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STATE GLADIATORS GO HIGH TECH WITH RECORDS — WILL THE FEDS FOLLOW?

DANIEL R. MURRAY & TIMOTHY J. CHORVAT*

The adoption of the Federal Rules of Evidence in 1975 represented a major advance, ensuring that a uniform and predictable set of principles would govern the admission of evidence in federal courts throughout the United States. A parallel development occurred at the state level with the promulgation by the National Conference of Commissioners on Uniform State Laws in 1974 of a state court code of evidence, the Uniform Rules of Evidence.¹ Spurred by the advent of the Federal Rules of Evidence, the Uniform Rules of Evidence achieved widespread adoption by the states² and thus extended progress made at the federal level by promising similar uniformity, accessibility, and predictability for the states that adopted those rules.

Both the Federal Rules and the Uniform Rules have adapted over time to changing realities in the courtroom, and for the most part the two codes have stayed closely aligned, thus maximizing the utility of both. In the late 1990s, however, the Federal Rules and the Uniform Rules moved in different directions in response to the challenge presented by evidence that increasingly appears in forms other than traditional paper documents.³ Based on a conclusion that courts generally have

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1. Prior efforts at codifying the law of evidence made by the American Law Institute and the National Conference of Commissioners on Uniform State Laws (the "National Conference") are summarized in Leo H. Whinery, *The American Version of the Rules of Evidence — Can They Be Improved?*, 195 F.R.D. 57, 59-62 (1999).

2. The 1988 text of the Uniform Rules of Evidence is now in effect in thirty-nine states. See ALASKA R. EVID. 101-1101; ARIZ. R. EVID. 101-1103; ARK. CODE ANN. §§ 16-41-101 to 16-41-1102 (Michie 1999); COLO. REV. STAT. title 13 app. EVID. 101 to 1102; CONN. SUP. CT. ORDER 99-2; DEL. R. EVID. 101-1103; FLA. STAT. ANN. §§ 90.101 to 90.958 (West 2000); HAW. REV. STAT. §§ 626-1 to 626-3 (1999); IDAHO R. EVID. 101-1103; IND. R. EVID. 101-1101; IOWA R. EVID. 101-1103; KY. R. EVID. 101-1104; LA. CODE EVID. arts. 101-1102; ME. R. EVID. 101-1102; MICH. R. EVID. 101-1102; MINN. R. EVID. 101-1101; MISS. R. EVID. 101-1103; MONT. R. EVID. 100-1008; NEB. REV. STAT. §§ 27-101 to 27-1103 (1999); NEV. R. STAT. §§ 47.020 to 52.295 (1999); N.H. R. EVID. 100-1103; N.J. R. EVID. 101-1103; N.M. R. EVID. 11-101 to 11-1102; N.C. GEN. STAT. § 8C-1, Rules 101 to 1102 (2000); N.D. R. EVID. 101-1103; OHIO R. EVID. 101-1103; 12 OKLA. STAT. ANN. §§ 2101-3103 (West 2000); OR. R. EVID. 100-1103; R.I. R. EVID. 100-1008; S.C. R. EVID. 101-1103; S.D. CODIFIED LAWS §§ 19-9-1 to 19-18-9 (Michie 1999); TENN. R. EVID. 101-1008; TEX. R. EVID. 101-1009 (2001); UTAH R. EVID. 101-1103; VT. R. EVID. 101-1103; WASH. R. EVID. 101-1103 (2001); W.V. R. EVID. 101-1102; WIS. STAT. ANN. §§ 901.01 to 911.02 (2000); WYO. R. EVID. 101-1104.

3. The explosion in use of paperless media in commerce is noted in Hon. Shira A. Scheindlin &

adapted well to that development, the Federal Rules have not undergone any broad revisions to make them more receptive to electronic evidence.⁴ By contrast, the 1999 revisions to the Uniform Rules represent exactly that sort of general adaptation to the new reality, following up on similar changes to the Uniform Commercial Code and other statutes.

In this article, we argue that the Federal Rules of Evidence should be amended to follow the lead of the Uniform Rules⁵ in order to restore uniformity between jurisdictions, enhance accessibility and predictability, and promote the reception of electronic records into evidence. In particular, this article explores the development of approaches in the Federal Rules of Evidence and the Uniform Rules of Evidence to the admission of what is sometimes referred to as electronic evidence, that is to say, records preserved in media other than paper documents. Those approaches culminated in the development of the term "record," which, in 1999, was adopted as part of the Uniform Rules of Evidence. This article concludes that the adoption of "record" represents an important advancement in the Uniform Rules, and suggests that the Federal Rules of Evidence should adopt that defined term in order both to restore uniformity to this area of the law and to promote medium neutrality in evidence law.

I. The Starting Point: Diverse, Inaccessible, and Unpredictable Evidentiary Rules

Before the uniform law movement achieved any significant success in harmonizing rules of evidence — horizontally, with respect to the states, or vertically, as between the federal and state government — the hodgepodge of evidentiary rules that then prevailed placed a premium on the "hometown" advantage. That is to say, a litigator from outside the jurisdiction or, for that matter, a young lawyer not

Jeffrey Rabkin, *Electronic Discovery in Federal Civil Litigation: Is Rule 34 Up To The Task?*, 41 B.C. L. REV. 327, 327-29 (2000); Christine Sgarlata Chung & David J. Byer, *The Electronic Paper Trail: Evidentiary Obstacles to Discovery and Admission of Electronic Evidence*, 4 B.U. J. SCI. & TECH. L. 5, 10-11 (1998). See also Mark D. Robins, *Computers and the Discovery of Evidence — A New Dimension to Civil Procedure*, 17 J. MARSHALL J. COMPUTER & INFO. L. 411, 414-25 (1999) (surveying the variety of paperless evidence).

4. For approximately the first two decades of the existence of the Federal Rules of Evidence, no separate committee existed to survey the need for modifications to the rules or to propose modifications to the Supreme Court of the United States. The creation of such a committee was advocated in Margaret A. Berger, *The Federal Rules of Evidence: Defining and Refining the Goals of Codification*, 12 HOFSTRA L. REV. 255, 277 (1984). Until the creation of the Advisory Committee on the Federal Rules of Evidence (the Advisory Committee), changes in the rules were minimal. See Whinery, *supra* note 1, at 66-68. Even after the appointment of the Advisory Committee, however, no wholesale review or overhaul of the rules was undertaken. See Advisory Comm. on the Fed. Rules of Evid. of the Judicial Conference of the United States, Minutes of Nov. 12, 1996 meeting, 1996 WL 936790, at *9; see also Paul R. Rice & Neals-Erik William Delker, *Federal Rules of Evidence Advisory Committee: A Short History of Too Little Consequence*, 191 F.R.D. 678 (2000).

The Advisory Committee, which was appointed and commenced work in the 1990s, is not to be confused with the Drafting Committee described in the text accompanying *infra* note 6, which prepared the original draft of the Federal Rules of Evidence in the early 1970s.

5. Unless otherwise indicated, all textual references and citations to the "Uniform Rules" or "Uniform Rules of Evidence" refer to the Uniform Rules of Evidence as last revised in 1999.

steeped in the experience of practicing before a particular judge with his own idiosyncratic rules of evidentiary practice based upon state law, would be at a distinct disadvantage. It was precisely to even that playing field that the proponents seeking the adoption of federal rules of evidence argued for a uniform set of rules that would apply throughout the federal court system without regard to the state in which each court was located.

The proponents argued for a common set of rules on two levels. First, they argued that judges in the federal system would not have to be acquainted with separate rules in each jurisdiction in which they sat. For example, judges visiting in other circuits would not be impeded by having to use unfamiliar rules of evidence. Also, judges sitting on courts of appeal encompassing a number of jurisdictions would not have to be familiar with the rules of evidence in each jurisdiction. Second, trial lawyers themselves would not be hampered when they tried a case in a jurisdiction other than their own. Albert E. Jenner, Jr., the chairman of the United States Judicial Conference Advisory Committee on Federal Rules of Evidence, described the advantages of having federal rules of evidence as follows:

These rules, when they go into effect, will afford the trial lawyer a handy pamphlet he can carry in his briefcase, and even in his pocket. We will have a pamphlet of rules for the first time in the history of this nation, not only resting on the judge's bench, but in the hands of the gladiators trying the case in the courtroom.⁶

In response to a question from Congressman Wiley Mayne, Mr. Jenner pointed out that the rules would be of even more assistance to a young lawyer who would be able to find in the rules an authoritative answer to an evidentiary question and thus would be on a par with a more experienced lawyer who would otherwise know the practice of the judge from experience. As Mr. Jenner pointed out, "[W]e all start on an even basis with this set of rules."⁷

Consequently, with the widespread adoption of the pre-1999 version of the Uniform Rules of Evidence in thirty-nine states, there is now a uniform set of rules that is readily accessible to the judge and the "gladiators" who are trying the case in the courtroom. Accessibility is achieved because there is a set of rules set forth in one text that can readily be adverted to as issues arise. Uniformity exists at the state level because the evidentiary rules laid out in the Uniform Rules of Evidence largely conform within the geographic area encompassed by the thirty-nine states that have adopted those rules. In addition, because the Uniform Rules have largely tracked the Federal Rules of Evidence over the years, uniformity is achieved not only horizontally among the states but also vertically as between the federal and state systems.⁸

6. *Hearings on Reform of Fed. Criminal Laws Before the Special Subcomm. of the House Comm. on the Judiciary*, 93d Cong. 34 (1973).

7. *Id.*

8. The lack of attention in the field of evidence to vertical choice-of-law issues is criticized in Earl

Precisely because of the benefits arising as a result of having a set of uniform rules in the hands of judges and the "gladiators," the drafters of the Uniform Rules of Evidence have not generally departed from the model provided by the Federal Rules of Evidence. The fact that the Federal Rules and a majority of the states' evidence rules track one another enhances their accessibility.

Uniformity and accessibility are critical ingredients in achieving a judicial process that operates in both a fair and efficient manner. The "hometown" advantage is minimized. The disparity between the experienced attorney with knowledge of anecdotal local evidentiary practice and the young attorney fresh out of law school is likewise reduced. The playing field is leveled so that the result of litigation more likely accords with a just result rather than a result placing a premium on evidentiary gambits.⁹

II. Electronic Evidence in an Age of Paper: Developments in the Federal Rules of Evidence

Any attempt to structure rules on the admissibility of items into evidence inevitably must confront the issue of the types of material that will be governed by such rules. Thus, for example, the original drafters of the Federal Rules of Evidence made the rules applicable to "writings." Subsequent efforts were made to expand the applicability of the rules to a broader class of materials that would include items other than "writings." An effort was made to capture information that was not stored in written format but rather was kept in another form, what we would think of today as an electronic form. From today's vantage point, the term "data compilation" hardly seems adequate to cover that broad scope — essentially every possible form of information storage and transmission other than paper. The drafters of the Federal Rules of Evidence, however, were not writing on a clean slate. The explanation for their selection of "data compilation" lies in earlier amendments to the Federal Rules of Civil Procedure.

The use of the term "data compilation" was first employed at the federal level in a 1970 amendment to the Federal Rules of Civil Procedure — specifically, an amendment to Rule 34 of the Federal Rules of Civil Procedure concerning document requests. The drafters of the rule confronted the problem of how to craft a definition of "document" that would encompass not only writings but also information stored electronically. The rule as amended provided that "any party may serve on any other party a request to produce . . . any designated documents (including writings, . . . , photographs, phono records, and other data compilations from which information can be obtained, translated, if necessary, by the respondent through detection devices into reasonably useable form)."¹⁰ The Advisory Committee Notes to that rule described the change as necessary "to accord with changing

C. Dudley, Jr., *Federalism and Federal Rule of Evidence 501: Privilege and Vertical Choice of Law*, 82 GEO. L.J. 1781, 1783-84 (1994).

9. For an evaluation of the extent to which the Federal Rules of Evidence after their first decade of existence had achieved the advantages claimed by its proponents, see Berger, *supra* note 4.

10. FED. R. CIV. P. 34.

technology."¹¹ Curiously, while the drafters took pains to include "data compilations" within the definition of "documents" for purposes of Rule 34, no such attempt was made in the terminology on scope of discovery contained in Rule 26(b). Rule 26(b) extends the scope of discovery to include "any matter, not privileged, which is relevant to the subject matter involved in the pending action . . . including the existence, description, nature, custody, condition, and location of any books, documents, or other tangible things."¹²

That term, "data compilation," was in turn incorporated by the Drafting Committee of the Federal Rules of Evidence in the early 1970s. Rule 803(6), for example, sets forth the business record exception to the hearsay rule. It exempted from the hearsay rule "[r]ecords of regularly conducted activity," which were defined to include

[a] memorandum, report, record, or data compilation, in any form, of acts, events, conditions, opinions or diagnoses, made at or near the time by, or from information transmitted by, a person with knowledge, if kept in the course of a regularly conducted business activity, and if it was the regular practice of that business activity to make the memorandum, report, record, or data compilation, all as shown by the testimony of the custodian or other qualified witness, unless the source of

11. FED. R. CIV. P. 34 advisory committee notes, 1970 Amendment, subdivision (a). The Advisory Committee Notes reflected a focus by the Advisory Committee on Civil Rules on the problem of translating data from electronic form into perceptible hard copy form as part of the discovery process:

The inclusive definition of "documents" is revised to accord with changing technology. It makes clear that Rule 34 applies to electronic data compilations from which information can be obtained only with the use of detection devices, and that when the data can as a practical matter be made usable by the discovering party only through respondent's devices, respondent may be required to use his devices to translate the data into usable form. In many instances, this means that respondent will have to supply a print-out of computer data. The burden thus placed on respondent will vary from case to case, and the courts have ample power under Rule 26(c) to protect respondent against undue burden or expense, either by restricting discovery or requiring that the discovering party pay costs. Similarly, if the discovering party needs to check the electronic source itself, the court may protect respondent with respect to preservation of his records, confidentiality of nondiscoverable matters, and costs.

Id. The Civil Rules Advisory Committee's focus on translating electronic data into a computer printout suggests that the Committee envisioned the application of the process prescribed by the rule in the context of the technology available at that time — *viz.*, a mainframe computer containing data, which would then be reported in perceptible form by the production of a computer printout through a printer attached to that mainframe computer. That model, of course, has become inadequate as a host of devices that employ the storage and processing of electronic items have been developed. *See Robins, supra* note 3, at 414-21.

12. FED. R. CIV. P. 26(b). The omission of any reference to "data compilations" might be accounted for by the express reference in Rule 26(b) to "documents," which is subsequently defined in Rule 34 to include "data compilations." *Cf. Scheindlin & Rabkin, supra* note 3, at 343-44 (noting that it "also could be argued, however, that the Advisory Committee . . . knew how to make express reference to computerized data when it wished to, such as in the case of its comments regarding Rule 34, and that the lack of any such reference in Rule 26 and its comments indicates that the Committee did not wish to incorporate computerized data within the scope of Rule 26").

information or the method or circumstances of preparation indicate lack of trustworthiness.¹³

The drafters did not make an effort to define the term "data compilation" or its companion terms "memorandum," "report," or "record."

The lack of clarity in definition was compounded in Rule 1001, which set forth definitions solely for purposes of article X on "Contents of Writings, Recordings and Photographs." Subsection (1) of that rule provided: "'Writings' and 'recordings' consist of letters, words, or numbers, or their equivalent, set down by handwriting, typewriting, printing, photostating, photographing, magnetic impulse, mechanical or electronic recording, or other form of data compilation."¹⁴ The phrase "other form of data compilation" appended at the end of the definition is confusing in at least two respects. First, the phrase "other" suggests an alternative to one or more of the items contained in the preceding series of words, though precisely which of the preceding words is referred to is not clear. It may refer to some form of data compilation other than a mechanical or electronic recording. Alternatively, it may refer to some form of data compilation other than a magnetic impulse or mechanical or electronic recording. Plausibly, though it is unlikely, given the technology available at the time of the phrase's drafting, it could even refer to all of the nouns in the preceding series, starting with handwriting.¹⁵ Second, the definition appears to suggest that "data compilation" would be termed a "writing" or a "recording," a concept that would have been revolutionary at the time if it had been imported, for example, into the interpretation of the requirement of a writing for purposes of the Statute of Frauds. It may have been precisely that concern which led the drafters of the Federal Rules of Evidence to restrict the application of the definitions in Rule 1001 solely to article X, thereby eliminating the possible use of the definition in other articles of the Federal Rules of Evidence. In any event, as suggested in the Advisory Committee Notes, the focus of the drafters in confecting Rule 1001 was unequivocally on the so-called "best evidence rule" prescribing when an original item of evidence was required.¹⁶

13. FED. R. EVID. 803(6).

14. FED. R. EVID. 1001(1).

15. Technology currently available, for example, includes handheld computer devices into which data may be stored by writing by hand onto the device's screen.

16. The Advisory Committee Notes to Federal Rule 1001(1) make clear the drafters' focus:

Traditionally the rule requiring the original centered upon accumulations of data and expressions affecting legal relations set forth in words and figures. This meant that the rule was one essentially related to writings. Present day techniques have expanded methods of storing data, yet the essential form which the information ultimately assumes for usable purposes is words and figures. Hence the considerations underlying the rule dictate its expansion to include computers, photographic systems, and other modern developments.

FED. R. EVID. 1001(1) advisory committee notes to 1972 Proposed Rules. The model evidently in the mind of the drafters of the rule, like the drafters of the Federal Rules of Civil Procedure, appears to have been primarily a mainframe computer storing words and figures that could then be displayed by means of a hardcopy computer printout produced from a printer attached to the computer.

While we have found no reported case that specifically declines to admit evidence of an electronic nature because it did not qualify as a data compilation, a number of commentators have noted the inadequacy of the term. With advances in technology, the question of whether the most recently developed varieties of electronic evidence fall within the rubric of "data compilation" has arisen.¹⁷ The issue has been raised, for example, whether a "cookie" or cache file appearing on a Web site and automatically downloaded onto the computer of a user visiting that site, without the knowledge or consent of the user of the computer, is a document within the meaning of Rule 34(a).¹⁸ Similarly, some programs will embed data in a document without the consent of the preparer of the document — e.g., most word processing programs will record information as to when a specific document is created and/or edited and the amount of time spent editing the document without obtaining anyone's consent to do so. Commentators have questioned whether such information constitutes a "compilation."¹⁹

Moreover, beyond the potential for confusion in the term "data compilation," the lack of an explicit provision in the Federal Rules of Evidence supporting the admission of nonpaper records may have inclined courts against admitting such records into evidence. A recent and colorful example of hostility toward the

Thus, subsection (3) of the same rule provides that "[i]f data are stored in a computer or similar device, any printout or other output readable by sight, shown to reflect the data accurately, is an 'original.'" FED. R. EVID. 1001(3). Although the phrase "or other output readable by sight" suggests contemplation of the possibility of other methods of translating the data into perceptible form, the Advisory Committee Note to that rule indicates that the drafters had in mind the model of a computer printout: "Similarly, practicality and usage confer the status of original upon any computer printout." FED. R. EVID. 1001(3), advisory committee notes to 1972 Proposed Rules (citing *Trans. Indem. Co. v. Seib*, 132 N.W.2d 871 (Neb. 1965)). In the *Seib* case cited by the Committee, the Supreme Court of Nebraska affirmed rulings of the trial court admitting into evidence a printout of a database stored on a computer over objections that an adequate foundation had not been laid and that the exhibit had been prepared for purposes of the litigation. The opinion does not reflect whether any objection on the basis of the best evidence rule was lodged and does not discuss the printout's admissibility under that rule, even though the case is cited by the Advisory Committee in its discussion of that rule.

17. *Scheindlin & Rabkin*, *supra* note 3, at 346-47.

18. *Id.* at 347.

19. *Id.* Judge Scheindlin and Mr. Rabkin questioned whether such information, while presumably "data" in a generic sense, is a "compilation" in the ordinary sense of "something composed out of materials taken from other preexisting documents. Rather temporary, backup, cookie, cache and history files all represent examples of a sui generis family of computer-created information." *Id.* at 347. Judge Scheindlin and Mr. Rabkin argue:

Embedded data, Web caches, history, temporary, cookie and backup files — all of which are forms of electronically-stored information automatically created by computer programs rather than by computer users — do not obviously fall within the scope of the term "documents." Certainly they are not "documents" in any traditional sense. Furthermore, they arguably do not constitute "compilations" of data, as that term is commonly understood. They are, in essence, a new breed of information, a breed not easily categorized within the scope of Rule 34(a).

Id. at 372. Because of the inadequacies of that terminology, they have recommended revisions of the rule in order "to accord with changing technology." *Id.* at 371 (quoting FED. R. CIV. P. 34(a) advisory committee notes, 1970 Amendment, subdivision (a)).

admission of evidence in electronic form is contained in *St. Clair v. Johnny's Oyster & Shrimp, Inc.*²⁰ In that case, the plaintiff brought claims against Johnny's Oyster & Shrimp for personal injuries the plaintiff allegedly sustained while employed as a seaman for the defendant aboard the vessel *Capt. Le'Brado*. The defendant sought to have the complaint dismissed on the ground that the defendant never owned the vessel in question. The plaintiff responded that the defendant did indeed own the vessel and, in support of that assertion, cited data downloaded from an Internet site posted by the United States Coast Guard's online vessel database.²¹ The court conditionally denied defendant's motion to dismiss, placing upon the plaintiff the burden to obtain documents, within a very short period of time, that would establish that the defendant owned the *Capt. Le'Brado*. In doing so, the court displayed open hostility to the form of the evidence put forth by the plaintiff:

Plaintiff's electronic "evidence" is totally insufficient to withstand Defendant's Motion to Dismiss. While some look to the Internet as an innovative vehicle for communication, the Court continues to warily and wearily view it largely as one large catalyst for rumor, innuendo, and misinformation. So as to not mince words, the Court reiterates that this so called Web provides no way of verifying the authenticity of the alleged contentions that Plaintiff wishes to rely upon in his Response to Defendant's Motion. There is no way Plaintiff can overcome the presumption that the information he discovered on the Internet is inherently untrustworthy. Anyone can put anything on the Internet. No web-site is monitored for accuracy and *nothing* contained therein is under oath or even subject to independent verification absent underlying documentation. Moreover, the Court holds no illusions that hackers can adulterate the content on *any* web-site from *any* location at *any* time. For these reasons, any evidence procured off the Internet is adequate for almost nothing, even under the most liberal interpretation of the hearsay exception rules found in Fed. R. Civ. P. 807.

Instead of relying on the voodoo information taken from the Internet, Plaintiff must hunt for hard copy back-up documentation in admissible form from the United States Coast Guard or discover alternative information verifying what Plaintiff alleges.²²

Although the issue in *St. Clair* is distinct from the definitional problem with "data compilation," both situations demonstrate that the evidence rules need to address

20. 76 F. Supp. 2d 773 (S.D. Texas 1999).

21. The United States Coast Guard maintains a vessel database that includes information concerning vessel characteristics, documentation, and ownership. The database is updated and revised on a quarterly basis. The Web site in question can be found at Commercial Fisheries, http://www.st.nmfs.gov/st1/commercial/landings/cg_vessels.html (last visited Apr. 25, 2001).

22. 76 F. Supp. 2d at 774-75. *St. Clair* was cited with approval in *United States v. Jackson*, 208 F.3d 633, 637 (7th Cir. 2000), *cert. denied*, 531 U.S. 973 (2000). In that case, the Seventh Circuit affirmed a ruling denying admission to certain Internet Web postings.

paperless records more directly than did the pre-1999 versions of either the Federal Rules or the Uniform Rules.

III. Other Failed Efforts to Capture the Concept

In its clumsy attempt to capture the concept of electronic evidence, the term "data compilation" is reminiscent of another term that was introduced by the 1958 text of article 1 of the Uniform Commercial Code (U.C.C.), and which still appears in the definitions set forth in that article. Subsection 41 of section 1-201 defines the term "telegram" to include "a message transmitted by radio, teletype, cable, any mechanical method of transmission, or the like."²³ That definition is deceptively described as "new" in the current text of Official Comment 41 to section 1-201.²⁴ Despite the suggestion of the official comment, the definition of telegram has remained undisturbed in the U.C.C. since the adoption of the original text in 1958. It is a definition that is wedded to the technology of the 1950s. It does not, for example, envision the possibility of messages communicated not mechanically, but electronically through a digital version of transmission. Because the definition of "telegram" became so quickly outmoded, it has remained in the U.C.C. not only undisturbed but apparently largely unused. Not a single reported case interpreting that definition during the forty-plus years of its existence has been found by the authors. In short, the concept has proven distinctly unhelpful.

Another definition appearing in article 1 of the Uniform Commercial Code was also viewed, on its face, as inadequate to capture the concept of information stored in media other than in written form. The terms "written" or "writing" are defined in section 1-201(46) of the U.C.C. as follows: "'Written' or 'writing' includes printing, typewriting or any other intentional reduction to tangible form."²⁵ While some commentators argued that the phrase "any other intentional reduction to tangible form" could be interpreted to refer to the saving of information onto a computer disk or drive, that view has not enjoyed widespread acceptance.²⁶ As a consequence, reformers seeking to expand the scope of the U.C.C. to nonwritten media sought to redefine existing concepts; for example, reformers suggested modifications to the definition of "writing" set forth in section 1-201(46).²⁷ Many concluded, however, that an attempted redefinition was bound to fail because existing concepts, such as "writing," would have to be used in their traditional sense in specific instances in commercial law. The requirement for a tangible writing, for example, would still be required under articles 3 and 7, which provide for the

23. U.C.C. § 1-201(41) (2000).

24. U.C.C. § 1-201 official comment 41 (2000). The fact that the Official Comment 41 to section 1-201 still refers to the definition as "new" is a testament to the fact that until recently, the text of article 1 has not been subject to any thorough revision since its original conception (other than conforming changes occasioned by overhauls of other articles to the Uniform Commercial Code).

25. U.C.C. § 1-201(46) (2000).

26. Patricia Brumfield Fry, *X Marks the Spot: New Technologies Compel New Concepts for Commercial Law*, 26 LOY. L.A. L. REV. 607, 611 (1993).

27. *Id.* at 612-16.

transfer of negotiable instruments with the transferee obtaining enumerated rights. This led reformers seeking to accommodate commercial law to new forms of media, which allowed them to explore the development of "new concepts."²⁸

IV. The Pre-1999 Approach of the Uniform Rules of Evidence

Versions of the Uniform Rules of Evidence in effect prior to the 1999 text have generally closely tracked the provisions of the Federal Rules of Evidence, and the approach to electronic evidence in particular did not diverge. Thus, for example, Rule 1001(1) of the 1988 text of the Uniform Rules tracks almost word for word the comparable rule in the Federal Rules of Evidence.²⁹ Similarly, Rule 1001(3) duplicates the comparable provision of the Federal Rules.³⁰ The earlier versions of the Uniform Rules track the Federal Rules so closely because the National Conference expressly charged the Drafting Committee to conform the Uniform Rules to the Federal Rules as finally enacted "so far as practicable."³¹ The 1974 version of the Uniform Rules was said to "reflect as closely as possible" the Federal Rules as finally enacted.³²

V. Making A "Record": The Evolution of a New Defined Term

The Working Group that sought to develop a new concept concluded that certain principles would have to govern the development of new terminology. The first necessary characteristic of any newly defined term was that it capture the idea that any information referred to must be capable of being perceived or intelligible to humans. That did not require that the information be stored in a form perceptible by humans in the first instance, but simply that the information could be converted into a form that would be perceptible or intelligible to humans.³³ The second characteristic identified by the Working Group was that the information must be reliable and accurate. In other words, the method of storing information must include the ability to retrieve the information at a later date in an accurate and

28. *Id.* Professor Fry's article describes in detail the history of the evolution of a "new concept." The term emanated from discussions in the Working Group on Electronic Writings and Notices of the Subcommittee on Electronic Commercial Practices of the Uniform Commercial Code Committee in the Business Law Section of the American Bar Association (hereinafter the Working Group). Professor Fry served as chair of the Subcommittee on Electronic Commercial Practices during the period in which the new concept was developed.

29. UNIF. R. EVID. 1001(1), 13B U.L.A. pt. 1B, at 648 (2000). The only variation is the addition of the word "sounds" following "letters" and "words" in the enumeration of what constitutes a writing or a recording.

30. UNIF. R. EVID. 1001(3), 13B U.L.A. pt. 1B, at 648 (2000).

31. UNIF. R. EVID. Prefatory Note to Original 1974 Rules of Evidence, 13A U.L.A. pt. 1A, at 5 (2000).

32. *Id.*

33. Fry, *supra* note 26, at 618. This principle thus parallels the reference in Federal Rule of Civil Procedure 34 to "other data compilations from which information can be obtained, translated, if necessary, by the respondent through detection devices into reasonably useable form." FED. R. CIV. P. 34.

reliable form.³⁴ As discussions advanced, the Working Group settled upon the following definition of the concept it had in mind to replace the term "writing" where a more flexible definition encompassing electronic media was desirable: "X means a durable symbolic representation of information in objectively perceivable form or susceptible to reduction to objectively perceivable form."³⁵ The Working Group finally identified a word that it thought best captured the concept — "record."³⁶

The term "record" was subsequently refined and introduced into the Uniform Commercial Code as articles of the U.C.C. underwent revision. The 1995 text of article 5, covering letters of credit, incorporated the definition of record used in section 5-102(a)(14): "'Record' means information that is inscribed on a tangible medium, or that is stored in an electronic or other medium and is retrievable in perceivable form."³⁷ Similarly, the 1999 text of article 9 of the U.C.C. sets forth the following definition in section 9-102(a)(69): "'Record', except as used in 'for record', 'of record', 'record or legal title', and 'record owner', means information that is inscribed on a tangible medium or which is stored in an electronic or other medium and is retrievable in perceivable form."³⁸ The American Law Institute and

34. Fry, *supra* note 26, at 618-19.

35. *Id.* at 621.

36. *Id.* at 621-22.

37. U.C.C. § 5-102(a)(14) (2000). The term is used, for example, in section 5-104 setting forth the formal requirements of a letter of credit. Instead of requiring that a letter of credit take the form of a writing, revised section 5-104 permits a letter of credit to be issued "in any form that is a record." U.C.C. § 5-104 (2000).

38. U.C.C. § 9-102(a)(69) (2000). The term is used throughout the 1999 text of article 9 of the U.C.C. U.C.C. § 9-102 official comment 9(a) (2000). For example, one method by which a security interest may attach to collateral is upon the authentication of a security agreement by the debtor. U.C.C. § 9-203(b)(3)(A) (2000). A debtor may authenticate a security agreement by either (A) signing it (implying the existence of a writing) or (B) by executing or otherwise adopting a symbol, or encrypting or similarly processing a record with the present intent to adopt or accept a record. U.C.C. § 9-102(a)(7) (2000). Clause (B) of the definition assumes that a security agreement can take the form of a record that is not a writing.

The 1999 text also seeks to be "medium-neutral" in the rules governing the filing of U.C.C. financing statements. U.C.C. § 9-101 official comment 4(h) (2000).

The 1999 text of article 9 took effect on July 1, 2001, in most of the states which have enacted it. As of this writing, every state has adopted the revisions. See ALA. CODE §§ 7-9-101 to 507 (2000) (effective January 1, 2002); ALASKA STAT. §§ 45.29.101 to 709 (Michie 2000); ARIZ. REV. STAT. §§ 47-9101 to 9708 (2000); ARK. CODE ANN. §§ 4-9-101 to 507 (Michie 1999); CAL. UNIF. COM. CODE §§ 9101-9708 (Deering 2000); COLO. REV. STAT. §§ 4-9-101 to 507 (2000); CONN. GEN. STAT. §§ 42a-9-101 to 507 (2001) (effective October 1, 2001); DEL. CODE ANN. tit. 6, §§ 9-101 to 709 (2000); D.C. CODE ANN. §§ 28-9-101 to 507 (1999); FLA. STAT. ch. 679.9-101 to 507 (2000) (effective January 1, 2002); GA. CODE ANN. §§ 11-9-101 to 507 (2000); HAW. REV. STAT. §§ 490-9-101 to 507 (1999); IDAHO CODE §§ 28-9-101 to 507 (1999); 810 ILL. COMP. STAT. ANN. 5/9-101 to 99-02 (West 2000); IND. CODE §§ 26-1-9-101 to 508 (1999); IOWA CODE §§ 554.9101 to .9507 (2000); KAN. U.C.C. ANN. §§ 84-9-101 to 507 (West 1999); KY. REV. STAT. ANN. §§ 355.9-101 to 507 (Banks-Baldwin 2000); LA. REV. STAT. ANN. §§ 10:9-101 to 605 (West 2000); ME. REV. STAT. ANN. tit. 11, §§ 9-1101 to 1507 (West 2000); MD. CODE ANN., COM. LAW I §§ 9-101 to 507 (1999); MASS. GEN. LAWS ch. 106, §§ 9-101 to 507 (2000); MICH. COMP. LAWS §§ 440.9101 to 9507 (2000); MINN. STAT. §§ 336.9-101 to 507 (2000); MISS. CODE ANN. §§ 75-9-101 to 507 (2000) (effective January 1, 2002); MO. REV. STAT. §§

the National Conference presently have under consideration a draft of article 1 that would include a definition of "record" for use throughout the Uniform Commercial Code.³⁹

The term "record" has also been utilized in other uniform laws promulgated by the National Conference — notably, the Uniform Electronic Transactions Act⁴⁰ and

400.9-101 to 507 (2000); MONT. CODE ANN. §§ 30-9-101 to 507 (1999); NEB. REV. STAT. §§ 9-101 to 507 (1999); NEV. REV. STAT. §§ 104.9101 to .9507 (1999); N.H. REV. STAT. ANN. §§ 382-A:9-101 to 9-507 (2000); N.J. STAT. ANN. §§ 12A:9-101 to 9-507 (West 2000); N.M. STAT. ANN. §§ 55-9-101 to 507 (Michie 2000); N.Y. U.C.C. LAW §§ 9-101 to 507 (McKinney 2000); N.C. GEN. STAT. §§ 25-9-101 to 507 (2000); N.D. CENT. CODE §§ 41-09-01 to 53 (1999); OHIO REV. CODE ANN. §§ 1309.01 to .50 (Anderson 2001); 12A OKLA. STAT. §§ 1-9-101 to 507 (2001); OR. REV. STAT. §§ 79.1010 to 79.8010 (1999); 13 PA. CONS. STAT. §§ 9101 to 9507 (2001); R.I. GEN. LAWS §§ 6A-9-101 to 507 (1999); S.C. CODE ANN. §§ 36-9-101 to 507 (Law. Co-op. 1999); S.D. CODIFIED LAWS §§ 57A-9-101 to 507 (Michie 2000); TENN. CODE ANN. §§ 47-9-101 to 507 (1999); TEX. BUS. & COM. CODE ANN. §§ 9.101 to .507 (Vernon 2000); UTAH CODE ANN. §§ 70A-9a-101 to 709 (2000); VT. STAT. ANN. tit. 9A, §§ 9-101 to 507 (1999); VA. CODE ANN. §§ 8.9A-101 to 507 (Michie 2000); WASH. REV. CODE §§ 62A.9A-101 to 507 (2000); W. VA. CODE §§ 46-9-101 to 507 (2000); WIS. STAT. ANN. §§ 409.101 to 409.507 (West 2000); WYO. STAT. ANN. §§ 34.1-9-101 to 507 (Michie 2000).

39. U.C.C. § 1-201(b)(33a) (Annual Conference Meeting Draft, Aug. 16, 2001). The definition, as currently drafted, reads as follows: "Record" means information that is inscribed on a tangible medium or that is stored in an electronic or other medium and is retrievable in perceivable form." The same definition also appears in current drafts of revised articles 2, 2A, 3, and 4. See U.C.C. § 2-103(1)(f) (Annual Conference Meeting Draft, Aug. 10, 2001); § 2A-103(1)(cc) (Annual Conference Meeting Draft, Aug. 10, 2001); § 3-103(a)(10A), § 4-104(c) (Discussion Draft, Feb. 2001). The proposed revision to Article 1 received the approval of the American Law Institute and the National Conference at their annual meetings in 2001. The proposed revisions to Articles 2 and 2A received the preliminary approval of the American Law Institute at its annual meeting in May 2001, but await the final approval of the National Conference and the American Law Institute.

40. UNIF. ELEC. TRANSACTIONS ACT §§ 1-21, 7A U.L.A. 28-68 (West Supp. 2001). As of this writing, thirty-seven states have enacted the Uniform Electronic Transactions Act. See UNIF. ELEC. TRANSACTIONS ACT, 2001 ALA. ACT 458 (2001) (to be codified at ALA. CODE §§ 8-1A-1 to 20); ARIZ. REV. STAT. §§ 44-7001-7051 (2000); ARK. CODE ANN. §§ 25-32-101 to 121 (2001); CAL. CIV. CODE §§ 1633.1-1633.17 (Deering 2000); DEL. CODE ANN. tit. 6, §§ 12A-101 to 117 (2000); 2000 D.C. STAT. 13-434 (approved Aug. 11, 2000); FLA. STAT. ch. 668.50 (2000); HAW. REV. STAT. §§ 489E-1 to 489E-19 (2000); IDAHO CODE § 28-4-110 (Michie 2000); IND. CODE §§ 26-2-8-101 to 8-302 (2000); IOWA CODE §§ 554D.101 to 554D.123 (2000); KAN. STAT. ANN. §§ 16-1601 to 16-1620 (2000); KY. REV. STAT. ANN. §§ 369.101 to 369.120 (Banks-Baldwin 2000); 2001 LA. ACT 244 (approved June 1, 2001); ME. REV. STAT. ANN. tit. 10, §§ 9401 to 9419 (West 2000); MD. CODE ANN., COM. LAW II §§ 21-101 to 21-120 (2000); MICH. COMP. LAWS §§ 450.831 to 450.849 (2000); MINN. STAT. §§ 325L.01 to 325L.19 (2000); MISS. CODE ANN. §§ 75-12-1 to 39 (2001); 2001 MONT. LAWS 52; NEB. REV. STAT. §§ 86-2101 to 86-2116 (2000); 2001 NEV. STAT. 548; N.H. REV. STAT. ANN. tit. 27, §§ 294-E:1-20 (2001); N.M. STAT. ANN. §§ 14-16-1 to 19 (Michie 2001); N.C. GEN. STAT. §§ 66-311 to 66-330 (2000); 2001 N.D. LAWS 1106 (approved Apr. 3, 2001); OHIO REV. CODE ANN. §§ 1306.01 to 1306.23 (2000); 12A OKLA. STAT. §§ 15-101 to 15-120 (2001); 73 PA. CONS. STAT. §§ 2260.101 to 2260.312 (2001); R.I. GEN. LAWS §§ 42-127.1-1 to 42-127.1-20 (2001); S.D. CODIFIED LAWS §§ 53-12-1 to 53-12-50 (Michie 2000); 2001 TENN. PUB. ACTS 72; 2001 TEX. GEN. LAWS 702; UTAH CODE ANN. §§ 46-4-101 to 501 (2000); VA. CODE ANN. §§ 59.1-479 to 497 (Michie 2000); W. VA. CODE §§ 39A-1-1 to 17 (2001); WYO. STAT. ANN. §§ 40-21-10 to 119 (Michie 2001).

Section 13 of the Act expressly precludes the exclusion of evidence solely because it is in electronic form, stating, "In a proceeding, evidence of a record or signature may not be excluded solely because it is in electronic form." UNIF. ELEC. TRANS. ACT § 13, 7A U.L.A. 53 (West Supp. 2001).

the Uniform Computer Information Transactions Act.⁴¹ The term has also been utilized by the United States Congress in the Electronic Signatures in Global and National Commerce Act.⁴² That Act establishes the general principle, subject to specified exceptions, that, with respect to any transaction in or affecting interstate or foreign commerce, a signature, contract, or other record (as that term is defined in 15 U.S.C. § 7006(9)) may not be denied legal effect, validity, or enforceability "solely because it is in electronic form . . . or . . . an electronic signature or electronic record was used in its formation."⁴³ Unlike the Uniform Electronic Transactions Act, the Federal Electronic Signatures in Global and National Commerce Act does not include a provision expressly precluding the exclusion of evidence solely because it is in electronic form.⁴⁴ Even though the Federal Electronic Signatures in Global and National Commerce Act does not expressly deal with the admissibility of electronic evidence, it nevertheless evidences a strong congressional policy favoring giving full effect to electronic transactions.

VI. The 1999 Text of the Uniform Rules of Evidence

Precisely with the benefits of vertical, as well as horizontal, uniformity in mind, the National Conference of Commissioners on Uniform State Laws has heretofore attempted to conform the Uniform Rules of Evidence as closely as possible to the Federal Rules of Evidence. In formulating the 1999 text of the Uniform Rules of Evidence, however, the National Conference chose to diverge in several important respects from the structure of the Federal Rules of Evidence. It did so because it thought that the benefit to be achieved by such a divergence substantially outweighed the efficiencies effected by the adoption of uniform rules that provided both horizontal and vertical harmony.⁴⁵

41. UNIF. COMPUTER INFO. TRANSACTIONS ACT § 102(a)(55), 7 U.L.A. 15 (West Supp. 2001). As of this writing, two states have enacted the Uniform Computer Information Transactions Act. See MD. CODE ANN., COM. LAW II §§ 22-101 to 22-816 (2000); VA. CODE ANN. §§ 59.1-501.1 to 59.1-509.3 (Michie 2001). Legislation has been introduced in eight states: Arizona, District of Columbia, Illinois, Maine, New Hampshire, New Jersey, Oregon, and Texas.

42. Electronic Signatures in Global & National Commerce Act, Pub. L. No. 106-229, 114 Stat. 464 (West 2000) (codified as amended at 15 U.S.C. § 7006(9) (2000)). This Act provides, "The term 'record' means information that is inscribed on a tangible medium or that is stored in an electronic or other medium and is retrievable in perceivable form." *Id.*

43. Section 101(a) of the Federal Electronic Signatures in Global and National Commerce Act provides in its entirety:

Notwithstanding any statute, regulation, or other rule of law (other than this title and title II), with respect to any transaction in or affecting interstate or foreign commerce —

(1) a signature, contract, or other record relating to such transaction may not be denied legal effect, validity, or enforceability solely because it is in electronic form; and

(2) a contract relating to such transaction may not be denied legal effect, validity, or enforceability solely because an electronic signature or electronic record was used in its formation.

Id. (codified at 15 U.S.C. § 7001(a) (2000)).

44. See *supra* note 40; cf. Robert A. Wittie & Jane K. Winn, *Electronic Records and Signatures Under the Federal E-Sign Legislation and the UETA*, 56 BUS. LAW. 293, 297 (2000).

45. The National Conference, for example, specifically charged the drafters of the 1988 text of the

One of the most striking areas in which the Uniform Rules of Evidence have departed from the framework of the Federal Rules is with respect to changes that the National Conference believed were necessary to take account of technological developments in preserving electronic records as well as writings on paper. The foundation of those modifications is the use of the term "record" in place of the term previously used — "writing."

In drafting the Uniform Rules of Evidence, the Drafting Committee determined it would make a new initiative with respect to capturing electronic evidence in all of its variety. The Drafting Committee seized upon the concept of "record," as used, among other places, in the Uniform Commercial Code. As described in the Reporter's Note to Uniform Rule 101, "The definition of 'record['] in RULE 101(3) is derived from § 5-102(a)(14) of the UNIFORM COMMERCIAL CODE and carries forward consistently the established policy of the Conference to accommodate the use of electronic evidence in business and governmental transactions."⁴⁶

The 1999 text of the Uniform Rules of Evidence sets forth an express definition of the term "record" that will apply throughout the Uniform Rules of Evidence.⁴⁷ As a consequence, the 1999 text of the Uniform Rules eliminates the confusion that afflicts the Federal Rules of Evidence and prior versions of the Uniform Rules, in which the definitions in article X do not apply to other articles.

Rule 101 of the 1999 text of the Uniform Rules of Evidence defines "record" to mean "information that is inscribed on a tangible medium or that is stored in an electronic form or other medium and is retrievable in perceivable form." As noted

Uniform Rules of Evidence to bring the language of the Uniform Rules into line with comparable provisions in the Federal Rules of Evidence wherever possible. No such charge was given the Drafting Committee that produced the 1999 text. The Prefatory Note to the 1999 text explains this as follows:

The underlying theory [for the 1988 text's bias toward vertical uniformity] was, apparently, that a trial practitioner need master only one set of rules to comfortably practice in both federal and state forums located in various States, Districts, and Circuits. However, in practice, this theory does not seem to work as well as expected. In operation, the same words are often construed differently by different courts, even by sister federal circuits and state jurisdictions. Thus, the careful lawyer must continue to research certain rules of evidence on a case-by-case basis.

As a result, the current Drafting Committee has endeavored to draft the amended rules in clear and reasonably understandable terms without slavish regard for other existing work product.

UNIF. R. EVID. prefatory note, at 1.

The arguments for and against conforming the state rules of evidence to the federal rules are explored in Kenneth W. Graham, Jr., *State Adaptation of the Federal Rules: The Pros and Cons*, 43 OKLA. L. REV. 293 (1990). The interplay between the development of state uniform law and federal law is explored on a more theoretical basis in Nim Razook, *Uniform Private Laws, National Conference of Commissioners for Uniform State Laws Signaling and Federal Preemption*, 38 AM. BUS. L.J. 41 (2000).

46. UNIF. R. EVID. 101 reporter's notes.

47. UNIF. R. EVID. 101. The Reporter's Note states as follows:

RULES 101 and 102 have been reorganized to include a definitions rule as RULE 101. The definitions in RULE 101 are of terms that are used throughout the UNIFORM RULES [OF EVIDENCE] and have a generic application. In contrast, terms that have application only in specific ARTICLES or RULES are separately defined in those ARTICLES or RULES.

in the prefatory note to the 1999 text of the Uniform Rules, the rules have been reorganized so that the definition of "record" applies throughout the Uniform Rules of Evidence, largely displacing references to writings or written documents.⁴⁸

The drafters' notes explain the adoption of this new terminology:

Although the UNIFORM RULES OF EVIDENCE prior to their amendment included specific reference, when appropriate, to "data compilations" to accommodate the admissibility of records stored electronically, many business and governmental records do not now consist solely of data compilations. Rather, in today's technological environment, records are [or may be] kept in a variety of mediums other than in just data compilations. "Records" may include items created, or originated, on a computer, such as through word processing or spreadsheet programs; records sent and received through electronic communications, such as electronic mail; data stored through scanning or image processing of paper originals; and information compiled into data bases. One, or all, of these processes may be involved in ordinary and customary business and governmental record keeping. Modern technology thus dictates that any of the foregoing [types of] records should be admissible when they are relevant if reasonable thresholds of evidentiary reliability are satisfied. The RULE 101(3) definition of "record" and the amendments to the UNIFORM RULES utilizing the term "record" are intended to facilitate the evidentiary use of these innovations in record keeping as well as more traditional forms of record keeping, such as writings, recordings and photographs.⁴⁹

By using one defined term throughout the various articles of the Uniform Rules of Evidence, with a carefully crafted definition capturing the meaning of the concept, the drafters of the Uniform Rules of Evidence have supplied careful draftsmanship in sharp contrast to the relatively loose use of terms in the Federal Rules of Evidence.

VII. Federal Response to the Increasing Use of Electronic Evidence

A. The Advisory Committee's Deliberations

Because the terminology employed by the Uniform Rules of Evidence, as last revised in 1999, represents a material improvement over the less-carefully drafted and structured provisions of the Federal Rules of Evidence, the changes effectuated by the Uniform Rules of Evidence have been brought to the attention of the Advisory Committee on Evidence Rules of the Judicial Conference of the United States. At its meeting on November 12, 1996, in San Francisco, California, the Advisory Committee took note of the fact that the Uniform Rules Drafting

48. See UNIF. R. EVID. 101, 106, 612, 801(a), 803(5)-(15), 803(17), 808, 901(b), 902(5), 902(6), 902(8), 902(9), 903, 1001(1), 1001(3), 1001(5), 1002, 1003, 1004, 1005, 1006, 1007.

49. UNIF. R. EVID. 101 reporter's note.

Committee proposed to revise every rule in which the term "writing" is used and to substitute the word "record." The Advisory Committee observed that the Drafting Committee of the Uniform Rules thought the change was necessary to "account for technological developments in preserving writings and records."⁵⁰ The minutes of that meeting appear to reflect the fact that the Advisory Committee was not disposed to make a change in terminology. The minutes report:

The proposed change in the term "writings" in the Uniform Rules engendered some discussion about technological advances and their impact on the Federal Rules of Evidence. Judge Stotler pointed out that the problem of electronic data cuts across all the rules, not only the Evidence Rules, as we move toward the "electronic courtroom." The Chair [the Honorable Fern M. Smith] observed that the problems created by technological change are more problems of validity and reliability than definitional. The Chair announced that in response to the challenges created by new technology, Judge Stotler has formed a subcommittee, consisting of one member from each of the advisory committees, as well as the reporters from each advisory committee. The purpose of this subcommittee is to consider how best to respond to changes in data retrieval and presentation in the federal courts. Judge Turner has been appointed by the Chair and has agreed to serve on the technology subcommittee.⁵¹

At a meeting of the Committee on Rules of Practice and Procedure on January 8-9, 1998, in Santa Barbara, California, Judge Fern M. Smith reported that the Advisory Committee on Evidence would also be considering whether amendments to the Federal Rules of Evidence were necessary to accommodate technological innovations in the presentation of evidence. She reported that, among other things, the Advisory Committee would review Rule 1001 "to determine whether the terms 'writing' and 'recording' should be redefined and whether they should apply to the entire body of the evidence rules."⁵²

Thus far, the Advisory Committee has not promulgated a proposal to amend the Federal Rules in the way that the 1999 amendments revised the Uniform Rules. Instead, the Advisory Committee proposed a narrower group of amendments, which resulted in the amendments that became effective on December 1, 2000.

B. The Curious Case of Federal Rule 902

The 2000 amendments to the Federal Rules themselves highlight the continuing need to address nonpaper records. Consider the recent amendment to Federal Rule 902, which changed the Federal Rules of Evidence in a way that conforms with the

50. Advisory Comm. on Evid. Rules of Judicial Conference of the United States, Minutes of Nov. 12, 1996 meeting, 1996 WL 936790, at *3.

51. *Id.*

52. Comm. on Rules of Practice and Procedure of the Judicial Conference of the United States, Minutes of Jan. 8-9, 1998 meeting, 1998 WL 907428, at *58.

1999 revision of the Uniform Rules of Evidence. The revision of Rule 902 represents a substantive advance, permitting parties to lay the foundation for the admission of records of regularly conducted activities by way of declaration rather than having to put on live testimony.⁵³ By simplifying the procedure for authenticating business records, the new Rule 902 ameliorates some of the risks of admitting paper and electronic business records into evidence. From our perspective, that is a good thing. That same revision, however, illustrates the lack of a consistent definition of "record," and the lack of any equivalent term in the Federal Rules.

The language of new Rules 902(11) and 902(12) is similar, but not identical to the new versions of the equivalent rules in the 1999 revisions to the Uniform Rules. Among the features that Federal Rules 902(11) and 902(12) share with their counterparts in the Uniform Rules, as revised in 1999, is that they use the word "record" and use that word consistently with the definition of "record" in the Uniform Rules. However, neither the text nor the comments to the 2000 amendments to the Federal Rules adopts or refers to that definition. That creates the potential for confusion because "record" in Rule 902, subsections (11) and (12), is being used in a way that is inconsistent with the use of that same word in Rule 803(6), which contains language that was not modified by the recent amendments.

In Federal Rule 803(6), "record" is one of a series of words (along with "memorandum," "report," and "data compilation") used to cover possible forms that business records might take.⁵⁴ In new Rule 902(11) and (12), however, "record" alone is used, and the context suggests that "record" is meant to cover the scope of the entire series of words recited in Rule 803(6). For example, is it reasonable to conclude that the new authentication procedure applies only to "records," whatever those may be, but not to any other memoranda, reports, or data compilations, which remain admissible under Rule 803(6) but are not eligible for authentication by declaration? It is hard to imagine anyone recommending that position as a normative matter, although the text of the rules would bear that interpretation. As a result, it appears that by adopting only one piece of the 1999 revisions of the Uniform Rules of Evidence, the Advisory Committee elected to forego an opportunity to clear up possible confusion about the rules governing admission of electronic evidence and, by doing so, actually created a new source of potential confusion.⁵⁵

In short, the 2000 revision of Rule 902 has exacerbated the need for a further amendment to the Federal Rules of Evidence that provides and implements a consistent definition of the word "record." The only logical candidate for that definition is the one already in use in the Uniform Rules of Evidence and the Uniform Commercial Code, among other enactments. Whatever the relative merits of the substantive and linguistic arguments about such a modification to the Federal

53. FED. R. EVID. 902(11), (12).

54. FED. R. EVID. 803(6).

55. To make matters even worse, Rule 803(6) was amended in 2000 to include a reference to Rule 902, but the use of "record" in that rule was unchanged, perhaps giving unintended credence to the argument noted in the text. FED. R. EVID. 803(6).

Rules prior to the recent amendments, that change is now necessary to bring the text of the Federal Rules of Evidence into harmony with the apparent substantive intentions of the Advisory Committee itself.

Conclusion

The 1999 revisions of the Uniform Rules of Evidence closely reflect the largely undisputed policy that it should not be more difficult for properly authenticated electronic records to be received into evidence than similarly genuine paper documents. By using the term "record" in a way consistent with the use of that word in the Uniform Commercial Code and other enactments, the 1999 revisions to the Uniform Rules also enhance the predictability and uniformity of the law. Unfortunately, the current version of the Federal Rules of Evidence does not share those virtues. Accordingly, the Federal Rules should be amended to adopt the definition and uses of "record" now in place in the Uniform Rules.