

New Rules for Electronic Discovery, so Now What?: *Daubert's* Impact on Determining What is not Reasonably Accessible

by
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Discovery concededly may work to the disadvantage as well as to the advantage of individual plaintiffs. Discovery, in other words, is not a one-way proposition. It is available in all types of cases at the behest of any party, individual or corporate, plaintiff or defendant. The problem thus far transcends the situation confronting this petitioner. And we must view that problem in light of the limitless situations where the particular kind of discovery sought by petitioner might be used.¹

Justice Murphy's observations of discovery within his 1947 opinion, *Hickman v. Taylor*, remain equally relevant almost sixty years later. Discovery has shifted from a tool for illuminating the truth to a mechanism for obfuscation and consequently, the Federal Rules of Civil Procedure have transformed to prevent discovery from stifling the search for truth. But the advancement of technology has accelerated the evolution of discovery, posing new challenges.

Technology has effectuated an age of unprecedented productivity for business.² However, technology has also created unheralded complexity within the modern world,³ and the pace of technological development cur-

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1. *Hickman v. Taylor*, 329 U.S. 495, 507 (1947).
2. This truism is easily identified by the growth of intellectual property law as a discipline in the legal community, replete with its own areas and sub-areas. The legal community regularly mimics the value added by technology to businesses through innovative ideas that leverage legal concepts applicable to technology for business improvement. See, e.g., Scott D. Locke, *Fifth Avenue and the Patent Lawyer: Strategies for Using Design Patents to Increase the Value of Fashion and Luxury Goods Companies*, 5 J. MARSHALL REV. INTELL. PROP. L. 40, 40 (2005). But these contributions do not have the same effect as technological innovation.
3. This complexity is not just reflected in anecdotal observations, but is quantifiable in the legal community through the sheer expansion of law and regulation. "A rough measure of the sheer quantity of rules may be derived from the number of pages added to the *Federal Register* each year: in 1960 there were

rently exhibits no signs of deceleration.⁴ These changes have placed enormous stress on the legal community,⁵ eliciting responsive action by judges, practitioners, and scholars who seek to blunt the effect of technological advancement on the American system of litigation.

Although technological development has been the mainstay of American business for decades,⁶ attorneys have only recently recognized the impact

14,477 pages added; in 2002, 80,322 pages.” Marc Galanter, *The Vanishing Trial*, 1 J. EMPIRICAL LEGAL STUD. 459, 529 (2004).

4. Moore’s Law states that the processing power of a microprocessor, at a given price, will double every eighteen months – this principle has remained consistent for forty years of the computer industry development. Kevin Werbach, *The Federal Computer Commission*, 84 N.C. L. REV. 1, 34 n.164 (2005). Werbach applies Moore’s Law to mobile phones, PDA’s, hand-held digital music players, and interactive home entertainment hubs to demonstrate the rapid development of intelligent devices with substantial computing power in the near future. *Id.* at 33-34.

The acceleration of technological cycles is evident in the time it took Americans to adopt four major technologies—the telephone, the television, the personal computer, and the Internet. It took forty years for 30% of Americans to own a telephone, seventeen years for 30% of Americans to own a television, thirteen years for 30% of Americans to own a personal computer, and only seven years for 30% of Americans to come online on the Internet.

Thomas A. Piraino, Jr., *A Proposed Antitrust Approach to High Technology Competition*, 44 WM. & MARY L. REV. 65, 75 (2002).

5. In 1998, Congress passed the Sonny Bono Copyright Term Extension Act, extending the term of copyright protection for an additional twenty years. *See* Pub. L. No. 105-298, §§ 101-02, 112 Stat. 2827, 2827-28 (1998). The same year, “Congress passed the Digital Millennium Copyright Act (DMCA) in response to perceived evils unleashed upon copyright holders by the advent of affordable digital technology allowing consumers to make perfect serial copies of works encoded in digital media with little difficulty and little cost.” Joshua Schwartz, *Thinking Outside the Pandora’s Box: Why the DMCA is Unconstitutional Under Article I, § 8 of the U.S. Constitution*, 10 J. TECH. L. & POL’Y 93, 95-96 (2005). International copyright agreements have even attempted to create global norms for intellectual property protection. *See* Terri Branstetter Cohen, *Anti-Circumvention: Has Technology’s Child Turned Against its Mother?*, 36 VAND. J. TRANSNAT’L L. 961, 966-69 (2003).
6. The development of AT&T is a classic example of business thriving, consuming, and driving technology. American Telephone and Telegraph was founded to capitalize on Alexander Graham Bell’s invention of the telephone and the existing technology of the telegraph. Now, the telegram is a fixture of the past and land based telephones are rapidly becoming obsolete. *See* FROM GUTENBERG TO THE INTERNET: A SOURCEBOOK ON THE HISTORY OF INFORMATION TECHNOLOGY 3-4 (Jeremy M. Norman ed., 2005). AT&T has shifted focus to assisting in the development of wireless Internet and other technologies.

of technology on discovery practice.⁷ Sixty years after the ENIAC began computing artillery trajectories for the U.S. Navy and Colossus began decoding German Enigma ciphers during World War II,⁸ the American legal system is poised to specifically address the challenges of computers and their obvious impact on the legal community. Following their approval, the United States Supreme Court submitted the new amendments to the Federal Rules of Civil Procedure to Congress on April 12, 2006,⁹ outlining specific rules for 'electronic discovery.'¹⁰ Without specific action by the legislature, the new rules will be enacted on December 1, 2006.¹¹

This article addresses the effects of technological growth on the development of electronic discovery as suggested by the latest amendments to the Federal Rules of Civil Procedure. Part I discusses American efforts to facilitate technological growth, underscoring the United States' embrace of technological innovation and recognizing the legal system's capability of handling complex issues associated with emerging technology. Part II outlines a brief history of the Federal Rules of Civil Procedure, identifying flexibility as the hallmark of American procedural jurisprudence and emphasizing the role that discovery abuse concerns have played in the rule modifications. It then touches on the recent amendments to the rules and their intended effect on the scope of electronic discovery. The article concludes by discussing the current standard for obtaining electronic discovery and proposes that the complexity of electronic discovery requires guidance from the Supreme Court's *Daubert* trilogy to ensure that parties are fairly represented in the wake of the proposed amendments to the Federal Rules of Civil Procedure.

See AT&T, AT&T Labs: In Development, <http://www.att.com/atlabs/development/> (last visited Oct. 20, 2006).

7. See, e.g., Richard L. Marcus, *2002 Institute for Law and Economic Policy Litigation Conference: Litigation in a Free Society: Reform Through Rulemaking?*, 80 WASH. U. L.Q. 901, 918-19 (2002). These issues have been gradually developing. In 1997, the United States District Court for the District of New Jersey sanctioned Prudential Insurance when a document retention order disseminated by e-mail failed to protect documents from destruction – an order that would be absurd in today's environment. *In re Prudential Ins. Co. of Am. Sales Practices Litig.*, 169 F.R.D. 598, 615-16 (D.N.J. 1997).
8. See Frances E. Zollers et al., *No More Soft Landings for Software: Liability for Defects in an Industry that has Come of Age*, 21 SANTA CLARA COMPUTER & HIGH TECH. L.J. 745, 747 (2005).
9. Letter from John G. Roberts, Jr. to the Honorable Dennis J. Hastert, Speaker of the House of Representatives (April 12, 2006), <http://www.supremecourt.us.gov/orders/courtorders/frcv06p.pdf>.
10. See Summary of the Report of the Judicial Conference Committee on Rules of Practice and—Procedure 21-37 (September 2005), available at <http://www.uscourts.gov/rules/Reports/ST09-2005.pdf>.
11. U.S. COURTS, FEDERAL RULEMAKING, <http://www.uscourts.gov/rules/> (last visited Oct. 20, 2006).

I. OUTLINE OF THE AMERICAN TECHNOLOGICAL LEGAL SYSTEM

The United States Constitution grants Congress the power “[t]o promote the Progress of Science and useful Arts, by securing for limited Times to Authors and Inventors the exclusive Right to their respective Writings and Discoveries.”¹² Cognizant of the importance of innovation, the founding fathers gave Congress the means to encourage technological development.¹³ James Madison described the significance of Congress’s ability to protect intellectual property: “The utility of this power will scarcely be questioned. . . . The right to useful inventions, seems with equal reason to belong to the inventors. The public good fully coincides in both cases, with the claims of individuals.”¹⁴

The Patent Act of 1790 was the nation’s first law to demonstrate congressional efforts to protect technological innovation.¹⁵ The United States Patent and Trademark Office (USPTO) issued the first patent on July 31, 1790, and has subsequently approved approximately seven million patent applications.¹⁶ The USPTO currently employs over 7,000 full time staff members who handle applications for complex processes, innovative ideas, and new products.¹⁷ In 2005, there were 409,532 applications for new patents filed, resulting in 165,485 issued patents.¹⁸

The patent statute proved to be merely the beginning of congressional efforts to guard intellectual property. Following the establishment of patent protection, early legislators enacted the Copyright Act of 1790, creating the United States’ first general copyright law.¹⁹ Congress has subsequently modified the scheme of copyright protection by changing the length of copyright

12. U.S. CONST. art. I, § 8, cl. 8.

13. “It is probably best to simply recognize that our founding fathers deemed intellectual property rights so vitally important to the success and stability of our new country that these rights were written into the Constitution, a document not generally known for its length and specificity.” Eugene R. Quinn, Jr., *An Unconstitutional Patent in Disguise: Did Congress Overstep its Constitutional Authority in Adopting the Circumvention Prevention Provisions of the Digital Millennium Copyright Act?*, 41 BRANDEIS L.J. 33, 37 (2002).

14. JAMES MADISON, THE FEDERALIST NO. 43 (1788).

15. See Patent Act of 1790, ch. 7, § 4, 1 Stat. 109, 111.

16. UNITED STATES PATENT AND TRADEMARK OFFICE, PATENTS: THE COLLECTION FOR ALL REASONS, <http://www.uspto.gov/web/offices/ac/ido/ptdl/patreaso.htm> (last visited Oct. 20, 2006).

17. See UNITED STATES PATENT AND TRADEMARK OFFICE, OUR BUSINESS: AN INTRODUCTION TO THE USPTO, <http://www.uspto.gov/web/menu/intro.html> (last visited Oct. 20, 2006).

18. UNITED STATES PATENT AND TRADEMARK OFFICE, TABLE 1: SUMMARY OF PATENT EXAMINING ACTIVITIES, tbl.1 (2005), http://www.uspto.gov/web/offices/com/annual/2005/060401_table1.html.

19. See Copyright Act of 1790, ch. 15, 1 Stat. 124.

terms,²⁰ reallocating administrative responsibilities,²¹ expanding the scope of protected works,²² and responding to international copyright pressures.²³

Most recently, Congress passed the Digital Millennium Copyright Act (DMCA)²⁴ in response to the potential threat that digital technology posed to copyright holders. With the emergence of digital technology, individuals are able to create high-quality duplicates of original works.²⁵ Indeed, the use of digital technology for making copies created the possibility of surreptitious reproduction on a massive scale.²⁶ Although primarily aimed at copyright protection, passage of the DMCA was equally important to fostering continued growth and development of electronic commerce, while simultaneously protecting intellectual property rights.²⁷

Laws that protect technological innovation have created a hybrid subset of legal specialization commonly known as intellectual property. Over time, intellectual property law has evolved to protect the fruits of American ideas. Patent attorneys recognize Article I, Section 8, Clause 8 as the Patent Clause, and although copyright attorneys identify the same section in the Constitution as the Copyright Clause, what is more important is the obvious emphasis on technological development.²⁸ Law firms throughout the country fearlessly wade into the legal arena of intellectual property sometimes struggling over legal and technological issues that have multi-million and multi-billion dollar implications.²⁹ Not only has the area of intellectual property law become financially significant, its scope has increased beyond national borders and is now a worldwide field of practice.³⁰

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20. See Copyright Act of 1831, ch. 16, §§ 1-2, 16, 4 Stat. 436-37, 439.
 21. See Copyright Act of 1870, ch. 230, §§ 85, 89-95, 16 Stat. 198, 212-13 (shifting the administration of copyright registration from the district courts to the Library of Congress Copyright Office).
 22. See Copyright Act of 1909, ch. 320, §§ 1, 3-6, 35 Stat. 1075-77.
 23. See Copyright Act of 1976, ch. 6, §§ 601-03, 90 Stat. 2541, 2588-90.
 24. See Digital Millennium Copyright Act, Pub. L. No. 105-304, 112 Stat. 2860 (1998).
 25. See Schwartz, *supra* note 5, at 96.
 26. *Id.*
 27. See Quinn, Jr., *supra* note 12, at 52.
 28. See *Id.* at 37.
 29. See *NTP, Inc. v. Research in Motion, Ltd.*, 418 F.3d 1282 (Fed. Cir. 2006) (discussing the now infamous Blackberry intellectual property dispute that not only has enormous potential costs for the parties, but the business community as a whole, as a result of the interruption of Blackberry services).
 30. See Eleanor M. Fox, *A Tale of Two Jurisdictions and an Orphan Case: Antitrust, Intellectual Property, and Refusals to Deal*, 28 *FORDHAM INT'L L.J.* 952 (2005).

Patent attorneys have a specialized bar examination and are required to obtain specialized training prior to being qualified to practice.³¹ Copyright attorneys deal with complex issues from a theoretical and technological perspective. Subset categories such as Internet law continue to emerge in the field of intellectual property. Years of innovation and technological development have not completely bypassed the legal world. Today's attorneys are more equipped than ever to understand technological issues due to the lucrative rewards available for understanding and addressing modern innovation.

II. A BRIEF HISTORY OF THE FEDERAL RULES OF CIVIL PROCEDURE

The development of the Federal Rules of Civil Procedure is, in itself, a study in innovation. The early American legal system was rooted in the strict forms of English law. Rather than explicitly adopting the absolute strict forms of the English system, early colonial settlers modified the system to fit local needs, particularly emphasizing the importance of juries in the decision making process.³² The writ system that resulted in procedural exclusion from the courts never took root in the fledgling colonies.³³

The individual colonies utilized different systems, but these early American systems generally adopted modified versions of the complementary English systems of law and equity.³⁴ After the colonial period, individual states retained the authority to control their judicial systems.³⁵ Once again, the Constitution made room for continued judicial innovation on a national scale, though not as explicitly as with technological innovation, "The judicial Power of the United States, shall be vested in one supreme Court, and in such inferior Courts as the Congress may from time to time ordain and estab-

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31. See U.S. PATENT AND TRADEMARK OFFICE, GENERAL REQUIREMENTS BULLETIN FOR ADMISSION TO THE EXAMINATION FOR REGISTRATION TO PRACTICE IN PATENT CASES BEFORE THE U.S. PATENT AND TRADEMARK OFFICE (2005), <http://www.uspto.gov/web/offices/dcom/olia/oed/grb15nov05.pdf>.
 32. See Stephen N. Subrin, *How Equity Conquered Common Law: The Federal Rules of Civil Procedure in Historical Perspective*, 135 U. PA. L. REV. 909, 926-27 (1987).
 33. See *id.* at 927.
 34. See Stephen N. Subrin & Thomas O. Main, *The Integration of Law and Fact in an Uncharted Parallel Procedural Universe*, 79 NOTRE DAME L. REV. 1981, 1989 (2004).
 35. The tension between the state law systems and the federal system that developed over time is emphasized by the Supreme Court's seminal decision in *Erie R.R. Co. v. Thompkins*, 304 U.S. 64 (1938), decided after the passage of the Rules Enabling Act of 1934 and prior to the application of the 1938 Federal Rules of Civil Procedure. "Prior to Erie and the Federal Rules, the Conformity Act required that federal courts sitting in diversity apply the procedural rules of the state in which the court was located." Jeffrey W. Stempel, *Politics and Sociology in Federal Civil Rulemaking: Errors of Scope*, 52 ALA. L. REV. 529, 536 (2001).

lish.”³⁶ Congress was empowered with the tacit authority to shape federal courts within the bounds of the Constitution and quickly did so with the passage of the Judiciary Act of 1789.³⁷

The states’ autonomy resulted in a multitude of mini-systems that remain today.³⁸ The collection of legal approaches throughout the states provided an opportunity for diverse substantive and procedural systems to develop. The most significant development in the American system was the merger of traditional law and equity systems that served as the basis for the Federal Rules of Civil Procedure. Over a hundred years after the United States was established, the American legal system was modified to create a more accessible system of adjudication by using the legal technological advancement of notice pleading and discovery.

A. Early Attempts at Codification

Prior to the Federal Rules of Civil Procedure, New York’s 1848 Field Code was an early response to the ideas about uniting law and equity.³⁹ This early system abolished the search for a single issue that dominated early American legal systems and replaced it with a system that emphasized “swift, economic, and predictable enforcement of discrete, carefully articulated rights.”⁴⁰ By 1890, half of the states had adopted the Field Code, but the dominance of this system would not last much longer.⁴¹ Over fifty years, the New York legislature modified the Code from 347 provisions to 3441, dramatically increasing the complexity of legal practice and causing commentators to stress for more substantive change.⁴²

Roscoe Pound, Dean of the Nebraska College of Law, spearheaded the cry for procedural reform arguing that professional expertise was needed to meet the procedural problems that were stifling the American legal system.⁴³

36. U.S. CONST. art. III, § 1.

37. *See* Judiciary Act of 1789, ch. 20, 1 Stat. 73.

38. Louisiana’s legal system stands out as an example of independent procedural development. *See* David Gruning, *Bayou State Bijuralism: Common Law and Civil Law in Louisiana*, 81 U. DET. MERCY L. REV. 437 (2004) (although Louisiana is an extreme example, there are a multitude of differences between the states).

39. *See* Subrin, *supra* note 31 at 932.

40. *See id.* at 935.

41. *Id.* at 939.

42. These modifications were known as the Throop Code and their complexity ultimately contributed to twentieth century procedural reform. “[The Throop Code] was attacked by bar committees for intermingling substantive and procedural provisions, and for being too long, too complicated, too minute and technical, and lacking elasticity and adaptability.” *Id.* at 940 (citations omitted).

43. *See id.* at 944-47.

Virginia lawyer, Thomas W. Shelton, lobbied extensively to ensure that Congress passed a rules enabling act that would allow the Supreme Court to establish uniform rules of federal procedure.⁴⁴ Charles E. Clark, dean of Yale Law School, argued for the procedural reforms as well.⁴⁵

B. The Early Federal Rules of Civil Procedure

With the Rules Enabling Act of 1934, Congress gave the Supreme Court the power to promulgate national rules to create technological change in the American legal system.⁴⁶ The Act provided that the Court “shall have the power to prescribe, by general rules, for the district courts of the United States and for the Courts of the District of Columbia, the forms of process, writs, pleadings, and motions, and the practice and procedure in civil actions at law.”⁴⁷ The first meeting of the Advisory Committee on federal procedural rules followed shortly after passage of the Act on June 20, 1935.⁴⁸ The final report of the Advisory Committee was issued in November of 1937, because of Congressional inaction, and the Federal Rules of Civil Procedure went into effect on September 16, 1938.⁴⁹

The new rules lowered the requirement for litigants to get into court by providing for a notice-pleading regime.⁵⁰ Even claimants of modest means were intended to be able to satisfy the pleading requirements of the new Federal Rules of Civil Procedure.⁵¹ Although notice pleading opened the door to the courts, the rules of discovery were intended to guide the course of actual litigation by honing the liberal notice pleading regime through an intensified interest in the discovery of underlying facts.⁵² These basic principles of the new rules emphasized the elimination of trial by surprise and promoting results based on the merits.⁵³

44. *See id.* at 948-49.

45. *See id.* at 961-75.

46. *See* Rules Enabling Act of 1934, Pub. L. No. 73-415, 48 Stat. 1064.

47. *Id.*

48. *See* Stephen N. Subrin, *Fishing Expeditions Allowed: The Historical Background of the 1938 Federal Discovery Rules*, 39 B.C. L. REV. 691, 717 (1998).

49. *See id.* at 729. Indeed, the current amendments to the Federal Rules of Civil Procedure are set to go into effect as a result of Congressional inaction.

50. *See* Stempel, *supra* note 34, at 537.

51. *See* Subrin & Main, *supra* note 33, at 1992-97.

52. *See id.* at 1999.

53. *See* Richard Marcus, *Only Yesterday: Reflections on Rulemaking Responses to E-Discovery*, 73 FORDHAM L. REV. 1, 5 (2004).

C. The Rise of Discovery

The liberal access to the courts afforded by notice pleading is counterbalanced by the discovery mechanism. While notice pleading allows litigants to plead broad causes of action, discovery allows litigants to reach the substance of the pleadings by affording the opportunity to investigate the facts. By providing discovery requirements, the Federal Rules of Civil Procedure have modified the nature of litigation in substantive ways.

Discovery has shifted from a fact illuminating mechanism to an end in itself. The reason for providing for discovery rules is simple; lawyers simply do not want to disclose facts to the other side that are detrimental to their case.⁵⁴ With the access to information that discovery provides, proponents of the early Federal Rules of Civil Procedure knew that unlimited discovery rules could lead to the same abuses associated with the old equity rules.⁵⁵ Ultimately, broad provisions for discovery were seen as a mechanism for encouraging informed settlement and efficient trials.⁵⁶ Since the 1970s, the discovery provisions inherent in the Federal Rules of Civil Procedure have perhaps often been unnecessarily modified.⁵⁷

By 1978, the rule makers began to respond to discovery abuses by modifying the discovery provisions of the Federal Rules of Civil Procedure. As much as the discovery modifications of the late twentieth century reflected the technological evolution of the federal rules in response to perceived abuses, the rise of digital technology would present an entirely new set of challenges for the federal rule makers. Quite simply, the technological innovation that was encouraged by the Constitution has resulted in litigation problems that dwarf the complexities of the Field Code or the burdensome nature of the writ system. Discovery has collided with the data storage technology of the twenty-first century. The discovery abuses associated with warehouses full of documents pale beside words like megabyte, gigabyte, and terabyte – names which encapsulate warehouse, after warehouse, after warehouse of paper documents.

III. AMENDING THE RULES TO ACCOUNT FOR ELECTRONIC DISCOVERY

Amending the Federal Rules of Civil Procedure is still the preferred mechanism for having a direct effect on the practice of litigation in the United States. Immediately after the 2000 Amendments went into effect, the

54. See Stephen N. Subrin, *Fudge Points and Thin Ice in Discovery Reform and the Case for Selective Substance-Specific Procedure*, 46 FLA. L. REV. 27, 30 (1994).

55. “It does not require a retentive memory to recall that the chief complaint against the old equity rules was the costly imposition of lengthy depositions.” *Id.* at 32-33 (quoting Thomas W. Shelton, the Virginia lawyer who spearheaded the campaign for uniform federal rules).

56. See *id.* at 30.

57. See Stempel, *supra* note 34, at 532.

Advisory Committee commenced the development of yet another revision to the Federal Rules of Civil Procedure.⁵⁸ The interest in modifying the Rules resulted from a “comprehensive examination” of discovery practices in litigation starting in 1996, and the issue of electronic discovery seemed to spring forth fully-formed from the collective minds of the consulting parties.⁵⁹

One external entity, the Sedona Conference, exerted influence to modify the rules for electronic discovery by promulgating an independent guideline, “The Sedona Principles: Best Practices Recommendations & Principles for Addressing Electronic Document Production.”⁶⁰

A. The Sedona Conference and the Rules Committee

The Working Group Series (the “WGS”) was established “to bring together some of the nation’s finest lawyers, consultants, academics and jurists to address current problems in the areas of antitrust law, complex litigation and intellectual property rights that are either ripe for solution or in need of a ‘boost’ to advance law and policy.”⁶¹ The WGS was not established specifically for electronic discovery.⁶² Since electronic document production was an ideal first subject for the WGS, it held the Sedona Conference.⁶³ “The problems posed [by electronic discovery] vex corporations, litigants, and the courts alike, yet there exist few guides sufficient to meet the complexity of issues that even the most simple document request can raise.”⁶⁴

Insightful thinkers from around the nation were invited to address problems in antitrust, complex litigation, and intellectual property – the very areas where the most technologically savvy attorneys work for the most advanced businesses in the country. The Sedona Conference chimed in on the issue of electronic discovery because “[i]t seemed doubtful to us that the normal development of case law would yield, in a timely manner, best prac-

58. Thomas Y. Allman, *The Need for Federal Standards Regarding Electronic Discovery*, 68 DEF. COUNS. J. 206, 206 (2001).

59. See Richard Marcus, *Only Yesterday: Reflections on Rulemaking Responses to E-Discovery*, 73 FORDHAM L. REV. 1, 7 (2005).

60. THE SEDONA PRINCIPLES: BEST PRACTICES RECOMMENDATIONS & PRINCIPLES FOR ADDRESSING ELECTRONIC DOCUMENT PRODUCTION 3 (Jonathan Redgrave, Esq. et al.eds., The Sedona Conference Working Group Series, 2003), available at http://www.thosedonaconference.org/publications_html.

61. Richard G. Braman, *Foreward* to THE SEDONA PRINCIPLES: BEST PRACTICES RECOMMENDATIONS & PRINCIPLES FOR ADDRESSING ELECTRONIC DOCUMENT PRODUCTION i (Jonathan Redgrave, Esq. et al.eds., The Sedona Conference Working Group Series, 2003), available at http://www.thosedonaconference.org/publications_html.

62. *Id.*

63. *Id.*

64. *Id.*

tics for organizations to follow in the production of electronic documents.”⁶⁵ The conference articulated the problem simply: “the way in which information is created, stored and managed in digital environments is inherently and fundamentally different from the way in which that is done in the paper world.”⁶⁶

B. Amending to Solve Perceived Problems

As a result of the Advisory Committee’s own investigations and the influence of external legal groups such as The Sedona Conference, electronic discovery became the focus of the most recent amendment recommendations. The desire for uniformity among jurisdictions and the conspicuous absence of appellate court decisions to guide courts ultimately provided the final rationale for Advisory Committee to amend the Federal Rules of Civil Procedure.⁶⁷ Thus, in order to achieve uniformity in the guidelines for electronic discovery, the Standing Committee passed amendments to the Federal Rules of Civil Procedure at the June 2005 meeting.⁶⁸ A summary of the Advisory Committee’s Report states that “proposed amendments to the discovery rules aim to improve electronic discovery by reducing its costs, increasing its efficiency, increasing uniformity of practice, and encouraging the judiciary to participate more actively in case management.”⁶⁹ However, the substance of the modifications may not meet the Advisory Committee’s lofty goals.

Numerous authors have already outlined the potential scope of the proposed rules.⁷⁰ Generally, the amendments can be broken down into three discrete categories: 1) inaccessibility as the standard for non-disclosure; 2)

65. Thomas Y. Allman et al., *Introduction to THE SEDONA PRINCIPLES: BEST PRACTICES RECOMMENDATIONS & PRINCIPLES FOR ADDRESSING ELECTRONIC DOCUMENT PRODUCTION 1* (Jonathan Redgrave, Esq. et al.eds., The Sedona Conference Working Group Series, 2003), available at http://www.thesedonaconference.org/publications_html.

66. *Id.*

67. Thomas Y. Allman, *Proposed National E-Discovery Standards and the Sedona Principles*, 72 DEF. COUNS. J. 47, 48 (2005).

68. Daniel B. Garrie, Matthew J. Armstrong, & Bill Burdett, Comment, *Hiding the Inaccessible Truth: Amending the Federal Rules to Accommodate Electronic Discovery*, 25 REV. LITIG. 115, 115-16 (2006).

69. *Id.* at 116 n.2.

70. See e.g., *Id.* at 120-30; Allman, *supra* note 66, at 48-52; Kenneth J. Withers, *We’ve Moved the Two Tiers and Filled in the Safe Harbor*, 52-DEC FED. LAW. 50, 51-54 (2005); Henry S. Noyes, *Is E-Discovery So Different That It Requires New Discovery Rules? An Analysis of Proposed Amendments to the Federal Rules of Civil Procedure*, 71 TENN. L. REV. 585, 588-629 (2004); Marcus, *supra* note 58, at 7-19; Ken Withers, *Two Tiers and a Safe Harbor: Federal Rulemakers Grapple with E-Discovery*, 51-SEP FED. LAW. 29, 29-31 (2004).

determination of good cause to overcome inaccessibility; and 3) protections for routine spoliation.⁷¹

C. Accessibility as the Threshold for Production

This modification to the Federal Rules of Civil Procedure creates a loophole in electronic discovery production that allows parties to escape production when they are able to “articulate technological and monetary arguments to courts that their data is not reasonably accessible, and therefore presumptively beyond the scope of discovery.”⁷²

A party need not provide discovery of electronically stored information from sources that the party identifies as not reasonably accessible because of undue burden or cost. On motion to compel discovery or for a protective order, the party from whom discovery is sought must show that the information is not reasonably accessible because of undue burden or cost.⁷³

No definition is provided to clarify what ‘not reasonably accessible’ means in the context of electronic discovery.⁷⁴ Presumably, courts will be forced to create independent methodologies for determining what material is available for production. As guidance, courts are likely to look to prior decisions to see how other courts have handled the issue.⁷⁵

An employment discrimination case out of the Southern District of New York, *Zubulake v. UBS Warburg, L.L.C.*, established a working definition for inaccessible data which will likely be used by courts in interpreting the Rule 26(b)(2)(B) modifications.⁷⁶ The course of litigation in the *Zubulake* case presents an excellent vignette on some of the problems associated with electronic discovery – determining accessibility,⁷⁷ potential ramifications of electronic retention policies,⁷⁸ cost shifting,⁷⁹ spoliation of electronic evidence,⁸⁰

71. See Garrie, Armstrong, & Burdett, *supra* note 67, at 116-18.

72. *Id.* at 121.

73. FED. R. CIV. P. 26(b)(2)(B) (proposed) (Effective December 1, 2006).

74. See Garrie, Armstrong, & Burdett, *supra* note 67, at 121.

75. *Id.*

76. *Zubulake v. UBS Warburg, L.L.C.*, 217 F.R.D. 309, 318-20 (S.D.N.Y. 2003) (hereinafter “Zubulake I”).

77. *Id.*

78. *Zubulake v. UBS Warburg, L.L.C.*, 230 F.R.D. 290, 291-293 (S.D.N.Y. 2003) (hereinafter “Zubulake II”).

79. *Zubulake v. UBS Warburg, L.L.C.*, 216 F.R.D. 280, 284 (S.D.N.Y. 2003) (hereinafter “Zubulake III”).

80. *Zubulake v. UBS Warburg, L.L.C.*, 220 F.R.D. 212, 216-17 (S.D.N.Y. 2003) (hereinafter “Zubulake IV”).

sanctions for electronic spoliation,⁸¹ and the admissibility of electronic discovery problems at trial.⁸²

Zubulake I discusses the inaccessibility of electronic data as the threshold for cost shifting.⁸³ The *Zubulake* court outlined broad categories of data and described whether or not the types of data would be accessible or inaccessible – thus triggering a cost shifting provision: “[W]hether production of documents is unduly burdensome or expensive turns primarily on whether it is kept in an *accessible or inaccessible* format.”⁸⁴ The *Zubulake* court focused its determination of accessibility and inaccessibility on “the media on which [the electronic data] is stored.”⁸⁵

The five categories of electronic media are: 1) Active, online data – such as hard drives; 2) Near-line data – such as robotic storage devices; 3) Offline storage/archives – represented by removable optical disks and magnetic tape media; 4) Backup tapes – ‘traditional’ computer tapes; and 5) Erased, fragmented or damaged data – latent electronic information remaining from fragmented clusters.⁸⁶ Of the five categories of data, the *Zubulake* court easily described the first three types of media as accessible and the last two as inaccessible.⁸⁷

“Backup tapes must be restored . . . , fragmented data must be de-fragmented, and erased data must be reconstructed, all before the data is usable. That makes such data inaccessible.”⁸⁸ The *Zubulake* court’s stance on inaccessibility is relatively stark from a technological perspective and unduly artificial.⁸⁹

81. *Zubulake v. UBS Warburg, L.L.C.*, 229 F.R.D. 422, 436-39 (S.D.N.Y. 2004) (hereinafter “*Zubulake V*”).

82. *Zubulake v. UBS Warburg, L.L.C.*, 382 F. Supp. 2d 536, 546-47 (S.D.N.Y. 2005) (hereinafter “*Zubulake VI*”).

83. *Zubulake I*, 217 F.R.D. at 318; *see also* Jessica Lynn Repa, Comment, *Adjudicating Beyond the Scope of Ordinary Business: Why the Inaccessibility Test in Zubulake Unduly Stifles Cost-Shifting During Electronic Discovery*, 54 AM. U.L. REV. 257, 274-76 (2004).

84. *Zubulake I*, 217 F.R.D. at 318.

85. *Id.*

86. *Id.* at 318-19.

87. *Id.* at 319-20.

88. *Zubulake I*, 217 F.R.D. at 320.

89. For an interesting article about the *Zubulake* court’s inaccessibility test and unexpected ramifications for cost shifting when presented with complex, but accessible data, *see* Repa, *supra* note 81, at 274. The most recent amendments to the Federal Rules of Civil Procedure do not address a cost-shifting provision, leaving ‘traditional’ *Zubulake* cost-shifting unchanged.

D. More Protection? – Requiring a Showing of Good Cause

Regardless of the inaccessibility of electronic material, the requesting party is able to obtain requested electronic evidence upon a showing of good cause.⁹⁰ If a “showing is made [that the material is inaccessible], the court may nonetheless order discovery from such sources if the requesting party shows good cause, considering the limitations of Rule 26(b)(2)(C). The court may specify conditions for the discovery.”⁹¹

Just as with ‘inaccessibility’, the proposed rule does not define ‘good cause’. However, there is no indication that ‘good cause’ associated with the rule modification will be any different than the standard for discovery articulated by Rule 26(b)(1) that is currently in effect. “For good cause, the court may order discovery of any matter relevant to the subject matter involved in the action. Relevant information need not be admissible at the trial if the discovery appears reasonably calculated to lead to the discovery of admissible evidence.”⁹² This standard derives from a relatively recent amendment to the Federal Rules of Civil Procedure, effective only since 2000, that usefully “[involves] the court more actively in regulating the breadth of sweeping or contentious discovery.”⁹³

The 2000 Rule 26(b)(1) amendment was controversial for its use of the ‘good cause’ language. Describing the problem by including this language to principles of discovery, Judge Scheindlin of the Southern District of New York⁹⁴ said, “[t]he ‘good cause’ requirement will lead to ten or twenty years of satellite litigation while its meaning is worked out; the good cause requirement was abandoned from Rule 34 in 1970, and should not now be resurrected.”⁹⁵

“Where a party seeks information that does not readily bear on a claim or defense but may be important to the case and help develop potentially admissible evidence, this should ordinarily suffice as a demonstration of sufficient good cause for obtaining this further discovery.”⁹⁶ Under this interpretation, the 2000 amendments would have resulted in limiting discovery

90. FED. R. CIV. P. 26(b)(2)(B) (proposed) (Effective December 1, 2006).

91. *Id.*

92. FED. R. CIV. P. 26(b)(1).

93. FED. R. CIV. P. 26(b)(1)(B) (Advisory Committee note 2000); *see also In re Sealed Case* (Medical Records), 381 F.3d 1205, 1215 (D.C. Cir. 2004).

94. Judge Scheindlin ruled on the Zubulake cases. Considering her criticism of the ‘good cause’ standard, the Rules Committee’s use of ‘good cause’ as the required showing to obtain discovery of inaccessible data is interesting.

95. *See Stempel, supra* note 34, at 571 (2001).

96. Ronald J. Hedges, *Complex Case Management*, SK042 ALI-ABA 1247, 1264 (2005).

abuses without limiting the effectiveness of litigation.⁹⁷ In contrast, however, the courts determined that ‘good cause’ is a high burden for plaintiffs to overcome.⁹⁸ This leaves the plaintiff seeking to obtain electronic discovery of information that is inaccessible with the task of demonstrating good cause.

E. Removing the Sting – Protection for Routine Spoliation

Spoliation results when evidence that is relevant to litigation is lost.⁹⁹ Specifically, a party has “a duty to preserve documents . . . when a party knows or should know that the evidence may be relevant to future litigation.”¹⁰⁰ Pleadings, appropriately described, should place the opposing party on notice regarding the relevant material evidence.¹⁰¹ Vague notice pleading may not provide the opposing party with sufficient information to reasonably inform him or her of what potential material evidence should be preserved. As pleadings become more specific, parties receive more notice of the claims against them and the evidence that is relevant to those claims. Discovery requests identify specific types of information as relevant to the claim of the

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97. *Id.* (citing Jeffrey W. Stempel, *Applying Amended Rule 26(B)(1) (sic) in Litigation: The New Scope of Discovery*, 199 F.R.D. 396, 424 (2001)).
 98. *See Semien v. Life Ins. Co. of N. Am.*, 436 F.3d 805, 816 (7th Cir. 2006) (finding that absent a prima facie evidence of misconduct the plaintiffs could not demonstrate good cause to the trial court); *Wagner v. First Unum Life Ins. Co.*, 100 Fed. Appx. 862, 863 (2d Cir. 2004) (finding that a claim of conflict of interest could not amount to good cause); *Hoffart v. United States Gov’t*, 24 Fed. Appx. 659, 665-66 (9th Cir. 2001) (stating that evidence of a 1983 conspiracy does not support a 1996 conspiracy and is not good cause for discovery); *compare to DeFelice v. Am. Int’l Life Assurance Co.*, 112 F.3d 61, 67 (2d Cir. 1997) (finding good cause for a demonstrated conflict of interest).
 99. *But see Residential Funding Corp. v. DeGeorge Fin. Corp.*, 306 F.3d 99 (2d Cir. 2002) (allowing the sanctions for ‘purposeful sluggishness’ in making e-mail data available even though physical destruction of the evidence did not occur); *Sheppard v. River Valley Fitness One, L.P.*, 203 F.R.D. 56 (D.N.H. 2001) (finding sanctions applicable for lack of diligence in electronic discovery); *Thompson v. United States HUD*, 219 F.R.D. 93 (D. Md. 2003) (sanctioning the federal government for production of 80,000 emails on the eve of trial). Presumably the same standards regarding dubious discovery practices would continue to apply today.
 100. Harvey L. Kaplan, *Electronic Discovery in the 21st Century: Is Help on the Way?*, 733 PLI/Lit 65, 73 (2005); *see also Wiginton v. Ellis*, 2003 WL 22439865, 6 (N.D. Ill. 2003) (finding that a letter from plaintiff’s counsel provided a duty to preserve data that were likely to be the subject of discovery requests).
 101. *See Wm. T. Thompson Co. v. Gen. Nutrition Corp.*, 593 F. Supp. 1443 (C.D. Cal. 1984) (finding sanctions where the defendant purposefully attempted to destroy relevant information through all phases of the litigation).

parties. If spoliation occurs in the discovery phase, the Federal Rules of Civil Procedure provide a remedy for the requesting party.¹⁰²

Rule 37 normally provides sanctions for failing to make appropriate discovery – thus punishing spoliation. The possible sanctions include – deeming the fact for which the evidence was needed by the requesting party proven; refusal by the court to allow the spoliator to oppose designated claims that would have been supported by the evidence; an order striking the pleadings of the spoliator, including the entry of summary judgment for the requesting party; or a finding of contempt.¹⁰³

The modifications to Rule 37(f) will remove the possibility for sanctions due to spoliation¹⁰⁴ when routine business operations result in the destruction of electronic evidence.¹⁰⁵ The change to the rule is straightforward; “[a]bsent exceptional circumstances, a court may not impose sanctions under these rules on a party for failing to provide electronically stored information lost as a result of the routine, good-faith operation of an electronic information system.”¹⁰⁶ This rule potentially provides a powerful exception for applying sanctions against a party that has allowed spoliation of evidence to occur, but in practice, it may not provide the protections intended.¹⁰⁷

A reason for the desired increase in protection can be seen in *United States v. Philip Morris USA, Inc.* where the court sanctioned Philip Morris even after it claimed that the loss of electronic information was a result of a routine business practice.¹⁰⁸ In *Philip Morris*, the court had entered a blanket

102. See *Trigon Ins. Co. v. United States*, 204 F.R.D. 277 (E.D. Va. 2001) (holding sanctions for spoliation were appropriate when discoverable documents were destroyed as part of the routine business practices of a sub-contractor to one of the litigants).

103. FED. R. CIV. P. 37(b)(2).

104. The *Zubulake* court dealt with sanctions for spoliation, finding only the awarding of costs for additional depositions appropriate. See *Zubulake IV*, 220 F.R.D. 212.

105. See *Garrie, Armstrong, & Burdett*, *supra* note 67, at 126-27.

106. FED. R. CIV. P. 37(f) (proposed) (Effective December 1, 2006).

107. See *Zubulake V*, 229 F.R.D. 422 (finding sanction following the willful destruction of e-mails); see also *Metro. Opera Ass’n v. Local 100, Hotel Employees & Rest. Employees Int’l Union*, 212 F.R.D. 178 (S.D.N.Y. 2003) (finding bad faith in the routine business operations of a litigant where actions included the replacement of all computers relevant to the litigation with new computers prior to a scheduled on-site inspection); see also Thomas Y. Allman, *Proposed National E-Discovery Standards and the Sedona Principles*, 72 DEF. COUNS. J. 47, 55 (2005) (pointing out that the Second Circuit’s sanctioning of a party for negligent failure to produce ESI in *Residential Funding Corp. v. DeGeorge Fin. Corp.*, 306 F.3d 99 (2d Cir. 2002), would not be overruled by the modifications to Rule 37(f)). Whether or not this observation holds true remains to be seen.

108. *United States v. Philip Morris USA, Inc.*, 327 F. Supp. 2d 21 (D.D.C. 2004).

data preservation order early in the course of litigation.¹⁰⁹ However, even after entry of the order, the defendant continued to systematically delete e-mail that was older than sixty days old.¹¹⁰ This policy resulted in irrevocably losing information from employees that held the highest, most responsible positions in the company.¹¹¹ Even after learning of the problem, the company continued the deletions.¹¹² Regardless of the system-wide nature of this business policy, Philip Morris was clearly on notice regarding the importance of the information for litigation.¹¹³ As a result, sanctions disallowing Philip Morris from calling a specific witness and monetary fines were entirely appropriate.¹¹⁴ However, the modifications to Rule 37(f) could protect companies like Philip Morris, that acting in the course of ordinary business destroy vital documents for litigation.

Because of the Rule 26 conferences during litigation, discussion between parties concerning the appropriate information necessary for discovery provide extensive notice regarding the types of electronic material that need to be disclosed. Amended Rule 26(f) would further require the parties to: 1) discuss the preservation of electronic information, disclosure or discovery of electronically stored information, including the form of production; 2) potential privilege problems; 3) potential for asserting privilege after production; and 4) whether or not a court order is required.¹¹⁵ Specifically included in this conference would be descriptions of relevant electronically stored data. Additionally, Rule 33(d), as modified, will allow for interrogatories regarding electronic information.¹¹⁶

The type of notice provided by conferences and relevant interrogatories should certainly meet the new rule's exceptional circumstances requirement for triggering sanctions.¹¹⁷ When combined with the new 'not reasonably accessible' protection of Rule 26(b)(2)(B), the parties should have fully identified what information is available for discovery.¹¹⁸ Lost information outside the scope of accessible information will not be sanctionable because

109. *Id.* at 23.

110. *Id.*

111. *Id.* at 24.

112. *Id.* at 23.

113. *Id.* at 25.

114. *Id.* at 25.

115. *See* FED. R. CIV. P. 26(f) (proposed).

116. *See* FED. R. CIV. P. 33(d) (proposed).

117. *See* *United States v. Philip Morris USA Inc.*, 327 F. Supp. 2d 21, 26 (D.D.C. 2004) (holding that sanctions were appropriate when the defendant was aware of the data-preservation order, but continued the routine business practice of deleting e-mail messages greater than sixty days old).

118. *But see* *Convolve, Inc. v. Compaq Computer Corp.*, 223 F.R.D. 162, 177 (S.D.N.Y. 2004) (citing the proposed amendment to FED. R. CIV. P. 37 and

it will not be discoverable under the new rules. However, lost information that is accessible will remain sanctionable because, once a party's electronic information is found to be accessible, the notice to the party should be sufficient to either create an 'exceptional circumstance' or defeat a 'good faith' defense.

F. The Final Effect of the Changes

These changes to the federal rules provide defendants with substantial protections. Ultimately, the new rules protect a subset of information from discovery, shifting discoverability from the traditional paper discovery standard of all material "relevant to the claim or defense of any party"¹¹⁹ to the electronic discovery standard of accessibility of the electronic material, regardless of its relevance to the claim or defense of any party.¹²⁰ Under a general electronic discovery scenario, litigants can choose to presumptively declare material "not reasonably accessible", forcing a hearing on a motion to compel discovery.¹²¹ The moving party must then demonstrate good cause to have access to the material.¹²² But once material is determined to be inaccessible, the full protections of Federal Rules will come into effect because the proposed language of Rule 37(f) allows for the routine destruction of electronic information.¹²³

It is apocalyptic to believe that the courts will find everything inaccessible and thus non-discoverable. But the 'traditional' tests of accessibility articulated by *Zubulake* cannot strike the proper balance when compared to the rapid development of digital technology. Battles over accessibility will be fought under another, older guise – *Daubert*.

IV. APPLYING DAUBERT PRINCIPLES IN TESTING ACCESSIBILITY

The *Zubulake* analysis bases accessibility on the type of storage media for the electronic information.¹²⁴ But the evidence for determining accessibility has previously rested with the parties. Numerous representatives will be willing to state that electronic data is stored in an inaccessible form. Parties seeking to overcome the "not reasonably accessible" test will need to understand the electronic technology of the opposing side and be prepared to present testimony to the contrary; most importantly, they will need to articu-

finding that absent a violation of a preservation order, no sanction was warranted).

119. FED. R. CIV. P. 26(b)(1).

120. FED. R. CIV. P. 26(b)(2)(B) (proposed).

121. *See id.*

122. *Id.*

123. *See* FED. R. CIV. P. 37(f) (proposed).

124. *See Zubulake I*, 217 F.R.D. at 319-320.

late to the court why their view regarding the accessibility of the material is correct.

A. Zubulake's Mechanism for Determining Not Reasonably Accessible

In *Zubulake*, the court faced an electronic discovery dispute¹²⁵. The plaintiff's first document request specifically identified "[a]ll documents concerning any communication by or between UBS employees concerning Plaintiff."¹²⁶ The discovery request further defined the term 'document' broadly, including "without limitation, electronic or computerized data compilations."¹²⁷ Not surprisingly, the parties disputed the scope of this request as unduly burdensome.

Following a conference with United States Magistrate Judge Gorenstein, the parties reached an agreement stating that the defendant "will produce responsive e-mails if retrieval is possible."¹²⁸ In accordance with the agreement between the parties, the defendant produced one hundred pages of e-mails.¹²⁹ The plaintiff objected to the defendant's production, believing that the discovery agreement included the production of e-mail from backup tapes.¹³⁰ UBS Warburg disagreed, stating that the cost of producing the e-mails from backup tapes would be prohibitively expensive.¹³¹

In this case, *Zubulake* knew that UBS had not searched the back-up tapes, because "she herself had produced approximately 450 pages of e-mail correspondence."¹³² In response to the assertion of prohibitive expense by the defendants, Judge Gorenstein ordered the deposition of a person with knowledge of the defendant's email policies and the burden of producing the e-mails.¹³³ The defendants produced the Manager of Global Messaging who testified to the technical nuances of the system and the cost of restoring the relevant information, ultimately indicating that the defendant used two systems to maintain archival e-mails: an optical disk system and a back-up tape system.¹³⁴

The *Zubulake* court took notice of the defendant's two email storage systems and ranked them in its analysis of the accessibility of electronic me-

125. *Id.* at 316.

126. *Id.* at 312 (internal quotations omitted).

127. *Id.*

128. *Id.* at 313.

129. *Id.*

130. *Id.*

131. *Id.*

132. *Id.*

133. *Id.*

134. *Id.* at 313-314.

dia. “[W]hether production of documents is unduly burdensome or expensive turns primarily on whether it is kept in an *accessible* or *inaccessible* format.”¹³⁵ Judge Scheindlin noted parenthetically that the distinction between accessibility and inaccessibility “corresponds closely to the expense of production.”¹³⁶ Judge Scheindlin then *sua sponte* established five categories of electronic media without the assistance a court appointed expert: active, online data;¹³⁷ near-line data;¹³⁸ offline storage/archives;¹³⁹ backup tapes;¹⁴⁰ and erased, fragmented or damaged data.¹⁴¹ “Of these, the first three categories are typically identified as accessible, and the latter two as inaccessible.”¹⁴²

With the escalation in importance of a determination of ‘not reasonably accessible’ under the latest amendments to the Federal Rules of Civil Procedure, litigants cannot afford to rely on a beneficial, independent determination by a judge to protect their interests.¹⁴³ Nor would such a decision be appropriate. Technological advancement causes electronic discovery issues to present moving targets for litigants. There can be no bright line test for answering whether electronic information is reasonably accessible. But the inability to create a bright line test is not merely due to the prospective of technological advancement; it also results from the use of legacy technology.

135. *Id.* at 318.

136. *Id.*

137. *Id.* (citing Cohasset Associates, Inc., *White Paper: Trustworthy Storage and Management of Electronic Records: The Role of Optical Storage Technology* (April 2003), available at <http://www.plasmon.com/downloads/pdf/cohasset.pdf> (Hereinafter “White Paper”)).

138. *Id.* at 318-19 (citing White Paper).

139. *Id.* at 319 (citing White Paper).

140. *Id.* (citing Webopedia, at http://inews.webopedia.com/TERM/t/tape_drive.html; SDLT, Inc., *Making a Business Case for Tape* (June 2002), http://quantum.treehouse1.com/Surveys/publishing/survey_148/pdfs/making_a_business_case_for_tape.pdf; Jerry Stern, *The Perils of Backing Up*, http://www.grsoftware.net/backup/articles/jerry_perils.html).

141. *Id.* (citing Sunbelt Software, Inc., *White Paper: Disk Defragmentation for Windows NT/2000: Hidden Gold for the Enterprise 2*, <http://www.sunbelt-software.com/evaluation/455/web/documents/idcwhite-paper-english.pdf>; Executive Software, Inc., *Identifying Common Reliability/Stability Problems Caused by File Fragmentation*, http://www.execsoft.com/Reliability_Stability_Whitepaper.pdf; Stan Miastkowski, *When Good Data Goes Bad*, PC WORLD, Jan. 2000).

142. *Id.* at 319-20.

143. See *Daubert v. Merrell Dow Pharms., Inc.*, 509 U.S. 579, 593 n.11 (1993) (stating “[T]heories that are so firmly established as to have attained the status of scientific law, such as the laws of thermodynamics, properly are subject to judicial notice”).

Ultra modern and Jurassic technologies present similar challenges and should require the guidance of expert testimony when accessing accessibility. Federal courts are not unfamiliar with spontaneously addressing cutting-edge scientific principles. And the *Daubert* decision created the current standard for accessing the validity of expert assertions.

B. Daubert Meets the Helpdesk

In 1993, the Supreme Court in *Daubert* “promulgated a new test for the federal courts to use when ruling on the admissibility of scientific evidence.”¹⁴⁴ The Court in *Daubert* found that “the trial judge must ensure that any and all scientific testimony or evidence admitted is not only relevant, but reliable.”¹⁴⁵ This decision modified the “general acceptance” test used in *Frye v. United States*,¹⁴⁶ creating a new test for admissibility that emphasized the role of the judge as the gatekeeper of proffered expertise.¹⁴⁷ *Daubert* creates a list of factors for consideration when assessing scientific expert testimony: 1) whether the expert theory can be tested objectively; 2) whether the theory is subject to peer review; 3) error rate of the theory; 4) existence and maintenance of standards and controls; and 5) the general acceptance in the scientific community.¹⁴⁸

While *Daubert* dealt with the sufficiency of theoretical scientific evidence, *Kumho Tire Co. v. Carmichael* expanded the principles expressed in *Daubert* to the realm of expert testimony based on experience-based observations.¹⁴⁹ *Kumho Tire* requires a court to “exercise its gatekeeping obligation so that the expert, whether relying on professional studies or personal experience, will, when testifying, employ the same level of intellectual rigor that

144. Margaret A. Berger, *The Supreme Court's Trilogy on the Admissibility of Expert Testimony*, REFERENCE MANUAL ON SCIENTIFIC EVIDENCE 9, 10 (2d ed. 2000).

145. 509 U.S. 579, 589 (1993).

146. *Frye v. United States*, 293 F. 1013 (D.C. Cir. 1923); see also, David E. Bernstein, *Frye, Frye, Again: The Past, Present, and Future of the General Acceptance Test*, Law and Economics Research Papers Series Paper No. 01-07 (2001), available at http://papers.ssrn.com/paper.taf?abstract_id=262034 (stating “In *Frye v. United States*, the District of Columbia Court of Appeals refused to admit evidence that was based on a forerunner of the modern lie detector test. In a pity opinion, the court announced that “while courts will go a long way in admitting expert testimony deduced from a well-recognized scientific principle or discovery, the thing from which the deduction is made must be sufficiently established to have gained general acceptance in the particular field in which it belongs.”).

147. See Berger, *supra* note 143, at 19.

148. *Daubert*, 509 U.S. at 593-94.

149. *Kumho Tire Co. v. Carmichael*, 526 U.S. 137, 141 (1999).

the expert would use outside the courtroom when working in the relevant discipline.”¹⁵⁰

The rationale of *Daubert* and *Kumho Tire* was codified by amendments to the Federal Rules of Evidence in 2000.¹⁵¹

If scientific, technical, or other specialized knowledge will assist the trier of fact to understand the evidence or to determine a fact in issue, a witness qualified as an expert by knowledge, skill, experience, training, or education, may testify thereto in the form of an opinion or otherwise, if (1) the testimony is based upon sufficient facts or data, (2) the testimony is the product of reliable principles and methods, and (3) the witness has applied the principles and methods reliably to the facts of the case.¹⁵²

The new rule places the technical and other specialized knowledge test on the same level as scientific knowledge. In the realm of electronic discovery, the helpdesk should become the expert witness for determining accessibility.

1. Using the Helpdesk to Define Accessibility

Electronic evidence typically presents a separate set of challenges from the theoretical scientific discussions associated with cutting-edge expert testimony addressing untested or new fields.¹⁵³ Access to e-mail and other existing electronic documents is likely to be the most common request in the field of electronic evidence – the bread and butter of the helpdesk set. Actually, the e-mail systems and electronic document management systems require much more technological expertise than the helpdesk normally provides, but conceptually only the technological witchdoctors of the helpdesk can really provide the necessary information on accessibility. The helpdesk is an apt metaphor for those individuals possessing specialized knowledge and are in the best position to educate the court regarding accessibility. For example, in health care litigation, electronic data “consists of different data types and formats and is located in various electronic input systems including: laboratory information systems; pharmacy information systems; picture archives and communications systems; results reporting systems; computerized provider order entry systems; and word processing systems.”¹⁵⁴ Utilizing a corporate representative as the source of information

150. See Berger, *supra* note 143, at 19 (citations omitted).

151. See R. Matthew Wise, Comment, *From Price Waterhouse to Dukes and Beyond: Bridging the Gap Between Law and Social Science by Improving the Admissibility Standard for Expert Testimony*, 26 BERKELEY J. EMP. & LAB. L. 545, 557 (2005).

152. FED. R. EVID. 702.

153. *But see infra* Part IV.B.4.

154. John M. Murdock & Jessica M. Swartz, *The Proposed E-discovery Amendments to the Federal Rules of Civil Procedure: Possible Opportunities and Pit-*

about electronic systems is not the most appropriate mechanism for actually determining what information is readily accessible.

In *Zubulake*, the defendant produced the Manager of Global Messaging to prove that the documents requested were unduly burdensome, by describing the optical disks and backup tape systems that were in place at the time.¹⁵⁵ In reality, executives may be the wrong individuals to produce at trial for determining accessibility because “it seems that some executives of companies often understand only dimly, or not at all, how their own information systems work and what information they produce.”¹⁵⁶

In *GTFM v. Wal-Mart Stores Inc.*, Wal-Mart’s defense counsel objected to a request for the production of electronic documents stating that the material was inaccessible.¹⁵⁷ Counsel based this assertion on a statement by a Rob Hey, a senior executive for Wal-Mart, which indicated “Wal-Mart’s computers could not produce sales information of locally purchased goods for a period longer than five weeks.”¹⁵⁸ At a hearing two years later, Wal-Mart’s counsel continued to assert that the records were unavailable, even when plaintiff’s counsel asserted disbelief that a company of Wal-Mart’s size would be unable to retain the sales records. One year later during a deposition, Carol Basnaw, Vice President in the MIS Department, stated that the records were available for a period of one year following the transaction.¹⁵⁹ But “[b]ecause the full extent of defendant’s computer capability was only recently discovered, however, defendant states that the information requested by plaintiffs in December 1998 is no longer available.”¹⁶⁰ Clearly, accessibility was a determination that experienced experts should have made and not corporate executives with a lack of understanding about the specific intricacies of an electronic storage system.

An effective response from the plaintiff’s counsel in the *Zubulake* case would demonstrate why optical disks and backup tape systems cause the electronic documents requested to be reasonably accessible. The expert testimony from both the plaintiff and defendant is essential for the judge to determine the true level of accessibility of the electronic data in question. Expert

falls for Discovery of Electronically Stored Healthcare Information, HEALTH LAWYER NEWS 24 (March 2006) (citing AHIMA e-HIM Work Group on the Legal Health Record, *Update: Guidelines for Defining the Legal Health Record for Disclosure Purposes*, 76 Journal of AHIMA 8, 64A-G (Sept. 2005) available at http://library.ahima.org/xpedio/groups/public/documents/ahima/bok1_027921.hcsp?dDocName=bok1_027921)

155. *Zubulake I*, 217 F.R.D. at 313, 318.

156. Marcus, *supra* note 58, at 16.

157. *GTFM v. Wal-Mart Stores, Inc.*, 49 Fed. R. Serv. 3d (West) 219 (S.D.N.Y. 2000).

158. *Id.* at 2.

159. *Id.*

160. *Id.*

testimony is necessary to prevent sweeping statements of inaccessibility from controlling the determination of the court. Statements such as, “retrieving archival data is very expensive because it typically requires a technician to write a program to collect the data” and “residual data consists of deleted files and emails, which are the most expensive to retrieve,” must be tested to ensure that they are technologically accurate.¹⁶¹

An example of how a corporate defendant could distort the purpose of the new amendments to the rules, through utilization of an XML tag modification to obfuscate the availability of readily accessible data, is by electing “not to upgrade an outdated mainframe application, leaving the data accessible to the bank while making restoration and production costs too expensive to require production to a requesting party.”¹⁶² This is precisely the reason for presenting expert testimony on accessibility. For the moving party, preparation for the hearing on the accessibility of electronic information will require an understanding about the defendant’s electronic systems – information that is obtainable through traditional discovery mechanisms such as interrogatories and depositions.

In *Sonnino v. University of Kansas Hospital Authority*, the Kansas district court recognized the importance of interrogatories regarding electronic information systems.¹⁶³ *Sonnino* was an employment discrimination case involving revocation of hospital privileges.¹⁶⁴ The plaintiff requested, via interrogatory, information regarding the defendant’s computer and e-mail systems.¹⁶⁵ The defendant objected on numerous grounds, but the court overruled these objections as irrelevant and non-responsive.¹⁶⁶ Although the court did not address the specific relevance of the plaintiff’s interrogatory, by requiring this type of information to be produced, the court demonstrates the premium associated with understanding an electronic infrastructure. The importance of the sub-issue of accessibility makes a party’s electronic infrastructure relevant to a claim of one of the parties, hence discoverable. This will be an even more important consideration when parties are expected to dispute the accessibility of another party’s electronic evidence.

2. The Helpdesk and Good Cause

Even after a determination that electronic information is not reasonably accessible, testimony from the helpdesk can be used to demonstrate why a party has good cause to access electronic information. The specialized

161. Brian Organ, *Discoverability of Electronic Evidence*, 2005 SYRACUSE SCI. & TECH. L. REP. 5 (2005).

162. Garrie, Armstrong, & Burdett, *supra* note 67, at 123.

163. *Sonnino v. Univ. of Kansas Hosp. Auth.*, 220 F.R.D. 633 (D. Kan. 2004).

164. *Id.* at 636.

165. *Id.* at 655.

166. *Id.*

knowledge contained in electronic information may result in a unique need for data in electronic format. Because discovery includes all material that is “relevant to the claim or defense of any party,”¹⁶⁷ the variety of uses for electronic discovery in litigation will continue to grow as the imagination of the attorneys and the development of technological advancements continues.

For example, metadata provides fertile ground for information relevant to litigation. As one author states, “[m]etadata is often referred to as ‘data about data.’”¹⁶⁸ Most people are familiar with simple categories of metadata. For example, when using the Microsoft Windows XP operating system, by modifying the view of a file to “details” when in Windows Explorer, the user can view the full filename of the document, the document’s size, and the date the document was last modified. However, by modifying the number of fields viewed in the Explorer window, a wealth of information is accessible: date created, date accessed, owner, author, and numerous other fields.¹⁶⁹ Metadata is a broad category of available information – different products produce different scopes of information. The document management software frequently used by law firms, Hummingbird, saves multiple fields of metadata information – providing access to whom, when, and where a document was last accessed and what was done with the document.

Mere suspicion that relevant information exists will likely not be enough to establish good cause. In *Bethea v. Comcast*, the plaintiff requested all electronic documents associated with the reorganization of the company.¹⁷⁰ The defendants turned over one organizational chart and no additional electronic communications.¹⁷¹ The plaintiff requested to perform an inspection of the defendant’s computers because they found the defendant’s assertion incredulous.¹⁷² The court was unwilling to allow the plaintiff access to the computer systems based on the mere speculation that relevant

167. FED. R. CIV. P. 26(b)(1).

168. J. Brian Beckham, *Production, Preservation, and Disclosure of Metadata*, 7 COLUM. SCI. & TECH. L. REV. 1 (2005-2006).

169. Scott Nagel describes several examples where metadata changed the course of litigation between two parties. In a wrongful termination suit, one defendant was able to demonstrate with the use of metadata that the plaintiff was going to be terminated prior to filing a sexual harassment complaint. In another, a plaintiff fabricated an e-mail to suggest that the defendant based his decision to terminate her on a romantic relationship; metadata exposed the true author. And in another, metadata was used to reconstruct a chain of e-mails demonstrating that a defendant had properly produced all e-mails as required. See Scott Nagle, *Embedded Information in Electronic Documents: Why Metadata Matters*, LAW PRACTICE TODAY (July 2004), available at <http://www.abanet.org/lpm/lpt/articles/ftr07044.html>.

170. *Bethea v. Comcast*, 218 F.R.D. 328, 329 (D.D.C. 2003).

171. *Id.* at 329 n.1.

172. *Id.*

information was contained on the defendant's computers.¹⁷³ However, with the appropriate awareness of the defendant's electronic infrastructure and a scintilla of evidence regarding the likely creation of such documents, such an inspection might have been allowed.

The unique information available by electronic discovery can provide ground for determining good cause when supported by the expert testimony of the helpdesk. In *GTFM v. Wal-Mart Stores Inc.*, the plaintiff was interested in electronic sales records that were ultimately deleted.¹⁷⁴ Absent a complete understanding of the operation of an electronic format, the judge is incapable of determining whether or not there is genuine good cause for allowing access to electronic information.

3. The Helpdesk and Spoliation

As noted above, the amendment to Rule 37(f) is intended to provide some protection for a party when the loss of electronic information results from routine business operations.¹⁷⁵ First, litigants must fully understand the electronic infrastructure of the opposing party to demonstrate accessibility and good cause. Further, they may also need to present expert testimony to demonstrate whether or not electronic evidence was lost as the result of a company's routine practices. The helpdesk may be particularly adept in providing specific evidence regarding a claim of spoliation.

Arista Records, Inc. v. Sakfield Holding Co. S.L. demonstrates the importance of expert testimony in determining that spoliation has occurred.¹⁷⁶ In this case, the plaintiffs alleged that the defendant had violated a copyright by allowing music, owned by the plaintiff, to be downloaded from a website, owned by the defendant.¹⁷⁷ The plaintiffs obtained access to the servers that originally housed the allegedly infringing material, but when the plaintiff's expert examined them, the servers had been wiped using a deletion program, which was run over fifty times.¹⁷⁸ Ultimately, the court determined that the defendants had intentionally run the deletion program to frustrate the plaintiff's lawsuit.¹⁷⁹ Fortunately, the plaintiff's expert was able to salvage enough data to conclusively support the plaintiff's assertions.¹⁸⁰ The value of lost or damaged data cannot be underestimated. A party with the right re-

173. *Id.* at 330.

174. *See supra* part IV.B.1; *GTFM v. Wal-Mart Stores Inc.*, 49 Fed. R. Serv. 3d (West) 219 (S.D.N.Y. 2000).

175. *See supra* part III.D.

176. *Arista Records, Inc. v. Sakfield Holding Co. S.L.*, 314 F. Supp. 2d 27 (D.D.C. 2004).

177. *Id.* at 29.

178. *Id.* at 33.

179. *Id.*

180. *Id.* at 34.

sources may obtain information from electronic media that might seem completely useless to individuals who do not have helpdesk experience.¹⁸¹

Spoliation may present different challenges across different industries and technologies. For example, in the healthcare context, use of electronic information is a relatively new innovation; the federal government is spearheading a new plan to create electronic health records for all patients.¹⁸² Additionally, e-prescribing is seen as a mechanism for increased efficiency and decreased cost.¹⁸³ However, the lack of experience with electronic information means that there is a potential for significant problems in spoliation.¹⁸⁴ Healthcare providers may not be able to “confidently identify a reasonably limited universe of electronic information to preserve.”¹⁸⁵

4. Expanding Electronic Evidence into the Theoretical

Although access to e-mail and other basic electronic information will likely rely on the experienced-based expert from the helpdesk, other realms of electronic discovery remain fertile ground for scientific experts to opine. As attorneys become increasingly more creative with using electronic discovery in litigation, scientific experts may begin replacing experience-based experts. Hypothetically, numerical analysis of a company’s financial database may provide evidence of a pattern of wrongdoing that cannot otherwise be tracked discreetly through individual transactions. Additionally, a scientific expert may be required to describe how an electronic discovery request could ever provide relevant evidence; that is, if it were even allowed to be discovered.

In *Convolve, Inc. v. Compaq Computer Corp.*, the use of expert testimony by one of the defendant’s own employees served as the grounds for demonstrating the relevance of electronic evidence.¹⁸⁶ In *Convolve*, the plaintiff alleged that the defendant had appropriated trade secrets used to

181. See *Strasser v. Yalamanchi*, 783 So. 2d. 1087 (Fla. Dist. Ct. App. 2001) (allowing sanctions for spoliation following the disposal of a computer hard driver after lightning damaged it).

182. See Health IT, A U.S. Government Health Information Technology Web Site, *Health IT: American Health Information Community (AHIC) Topics*, <http://www.hhs.gov/healthinformationtechnology/> (last visited April 30, 2006).

183. See United States Department of Health & Human Services, *Pilot Project Launched to Expand Electronic Prescribing* (2006), available at <http://www.hhs.gov/news/press/2006pres/20060117a.html>.

184. John M. Murdock & Jessica M. Swartz, *The Proposed E-discovery Amendments to the Federal Rules of Civil Procedure: Possible Opportunities and Pitfalls for Discovery of Electronically Stored Healthcare Information*, HEALTH LAWYER NEWS 24 (March 2006).

185. See *id.*

186. *Convolve, Inc. v. Compaq Computer Corp.*, 223 F.R.D. 162 (S.D.N.Y. 2004).

manufacture hard drives.¹⁸⁷ During testimony before a court-appointed special master, one of the defendant's employees described a technique for tuning hard drives for optimum performance.¹⁸⁸ The plaintiff requested access to the electronic records of the tuning.¹⁸⁹ Ultimately, the court ruled that the records were discoverable, but they had been destroyed during the routine operations of the defendant.¹⁹⁰ This determination was based on the expert testimony of the defendant's employee, who described why the relevant information was unavailable.

Convolve is analogous to the creation of new rationale for the availability of electronic information from a party by use of scientific experts. Electronic information is being recorded more often in a variety of media, both knowingly and unknowingly, by parties to litigation. Complex litigation involving insurance claims reimbursement, pharmaceutical companies, and pricing issues is "arguably made feasible because of the existence of large electronic databases of information that opposing parties believed could be mined for evidence of challenged practices and used to support a variety of strategic analytical theories of liability and damages."¹⁹¹ When the electronic information desired is particularly obscure or when the use is particularly novel, the connection between this information and litigation may need to be forged through the use of scientific expert witnesses.

187. *Id.* at 164.

188. *Id.* at 174.

189. *Id.* at 176.

190. *Id.* at 177, 177 n.4 (citing to the August 3, 2004, proposed version of Rule 37(f). The words of this version differed slightly as to spoliation:

Unless a party violated an order in the action requiring it to preserve electronically stored information, a court may not impose sanctions under these rules on the party for failing to provide such information if: (1) the party took reasonable steps to preserve the information after it knew or should have known the information was discoverable in the action; and (2) the failure resulted from loss of the information because of the routine operation of the party's electronic information system.

The court noted that the regular loss of this information was analogous to the loss of data in instant messaging, but the court was technologically savvy enough to recognize that an analysis of instant messaging could not be considered under the circumstance of this case. This was a wise decision due to the fact that this technology requires expert information from an entirely different set of experts based on the technology being utilized).

191. *See* Murdock, *supra* note 183 (citing *Shane v. Humana, Inc.*, Master File No. 00-1334-MD-MORENO (E.D. Fla. Cases consolidated Apr. 17, 2000) and *United States v. Merk-Medco Managed Care, L.L.C.*, 336 F. Supp. 2d 430 (E.D. Pa. 2004)).

5. Other uses for the helpdesk

There is no reason why the use of the helpdesk in demonstrating accessibility, good cause, extraordinary circumstances, or good faith needs to be limited to plaintiffs and defendants. Under the Federal Rules of Evidence, court-appointed experts can be utilized to educate the court on relevant technological issues. Court-appointed experts are regularly used in complex litigation such as patent, product liability, and antitrust.¹⁹² Federal Rule of Evidence 706 provides in part, “The court may on its own motion or on the motion of any party enter an order to show cause why expert witnesses should not be appointed, and may request the parties to submit nominations.”¹⁹³ Clearly, the court has the authority to appoint an expert to assist in technological decisions,¹⁹⁴ but will there be a need?¹⁹⁵

Considering the high stakes for litigants in defining accessibility, good-cause, extraordinary circumstance, or good faith in an electronic discovery dispute, there is little reason to believe that the type of litigant involved in an intensive electronic discovery battle will request a court-appointed expert. Likely, both parties will prepare for anticipated discovery conflict with knowledgeable, though partisan, experts for their cause.¹⁹⁶ As finders of fact, judges will not likely need another voice from the helpdesk to inform them of the appropriate decision because judges are called upon to make these types of weighty decisions every day.¹⁹⁷ Similarly, it is unlikely that the announcement of a court-appointed expert will add efficiencies as each party is mainly interested in putting their case in the best light through the use of their own

192. See Joe S. Cecil & Thomas E. Willging, *Court-Appointed Experts*, REFERENCE MANUAL ON SCIENTIFIC EVIDENCE 525, 541 (Federal Judicial Center 1994).

193. FED. R. EVID. 706.

194. The court also has the authority to appoint a special master under Rule 53 of the Federal Rules of Civil Procedure. Normally, special masters engage in fact finding for the court, but they have also served the role of being prepared to offer expert testimony. See Cecil & Willging, *supra* note 187, at 531 (citing *Hart v. Community Sch. Bd.*, 383 F. Supp. 699, 765–66 (E.D.N.Y. 1974), *aff'd*, 512 F.2d 37 (2d Cir. 1975)).

195. See David J. Damiani, Comment, *Proposals for Reform in the Evaluation of Expert Testimony in Pharmaceutical Mass Tort Cases*, 13 ALB. L.J. SCI. & TECH. 517, 550 (2003) (noting that federal courts in general have been reluctant to use court-appointed experts).

196. See Stephen D. Easton, *Ammunition for the Shoot-Out with the Hired Gun's Hired Gun: A Proposal for Full Expert Witness Disclosure*, 32 ARIZ. ST. L.J. 465, 482, 493-95 (2000).

197. See Samuel H. Jackson, Comment, *Technical Advisor Deserve Equal Billing with Court Appointed Experts in Novel and Complex Scientific Cases: Does the Federal Judicial Center Agree?*, 28 ENVTL. L. 431, 436, 444 (1998).

experts.¹⁹⁸ In the case of high-stakes, complex litigation, the court-appointed expert will save litigants, as well as the judicial system, nothing.

However, court-appointed experts may provide some use in litigation involving disadvantaged parties. *Pro se* and under-capitalized litigants could take advantage of the court's ability to appoint an expert.¹⁹⁹ Although the disadvantaged party would not be able to know the expert's opinion prior to presenting the expert to the court, this mechanism could still ensure that the court hears more than one opinion on electronic evidence.

V. CONCLUSION

The rapid advancement of digital technology has transformed American business and American law. The digitization of America complicates litigation by providing the potential for limitless discovery. In an era where virtually every communication and document created by a party is captured by some sort of electronic storage device, the reality of electronic discovery leads to staggering implications – in costs and in potential exposure.

As an increasing amount of information shifts to electronic media, lawyers will be confronted with the challenges of learning to navigate discovery using the techno-speak and analysis of the helpdesk. This may lead to new specializations in the legal field. Rather than outsourcing electronic discovery, attorneys may personally obtain the information from electronic sources. Although it is unlikely that a lawyer would act as an electronic expert due to issues in efficiency, there is little doubt that specialization could lead to increased efficiencies in legal practice. Just as trial lawyers are a specialized subset of attorneys, discovery may need to completely break away from the shadow of litigation due to of the specialized knowledge required to understand electronic discovery.

Although the amendments to the Federal Rules of Civil Procedure seek to blunt the obvious and considerable effect of electronic discovery on American litigation, they fail to provide guidance for applying, in practice, the concepts contained in those amendments. Existing case law, such as *Zubulake*, supports the use of standards that are woefully inadequate, when compared to the moving target of technological innovation. Courts need to remain flexible, regularly becoming reeducated on technology as the technological curve progresses. To that end, the use of *Daubert* style hearings to assess each party's technological capabilities is an essential component in the application of the new electronic discovery rules.

198. See Easton, *supra* note 195, at 493.

199. See Joe S. Cecil & Thomas E. Willging, *Accepting Daubert's Invitation: Defining a Role for Court-Appointed Experts in Assessing Scientific Validity*, 43 EMORY L.J. 995, 1052-53 (1994) (concluding that courts have been willing to assume the costs of court-appointed experts, but this approach may not be favored because the costs of the expert is typically borne by the parties, not the state).