Publishing Company and a special research product for Chicago attorneys. Quicklaw, Inc., *Quicklaw* <http://www.quicklaw.com/en/home.html> (accessed Sept. 24, 2000).

26. For a description of how LOIS has forced price drops by LEXIS and West in the CD-ROM market, see Kendall F. Svengalis, *The Legal Information Buyer's Guide and Reference Manual* 122-23 (Rhode Island LawPress 1998-99). See *id.* at 130-67 for an excellent discussion of online legal research databases and legal research on the Internet in general. It is difficult to compare the pricing of Westlaw and LEXIS, but Svengalis presents a cogent summary.

Wheaton v. Peters,[27] in which the United States Supreme Court considered the copyrightability of its own opinions.

Wheaton—a suit between the third and fourth Reporters of Decisions of the United States Supreme Court—arose when the defendant reporter republished his predecessor's reports without authorization. The plaintiff contended that the re-publication infringed his copyright in his reports. The Court rejected the infringement claim, holding that "no reporter has or can have any copyright in the written opinions delivered by this court; and that judges thereof cannot confer on any reporter any such right."[28]

Wheaton is clearer in its holding than in its reasoning.[29] The Court unequivocally rejected the reporter's copyright in the Court's opinions to facilitate public access to the law. However, the statutory interpretation behind the decision is obscure. The governing copyright statute—the Copyright Act of 1790—extended protection to "any map, chart, book or books."[30] Because the law reports were cast in the form of books, the Court obviously carved out an exception to the statute, but did so for unexplained reasons. The reasoning would emerge fifty-four years later in *Banks v. Manchester.*[31]

Banks v. Manchester considered the copyrightability of opinions from state court judges. The plaintiff, a law publisher, produced certain volumes of Ohio court reports under an exclusive contract with the state and secured a copyright in the reports for the State of Ohio. The defendant, another law book publisher, reprinted only the portion of the reports produced by the judges. The Supreme Court found no infringement, reasoning that neither the judges nor reporters could claim any copyright in judicial work products. First, as a simple matter of fact, the Court observed that the reporter is not the actual author of the opinions.[32] Then the Court declared, as a matter of public

27. 33 U.S. 591 (1834).

28. *Id.* at 668.

29. *See* L. Ray Patterson & Craig Joyce, *Monopolizing the Law: The Scope of Copyright Protection for Law Reports and Statutory Compilations*, 36 UCLA L. Rev. 719, 735 (1989).

30. Act of May 31, 1790, ch. 15 § 1, 1 Stat. 124, 124 (1790) (repealed by Act of Feb. 3, 1831, ch. 16, § 14, 4 Stat. 436, 439 (1831)).

31. 128 U.S. 244 (1888).

32. *Id.* at 250.

policy, that judges had no exclusive proprietary interest in their opinions.[33] On the latter point, the Court expounded on the meaning of *Wheaton*:

> Judges, as is well understood, receive from the public treasury a stated annual salary, fixed by law, and can themselves have no pecuniary interest or proprietorship, as against the public at large, in the fruits of their judicial labors. This extends to whatever work they perform in their capacity as judges, and as well to the statement of cases and head notes prepared by them as such, as to the opinions and decisions themselves. The question is one of public policy, and there has always been a judicial *consensus*, from the time of the decision in the case of *Wheaton v. Peters*, that no copyright could under the statutes passed by Congress, be secured in the products of the labor done by judicial officers in the discharge of their judicial duties. The whole work done by the judges constitutes the authentic exposition and interpretation of the law, which, binding every citizen, is free for publication to all, whether it is a declaration of unwritten law, or an interpretation of a constitution or a statute.[34]

The public policy articulated in *Wheaton* and *Banks* remains sound law but is no longer the sole reason why federal judicial opinions cannot be copyrighted. In the 1909 Copyright Act, Congress added a provision that states that copyright protection is not available for works created by the United States Government.[35] This provision—now codified at 17 U.S.C. § 105—obliquely advances the policy articulated in *Wheaton*. The provision effectively precludes both governmental and commercial printers from monopolizing the text of government

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33. *Id.* at 253.

34. *Id.* (citation omitted).

35. This 1909 copyright provision was initially enacted in 1895 as part of legislation to reorganize the Government Printing Office. Act of June 12, 1895, ch. 23 § 52, 28 Stat. 601, 608 (1895). The provision was prompted by a desire to prevent a particular private party who had purchased a duplicate set of printing plates to certain government publications from using the plates to profit on the sale of the publications. Despite this nearly private purpose, the language of the prohibition was framed in general terms and so denies all printers—public and private—a copyright monopoly over government works. Without fanfare, the provision was incorporated into the 1909 Copyright Act, where, with minor amendments, it has since remained. *See* Brian R. Price, *Copyright in Government Publications: Historical Background, Judicial Interpretation, and Legislative Clarification*, 74 Mil. L. Rev. 19, 28-30 (Fall 1976).

publications. Because of this provision, public access to federal court opinions has been maintained through a mixed economy of public and private publishers. Critics may contend that the private side of this mixed economy has not been sufficiently robust, thus leading to the dominant position of the West Publishing Company. However, the "playing field" created by section 105 has been level enough to allow competing sources for court opinions to spring forth with each new wave of electronic information technology.[36]

A. Copyrightability of Editorial Enhancements

Court opinions have long been published with supplemental material that assists the reader and researcher. Varying over time, this material has consisted of "arguments of counsel," the "statement of the case," the case "synopsis," the "syllabus," and the "headnotes," organized by digest "topics" and "key numbers." Copyright protection of these enhancements depends on who creates them.

In *Banks v. Manchester*, the Supreme Court concluded that if it is produced by judges, this supplemental material lies in the public domain, along with the text of the court's opinions.[37] In a companion case, *Callaghan v. Myers*,[38] the Court addressed whether "headnotes," "statements of facts," and the "arguments of counsel" prepared by a reporter are the proper subject of copyright protection. The Court concluded that nothing in the copyright statute prevented a reporter—as author—from obtaining a copyright in "matter which is the result of his intellectual labor."[39] Thus, under *Callaghan*, the reporter could obtain a copyright in a volume of court reports; however, the copyright covers only the parts of the books of which he is the author, and not the judicial opinions.

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36. Mainframe and modem technology begat LEXIS as a competitor to West Publishing; then CD-ROM technology gave birth to a host of new electronic law publishers, such as Loislaw.com. With the advent of the Internet, government and academic websites now serve as alternative sources for judicial opinions. So information technology has, by small degrees, diminished West's dominance in the law publishing industry.

37. 128 U.S. 244, 253 (1888).

38. 128 U.S. 617 (1888).

39. *Id.* at 647.

B. Other Elements Claimed by Publishers

The next copyright disputes concerned the arrangement and pagination of cases in a reporter. A close reading of *Callaghan* suggested that marginal intellectual work product, such as ordinary case arrangement and pagination, may not be eligible for copyright protection.[40] However, the issue was squarely presented in *Banks Law Publishing v. Lawyers' Co-operative Publishing*.[41] The case arose when The Lawyer's Co-operative Publishing Company ("LCP") published the same United States Supreme Court decisions that were available in the U.S. Reports published by Banks. However, LCP reprinted cases in the same order and added "star paging" to the Banks pages. The Second Circuit Court of Appeals held that these two features were not important enough to merit copyright protection.

The *Lawyer's Co-op* decision slumbered as settled law while technology repackaged court reports into the first generation of digital law libraries. Its repose was shaken when two titans of electronic legal publishing—West Publishing Company and Mead Data Central—squared off in litigation that arose when Mead decided to put star page numbers from the West National Reporters into the LEXIS database.[42]

At issue was whether systematic inclusion of West's pagination in LEXIS would violate West's compilation copyright in its reports. Mead sought to characterize West's infringement claims as a bald assertion of copyright in ordinary pagination using the Arabic numbering system.[43] The Eighth Circuit, however, rejected this characterization and held that systematic reproduction of West's pagination would violate West's copyright in the arrangement of the cases within the National Reporter System.[44]

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40. *See* Patterson & Joyce, *supra* n. 29, at 738.

41. 169 F. 386 (2d Cir. 1909).

42. *West Publg. Co. v. Mead Data Central, Inc.*, 799 F.2d 1219 (8th Cir. 1986), *cert. denied*, 479 U.S. 1070 (1987).

43. *Id.* at 1228.

44. *Id.* at 1227. The Eighth Circuit panel was concerned that the star paging, if used in conjunction with the LEXSEE feature of LEXIS, would enable a researcher to recreate on her computer terminal the same arrangement of cases that appear in the corresponding West reporter volume. The court gave short shrift to the fact that few, if any, researchers would ever engage in this time-consuming and expensive recreation of a West volume. *Id.*

Scholars and popular commentators alike criticized the *West-MDC* decision as a new barrier to public access to the law.[45] Although the Supreme Court declined to review *West-MDC*,[46] the Court implicitly undermined the decision in *Feist Publications, Inc. v. Rural Telephone Service Co.*[47]

In *Feist*, the publisher of a telephone directory claimed that a competing publisher had infringed its compilation copyright by copying some of its white pages. At trial, the plaintiff was able to show that it had compiled its directory through considerable labor and expense, and that the defendant systematically copied telephone listings from the plaintiff's directory without consent. Nevertheless, on this record, the Supreme Court found no infringement. The Court expressly rejected the "sweat of the brow" test to establish copyrightability. Instead, the Court focused on "originality" as an essential element of authorship. The Court reasoned that the white pages—a mere listing of names, towns, and telephone numbers that were organized in a simple, alphabetical arrangement—did not rise above a mass of uncopyrightable facts to an original work.[48] Lacking minimal originality, the work was not copyrightable. *Feist* cast a dark shadow on the copyrightability of case arrangements and pagination of law reports.

Emboldened by *Feist*, critics of the *West-MDC* decision sought federal legislation that would exclude from copyright protection any data element commonly used in citations to judicial opinions, statutes, and regulations.[49] The proposed legislation would have overturned *West-MDC* by statute, but, in the face of strong opposition from the West Publishing

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Years later, West presented the same argument to the Second Circuit, which rejected the contention with the rhetorical question, "What customer would want to perform this thankless toil?" *Matthew Bender & Co. v. West Publg. Co.*, 158 F.3d 693, 706 (2d Cir. 1998).

45. *See* Patterson & Joyce, *supra* n. 29; Linda Greenhouse, *Progress Spawns Question: Who Owns the Law?* N.Y. Times B7 (Feb. 16, 1990).

46. *West Publg. Co. v. Mead Data Central, Inc.*, 799 F.2d 1219 (8th Cir. 1986), *cert. denied*, 479 U.S. 1070 (1987).

47. 499 U.S. 340 (1991).

48. *Id.* at 361-64.

49. H.R. 4426, 102d Cong. (1992).

Company itself,[50] the bill did not become law. In 1997, a new wave of litigation commenced between West Publishing and two CD-ROM publishers, Matthew Bender and Hyperlaw.[51] Both CD-ROM publishers sought a declaratory judgment that West's copyrights would not be infringed if the plaintiffs incorporated West volume and pagination information into their competing products. Hyperlaw requested an additional declaration that no copyright violation would occur if Hyperlaw scanned the texts of opinions of the Supreme Court and the United States Court of Appeals from West's publications after redacting West's syllabi, headnotes and key numbers. On the issue of star paging, the trial court granted summary judgment to the plaintiff, concluding that no infringement would occur;[52] the Second Circuit affirmed. The appellate court held that "[b]ecause the internal pagination of West's case reporters does not entail even a modicum of creativity, the volume and page numbers are not [themselves] original components of West's compilations and are not themselves protected by West's compilation copyright."[53] By so reasoning, the Second Circuit embraced *Feist* and repudiated the earlier *West-MDC* decision.

On the separate matter of scanning opinions, the appellate court meticulously examined West's editorial process in preparing judicial opinions for its publications. The court found that the editorial process resulted in two types of editorial enhancements: 1) independently composed features, such as headnotes; and 2) features consisting of the addition or rearrangement of pieces of factual information, such as adding the names of counsel to the preface of each case.[54] Enhancements of the first type are clearly original works that are fully protected by the copyright statute; however, as the court noted, Hyperlaw did not contemplate copying this supplemental

50. H.R. Subcomm. on Intell. Prop. & Jud. Admin. of the House Comm. on Jud., *Exclusion of Copyright Protection for Certain Legal Compilations: Hearings on H.R. 4426*, 102d Cong. 259 (1992).

51. *See Matthew Bender & Co. v. West Publg. Co.*, 158 F.3d 674, 676 (2d Cir. 1998); *Matthew Bender & Co. v. West Publg. Co.*, 158 F.3d 693, 699 (2d Cir. 1998).

52. *Matthew Bender & Co. v. West Publg. Co.*, 1996 WL 774803 (S.D.N.Y. Nov. 22 & 26, 1996).

53. *Matthew Bender & Co.*, 158 F.3d at 699.

54. *Matthew Bender & Co.*, 158 F.3d at 676.

material.[55] As to enhancements of the second type, the court deemed them either non-copyrightable facts or non-original arrangements of factual material.[56] While sympathetic to the scholarly care and labor of West's editorial process,[57] the court, nevertheless, saw nothing in the process that imparted any originality to the West edition of the opinions to remove them from the public domain. Indeed, a contrary conclusion would have come perilously close to privatizing the text of the law.

Feist, along with the *Matthew Bender* decisions, reaffirms the boundaries of public and private ownership interests in court reports in the era of electronic publishing. Judicial work product—be it opinions or supplemental material—remains in the public domain. Private editorial work product—if original—is copyrightable by its author. Non-original editing of public domain text by a publisher does not remove opinions from the public domain, despite the labor, skill, and expense that a publisher might expend to bring a good product to market. This last point reveals that conventional copyright ownership is a fragile legal foundation for electronic publishing.

As *Feist* and *Matthew Bender* illustrate, scanning and digital publishing technology facilitates easy capture, replication, and dissemination of vast bodies of digital information that may have been compiled through considerable sweat of the brow of an initial publisher. On one hand, this vulnerability reduces the economic incentive of publishers to mount and maintain databases of facts or noncopyrightable materials. E-publishers have sought to insulate their information products from reengineering by competitors by three strategies. One strategy is pursuit of proposed federal legislation prohibiting database misappropriation. Another strategy is to

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55. *Id.* at 677.

56. *Id.* at 683-689.

57. Indeed, as the Court noted, West's capacity to be an original author might be impaired by its role as the true and faithful copyist of the court's opinion:

> West's editorial work entails considerable scholarly labor and care, and is of distinct usefulness to legal practitioners. Unfortunately for West, however, creativity in the task of creating a useful case report can only proceed in a narrow groove. Doubtless, that is because for West or any other editor of judicial opinions for legal research, faithfulness to the public-domain original is the dominant editorial value, so that the creative is the enemy of the true.

Id. at 688.

surround their information products with security technology that is protected against tampering by the Digital Millenium Copyright Act. The third strategy is the business practice of disseminating their information under restrictive "click-wrap" licenses that will be enforced with greater ease if state governments adopt the Uniform Computer Information Transactions Act ("UCITA").[58]

Since 1996, the information industry has sought passage of federal legislation to prohibit database piracy.[59] The current iteration of the bill would amend the Copyright Act to impose civil and, in certain circumstances, criminal liability on

> any person who extracts, or uses in commerce, all or a substantial part . . . of a collection of information gathered, organized, or maintained by another person through the investment of substantial monetary or other resources, so as to cause harm to the actual or potential market of that other person, for a product or service.[60]

The Registrar of the Copyrights favors the bill as a means to afford some measure of protection for databases produced by the sweat of the brow.[61] Information professional groups oppose the legislation fearing that it may enable a publisher to market and then claim copyright-like restrictions over databases of government information.[62] Indeed, if enacted, the proposal

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58. The February 2000 draft of UCITA is available on the Internet. Nat'l Conf. of Commrs. on Unif. St. Laws, *Uniform Computer Information Transactions Act* <http://www.law.upenn.edu/bll/ulc/ucita/ucita200.htm> (last updated Oct. 3, 2000).

59. Initially the proposal came before the 104th Congress as the Database Investment and Intellectual Property Antipiracy Act of 1996, H.R. 3531, 104th Cong. (1996). Reintroduced into the 105th Congress as the Collections of Information Antipiracy Act, H.R. 2652, 105th Cong. (1998), the bill was consolidated into the Digital Millenium Copyright Act ("DMCA"), H.R. 2281, 105th Cong. (1998). The DMCA passed, but without the database antipiracy provision that was eliminated from the bill at the Conference stage of legislative process. *See* H.R. Rpt. 105-845, at 421 (Feb. 26, 1998). The antipiracy proposal was reintroduced into the 106th Congress under the same name as its predecessor as H.R. 354, 106th Cong. (1999), where it awaits final consideration.

60. Collections of Information Antipiracy Act, H.R. 354, 106th Cong. § 2 (1999).

61. H.R. Subcomm. on Courts & Intell. Prop., *Statement of Marybeth Peters Registrarr of Copyrights on H.R. 354*, 106th Cong. (Mar. 18, 1999).

62. H.R. Subcomm. on Courts & Intell. Prop., *Statement of James G. Neal, Dean, University Libraries Johns Hopkins University on behalf of the American Association of Law Libraries, American Library Association, Association of Research Libraries, Medical Library Association Special Libraries Association on Judiciary Hearing on "Collections of Information Antipiracy Act," H.R. 354*, 106th Cong. (Mar. 18, 1999).

would overturn the *Matthew Bender* decisions and presumably clear the way for publishers to produce proprietary editions of court opinions.

After *Feist*, many database vendors now rely upon technological self-help to defeat database appropriation by competitors. Generally, this entails surrounding an information product with cyber-security devices that limit access to bona-fide customers and curtail the ability of customers to download, reengineer, or share large portions of the publisher's product. Specifically, this control is achieved by security techniques such as user-passwords, digital watermarks, and encryption. Deliberately designing information products to eliminate "freeriders" would not excite much comment except that a new federal law—the Digital Millennium Copyright Act ("DMCA")[63]—seeks to make these security devices legally "tamper-proof."

The DMCA[64] amends the Copyright Act to enable the United States to honor its obligations as a party to several World Intellectual Property Organization ("WIPO") treaties. These treaties obligate all parties to provide adequate legal protection against circumvention of technological security devices used by copyright holders to protect intellectual property rights secured by the WIPO treaties.[65] To effectuate this, the DMCA adds anti-circumvention provisions to the copyright statute. A detailed analysis of these provisions is beyond the scope of this study, but the general thrust of the law is to impose civil and criminal penalties for making, selling, or using devices or services that circumvent a copyright holder's security devices in order to *access or copy* a protected work without authorization from the copyright holder.[66] Parallel provisions impose liability for using devices—technology that a publisher installs to compute or assess royalties or fees for using a copyrighted product—to

63. Pub. L. No. 105-304, 112 Stat. 2860 (1998).

64. For a discussion of the major features of the DMCA, see U.S. Copyright Office, *The Digital Millenium Copyright Act of 1998, U.S. Copyright Office Summary* <http://www.loc.gov/copyright/legislation/dmca.pdf> (last updated Dec. 1998).

65. *World Intellectual Property Organization Copyright Treaty* art. 11 (Apr. 12, 1997), <http://www.wipo.org/eng/diplconf/distrib/94dc.htm>; *World Intellectual Property Organization Performances and Phonograms Treaty* art. 18 (Apr. 12, 1997), <http://www.wipo.org/eng/diplconf/distrib/95dc.htm>.

66. *See* 17 U.S.C. § 1201 (Supp. IV 1999).

defeat the integrity of a "copyright management system."[67] Exceptions qualify these provisions, and a savings clause provides that the anti-circumvention prohibitions will not affect existing rights under the copyright law.[68] Nevertheless, critics worry that the DMCA may sanction the use of strong technology barriers to public access to noncopyrightable information.[69] For example, the DMCA could serve as the legal framework for a new generation of commercial court reports that offer case law to the public on a pay-per-view basis.

Another form of self-help is licensing. A growing number of e-publishers find their legal positions stronger if they license—rather than sell—information products to customers. E-publishers typically require customers to accept a standardized mass-market licensing agreement as a condition precedent for accessing an information product. Customer assent to the terms—often given in advance of viewing them—is achieved by physically or virtually opening the information product; hence their description as "shrink-wrap"[70] or "click-wrap"[71] licenses. These licenses commonly forbid the customer from downloading substantial portions of the vendor's database and mounting the data on the Internet or reengineering data into a competing product. Some courts have upheld such licenses as enforceable under state contract law unless they are illegal or unconscionable.[72] However, enough uncertainty exists under the current law of sales that the National Conference of Commissioners of Uniform State Laws ("NCCUSL") has drafted the Uniform Computer Information Transactions Act ("UCITA")[73] for adoption by state legislatures. UCITA seeks to

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67. *See id.* § 1202.

68. *See id.* § 1201.

69. *See* Pamela Samuelson, *Intellectual Property and the Digital Economy: Why the Anti-Circumvention Regulations Need to Be Revised*, 14 Berkeley Tech. L. J. 519, 540-41 (1999).

70. A "shrink-wrap agreement" is "placed inside the cellophane 'shrink-wrap' of computer software boxes that, by [its own] terms become[s] effective once the 'shrink-wrap' is opened." *Stomp, Inc. v. NeatO, LLC*, 61 F. Supp. 2d 1074, 1080-81 n. 11 (C.D. Cal. 1999).

71. "A 'click-wrap agreement' allows the consumer to manifest its assent to the terms of a contract by 'clicking' on an acceptance button on the website. If the consumer does not agree to the contract terms, the website will not accept the consumer's order." *Id.*

72. *ProCD, Inc. v. Zeidenberg*, 86 F.3d 1447, 1449 (7th Cir. 1996).

73. *Supra* n. 58.

create a uniform legal environment for computer information licensing transactions.[74] The Act attempts to extend established principles of contract law to frame rules for forming electronic contracts with digital signatures for computer information transactions. These transactions include trade in computer software, Internet and online information, multimedia interactive products, and computer data and databases.

UCITA proceeds on an avowed philosophy of freedom of contract—that the parties should be able to order the terms of their own transaction and have such terms honored in letter and spirit in the courts. However, much controversy surrounds shrink- and click-wrap licenses. Proponents argue that mass-market licenses are an efficient means for a supplier to settle terms with millions of individual end-users, with whom traditional negotiation is impractical, if not impossible. Opponents argue that these licenses contain many oppressive terms that are thrust upon customers through contracts of adhesion and that customers first learn of these terms only after they have purchased the product. They also argue that the customer's sole recourse is to return the product, which is an impractical option for certain dominant software programs such Microsoft products. Confronted with this debate, the drafters of UCITA refused to ban click- and shrink-wrap licenses and declined to itemize and nullify specific impermissible license terms. Instead, the drafters provided for the usual judicial nullification of "unconscionable" terms pursuant to traditional contract doctrine[75] and a "heightened unconscionability standard" to render questionable terms unenforceable.[76] Under this standard, if a contract term violates a "fundamental public policy," a court can refuse to enforce the contract or enforce the contract without the impermissible term.[77]

In addition, UCITA provides the customer with an expanded remedy beyond the mere return of the product. If a customer-licensee does not have an opportunity to review a

74. For a general analysis of UCITA, see Carlyle C. Ring, Jr., *Overview of Uniform Computer Information Transactions Act (UCITA)* <http://www.ober.com/alerts/ucita-ov.htm > (accessed Sept. 24, 2000).

75. Unif. Computer Info. Transactions Act § 111 (NCCUSL 2000).

76. *See* Ring, *supra* n. 72.

77. Unif. Computer Info. Transactions Act § 105(b).

mass-market license prior to payment, and, upon review, does not agree with the terms of the license, then the customer is entitled to 1) return the product;[78] 2) receive reimbursement of the reasonable expense of return;[79] and 3) receive compensation for the reasonable and foreseeable expenses of restoring the customer's information processing system to its status quo before the installation of the product.[80] In short, UCITA does not leave customers wholly defenseless against non-negotiated click-wrap licenses.

UCITA—and other existing state licensing laws—matter because they may circumvent the balanced set of public and private rights arising under the federal Copyright Act. The issue hinges on preemption. Logically, if federal copyright law entirely preempts state contract or licensing laws—including UCITA—then mass market licenses cannot impair access or copying rights concerning public domain information. The fear is that preemption provisions in both the Copyright Act and UCITA are narrow in scope and only protect "exclusive" (i.e., private) rights under the copyright law and do not protect the public interest in accessing public domain works.[81]

Recent litigation surrounding the publication of court reports missed an opportunity for thoughtful examination of the relationship between state claims under licensing agreements

78. *Id.* § 112.

79. *Id.* § 209.

80. *Id.*

81. For the curious, here is a brief outline of the preemption issue. UCITA contains a preemption provision that renders the law inapplicable to the extent it is preempted by federal law. Unif. Computer Info. Transactions Act § 105(a). This provision complements section 301 of the Copyright Act, which declares that federal copyright law preempts rights arising under state law that are "equivalent" to the "exclusive rights" within the general scope of copyright as specified by sections 102 and 103 of the Copyright Act. 17 U.S.C. §§ 102, 103, 301 (1994). These preemption provisions assure that mass marketing license provisions cannot abridge or adjust any of exclusive rights granted under the copyright statute. Unfortunately, sections 102 and 103 say nothing about the public's interest in noncopyrightable material—so it is not clear that the preemption provision in the copyright law reaches out to protect public domain material from becoming burdened or limited by restrictive license provisions. Such preemption was presumed until *ProCD, Inc. v. Zeidenberg*, in which Judge Easterbrook concluded that vendor rights under license provisions are not equivalent to rights secured under the Copyright Act because licensing provisions, as contract rights, are specific to the parties, while copyrights are general in nature. 86 F.3d 1447, 1454 (7th Cir. 1996). This analysis ignores the commercial reality that mass market licenses are uniform and pervasive contract terms are applied to millions of consumers, which seem as general as many federal laws.

and federal copyright law. The litigation, which spanned state and federal courts, involved Jurisline.com, an Internet law publisher, and Matthew Bender, a subsidiary of Reed Elsevier, which owns LEXIS.[82] A principal of Jurisline.com, Eichen, subscribed to a CD-ROM edition of LEXIS case law, compiled on more than sixty CD-ROMs. To complete the purchase, Eichen executed a contract in which he represented that he was a solo practitioner who would use the CD-ROMs for his own use. Eichen also assented to terms that forbade using the data to establish a competing product. Jurisline.com then redacted editorial enhancements made by LEXIS out of the data and offered the data free to the public on the Internet.

Seeking legal justification for its sharp business practices, Jurisline.com sued in federal court for a declaratory judgment. Jurisline.com sought rulings that 1) the core text of the LEXIS CD-ROMs is in the public domain; and 2) the licenses restricting the use of the core text are unenforceable because the copyright law preempts state contract and related tort law underpinning the licenses. Jurisline.com also advanced—but did not seriously pursue—an antitrust claim alleging that LEXIS and Westlaw have conspired to monopolize the market for computer-assisted legal research services in the United States.[83]

As counter offense, Matthew Bender brought an action in state court alleging fraud and breach of contract. The fraud claim was grounded in Eichen's misrepresentation that his use of the LEXIS CD-ROMs was as an individual attorney. The contract claim rested on violation of the license provisions.

Jurisline.com removed the state case to federal court and Matthew Bender sought to remand the action to state court. Remand hinged on whether or not the state claims were preempted by section 301 of the Copyright Act.[84] Section 301

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82. The federal case in this matter was filed as *Jurisline.com v. Reed Elsevier*, 99 Civ. 1186 (S.D.N.Y), and a state case was filed in New York courts as *Matthew Bender & Co. v. Jurisline.com*, 600369/00 (N.Y. County). For a compendium of litigation papers filed in the Jurisline.com suits, see *TR's Legal Research Links—Jurisline.com Articles, Court Cases, Documents and Notes* <http://showcase.netins.net/web/trhalvorson/law/jurisline.html#JurislineDocuments> (accessed Oct. 24, 2000).

83. *See* T.R. Halvorson, *Where Shall We Play Ball: Reed Elsevier and Matthew Bender Say a Major Portion of the Dispute with Jurisline.com Belongs in State Court* <http://www.llrx.com/features/jurisline6.htm> (last updated Apr. 6, 2000).

84. 17 U.S.C § 301 (1994).

preempts rights arising under state law if they are "equivalent" to the exclusive rights secured under the copyright law. In a terse, conclusory opinion,[85] the judge in *Jurisline.com* held that Matthew Bender's state claims were not preempted, relying upon Judge Easterbrook's influential decision in *ProCD, Inc. v. Zeidenberg*.[86] In *ProCD*, Judge Easterbrook distinguished between the specific contractual rights that exist between the parties to a license agreement and the exclusive property rights enjoyed by all copyright holders under the copyright law. Because the two are not equivalent in nature, copyright law does not preempt the state contract claims.[87] Borrowing this reasoning, the judge in *Jurisline.com* remanded the fraud and contract claims to the state court, effectively stripping Jurisline.com of its primary federal defense to the state claims.

Soon after deciding the motion on the preemption issue, the judge dismissed all of Jurisline.com's federal claims. With the demise of the federal case, the state court entered final judgment against Jurisline.com with the defendants' consent. The judgment declared the click-wrap licenses valid and enforceable and ordered broad remedial relief for Matthew Bender.[88]

Jurisline.com offered an unusual opportunity to clarify the conflict between state contract law and federal copyright law concerning public access to judicial opinions. Unfortunately, the court's short, conclusory opinion left the preemption issue unexamined. Moreover, the case did nothing to explore whether the more ancient, but undisturbed, layer of copyright law laid down by *Wheaton* and *Banks* may preempt enforcement of click-wrap licenses, at least as applied to judicial opinions. Sadly, these interesting and important questions await scrutiny through future litigation.

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85. *Matthew Bender & Co. v. Jurisline.com LLC*, 91 F. Supp. 2d 677 (S.D.N.Y. 2000).

86. *ProCD, Inc. v. Zeidenberg*, 86 F.3d 1447 (7th Cir. 1996).

87. *Supra* n. 45.

88. Jurisline.com was ordered to delete all records obtained from Matthew Bender from its website and storage media and was ordered to cease and desist the transmission of these records to third parties. Jurisline.com was ordered to return all of the licensed CD-ROMS to Matthew Bender and was prohibited from using the LEXIS databases except as may be authorized by Matthew Bender. The court also ordered Jurisline.com to transfer forty-eight Internet domain names to Matthew Bender. *See* T.R. Halvorson, *Jurisline.com: It's All Over, Including the Shouting* <http://www.llrx.com/extras/jurisline8.htm> (last updated June 20, 2000).

"Who owns the law?" is a question that the twentieth century could readily answer. Case law and periodic amendments to the Copyright Act established a clear system of property rights with complementary public rights. The boundaries of this property system have remained remarkably stable through unimaginable technological change and modernization of copyright law itself. Judicial writings have been consistently held in the public domain under *Wheaton*, *Banks*, and most recently, for all federal works under section 105 of the Copyright Act. Works by reporters, publishers, and other authors have been available for copyright, initially under the *Banks* decision, if the work is the result of the intellectual labor of the author and, after *Feist*, if the work meets minimum standards of originality. Non-original aspects of compilations (e.g., case arrangement, pagination, and added factual material) do not remove works from the public domain.

The key question for the twenty-first century is "who controls access to the law?" Emerging technology and laws are forming non-property barriers around information.

The thrice-proposed federal database anti-piracy legislation would essentially create a federal tort action for misappropriation.[89] The Digital Millennium Copyright Act also creates tort and criminal liability for circumvention of a publisher's database security measures. Finally, shrink- and click-wrap licenses—more easily enforced after UCITA—will give publishers state fraud and contract claims against unauthorized data use. These legal doctrines are forming a citadel of tort and contract protection around traditional intellectual property; unfortunately public domain information has been spirited away into the citadel.

V. THE FUTURE OF APPELLATE COURT REPORTS

Technology is "raising the bar" on the kind and quality of research materials that will be used by the bench and bar of tomorrow. Print reporters, digests, and citators are doomed. It is

89. This law provides sui generis protection for databases that would be unprotected after *Feist*. However, the law creates no new property interest by making such databases eligible for copyright. The law merely proclaims civil and criminal liability for misappropriating a database.

cheaper to publish electronically than in paper form. However, books themselves are not doomed. They can be easily carried, marked up, and read in various computer-hostile places, but no one reads whole reporter, digest, or citator volumes. Researchers work only with a small part of the entire volume, which is more easily printed off a computer and carried around. States that publish official reporters in paper form will cease to do so. West will eventually stop publishing printed reporters and digests. CD-ROM disks will also die out, but not as fast. They lack the currency and breadth of the Internet. Internet speed and security will continue to improve, and pricing structures will continue to diversify.

In the public sector, more courts will release their opinions on websites. Australia[90] and Oklahoma[91] are building extensive, high-quality bodies of web-based case law, creating a true digital legal record for their citizenry. Behind the scenes, better-organized and better-funded courts will use digital technology to create official registries of decisions that archive the authoritative text of each opinion issued by their judges.[92] Assuring the authenticity of electronic texts after they issue forth from a court's website is a major issue. However, this problem will recede as technology builds an arsenal of data security techniques, such as digital seals and signatures for use by clerks of court and reporters of decisions.

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90. The Australasian Legal Information Institute ("AustLII") was established in 1995 by law professors at the University of Technology, Sydney, and the University of New South Wales. Today it contains the full text of primary authority of various Australian jurisdictions totaling over 1.5 million documents, with hypertext, full and automated "noting up," and a search engine. Access to AustLII is completely free. *See generally* Australasian Legal Information Institute, *AustLII* <http://www.austlii.edu.au/> (last updated Sept. 11, 2000).

91. Oklahoma's site, the Oklahoma Supreme Court Network ("OSCN"), contains the full text of hyperlinked case law dating back to 1940, as well as statutes and other primary authority and search engines. Access to OSCN is completely free as well. *See generally* Oklahoma Supreme Court, *Oklahoma Supreme Court Network* <http://www.oscn.net/> (accessed Sept. 24, 2000). AustLII and OSCN represent the cutting edge in technological advances for governments and universities with regard to the dissemination of appellate decisions.

92. The first call for such an archive was made by the Wisconsin bar. *See* Wisconsin State Bar Technology Resource Committee, *Proposed Citation System for Wisconsin: Report to the Board of Governors* 23-24 (1994).

Navigation aids will remain the weakest component of most public legal information systems. "Metadata" searching[93] will enable researchers to locate cases by name, docket number, universal citation, and, perhaps, by topical descriptors. Ideally, courts should offer powerful full-text, Boolean searching, and hypertexts links at their official websites, but these "value-added" features may be too labor-intensive and costly for public databases. In short, the public digital legal record will improve but remain the "plain vanilla" edition of the law.

The private sector will preserve its niche in the information economy by continuing to provide superior research products and services that "add value" to public legal information. Innovation will be fueled by a restructuring of the information economy from national into global markets.[94] Larger potential audiences with greater profit potential will spur publishers to offer more sophisticated and powerful products. Generally, these information products will be less compartmentalized and more personalized than traditional legal publications—the electronic extension of the "selective" philosophy of publication.

The cornerstones are quickly being laid for the pay-per-view system of selling legal information. Researchers identified by digital certificates will spend digital funds to retrieve web-accessed documents that are each identified by a unique digital object identifier ("DOI").[95] The DOI will enable publishers to exact copyright royalties or licensing fees each time the information is accessed.

As in the past, few researchers will be able to self-fund their entire information needs, so law libraries will remain important intermediaries for free or low-cost legal information. As "bulk purchasers" of electronic information, library

93. "Metadata" is data about data. For example a library's catalog record is a form of metadata. Metadata will enable us to greatly improve retrieval of legal (and other) information on the Internet. For more information, see "metadata" in the *AOL Computing Webopaedia* at <http://aol.pcwebopedia.com/TERM/m/metadata.html> (accessed Oct. 6, 2000).

94. For example, traditional English law book publishers are retooling their products for a European marketplace. By appealing to a regional legal services economy, publishers are promised a larger profit margin, thus inspiring them to offer more powerful and sophisticated information products than they have offered in smaller national jurisdictions.

95. For a general discussion of Digital Object Identifiers, see *The Digital Object Identifier System* <http://www.doi.org/tech.html> (accessed October 24, 2000).

consortia are already negotiating for "perpetual licenses" to electronic databases that will allow some degree of sustained access to core materials for researchers affiliated with the consortium library. Libraries offering these databases to their patrons will survive as wholesalers amid an expanding retail information economy.

Dramatic improvement in hypertext links will lend greater "intelligence" and dimensionality to traditionally static documents. This trend can already be seen in LEXIS, Westlaw, LOIS, and certain CD-ROM publications that feature court opinions with hypertext links to authority cited in an opinion. However, the current level of interconnectivity can be clumsy and imprecise when the link is to an organic body of law. Tomorrow's information product will deliver an interactive corpus of current law—as well as linked archival information—that will enable a researcher to see a seamless portrait of the law frozen in time.

Hypertext links are also breaking down the compartmentalization that has long characterized law publications. Historically, books—and the LEXIS and Westlaw databases that evolved from them—have compartmentalized legal materials first by jurisdiction and then by document type. Separate books or databases were published for federal and state law, and, within a particular jurisdiction, separate publications contain cases, statutes, and regulations. Electronic information products of the future will reach across a cross-section of documents unified by topic. Thus, a future researcher's query in a digital library for information on "equal protection" could retrieve both state and federal constitutional provisions and appellate decisions.

Some have raised the specter of authenticity:[96] How will we know that a document printed off the Internet is authentic, and how will we guarantee that what appears on the website itself is authentic? Lawyers and courts now routinely use the LEXIS, Westlaw, and LOIS versions of cases with no more authenticity problems than occur with paper format. The problem of the public's access to law in electronic form has also been raised.

96. Robert Berring has repeatedly raised this issue. *See e.g.* Robert Berring, *Chaos, Cyberspace and Tradition: Legal Information Transmogrified*, 12 Berkeley Tech. L.J. 189, 199-203 (1997).

How will the lone pro se researcher with no computer find cases? As one commentator points out, this user has traditionally been at the bottom of the research hierarchy.[97] He had to find a law library open to the public and use books, such as digests and citators, that were developed for the use of lawyers. Nowadays, our pro se patron will be able to gain access to law on the Internet from his public library terminal. He can obtain case law completely free from state and federal websites or pay a small charge to vendors like LOIS or Quicklaw to search cases and statutes with a reliable, powerful search engine. Attorneys willing to pay will have access to the bells and whistles of LEXIS and Westlaw, assuming that they both survive.

VI. CONCLUSION

The migration of legal information from print to electronic form and the ascendancy of the Web have caused thousands of sources of legal information to be available to the Internet user anywhere in the world. These sources range from huge databases with extremely powerful search engines like LEXIS and Westlaw, which are available through subscriptions, to much smaller sites offered by universities and government agencies with simple or no search engines. Not only have the sources of data multiplied, so have the ways in which data can be manipulated. At the same time, however, the power of the consumer over purchased information has shrunk, from outright ownership of volumes of books, to mere "access" from online publishers for the length of one's subscription, to electronic information. The state of legal publishing today is similar to that in the last few decades of the nineteenth century—extremely volatile—yet dissimilar, in that hyperlinks have the ability to increase access to one's electronic publications in a manner impossible with print publishing. Computers have both the storage capacity and the search capability to handle the ever-increasing mass of appellate decisions. Case law and statutory law that encourage a robust mix of government and commercial

97. Richard A. Danner, *Dissemination of Legal Information: Social and Political Issues in the United States* <http://law.duke.edu/fac/danner/Adij.htm> (accessed Sept. 24, 2000).

publishing and attempt to furnish a level playing field are the best way to defend the rights of legal information consumers.