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**ZUBULAKE v. UBS WARBURG: EVIDENCE THAT THE FEDERAL RULES OF CIVIL PROCEDURE PROVIDE THE MEANS FOR DETERMINING COST ALLOCATION IN ELECTRONIC DISCOVERY DISPUTES?**

I. Introduction

The shortcomings of the Federal Rules of Civil Procedure ("Rules") in determining whether parties should split the costs of electronic discovery appear to be greatly exaggerated in light of *Zubulake v. UBS Warburg.*

Although the tradition is to presume that the producing party pays the costs of discovery, cost splitting of discovery fees is not a new concept. In fact, the emerging necessity of high-priced electronic discovery has made

1. 217 F.R.D. 309 (S.D.N.Y. 2003) [hereinafter *Zubulake I*] (examining both Rules 26 and 34 of Federal Rules of Civil Procedure and test set forth in *Rowe Entertainment, Inc. v. William Morris Agency, Inc.*, 205 F.R.D. 421 (S.D.N.Y. 2002), in formulating three-step analysis and seven factors for courts to consider when determining cost allocation); see also *Zubulake v. UBS Warburg*, 216 F.R.D. 280, 284-91 (S.D.N.Y. 2003) [hereinafter *Zubulake II*] (applying three-step analysis and seven factors set forth in *Zubulake I* decision to specific facts of case after defendant UBS satisfied court's order to perform sample restoration of e-mails from backup tapes selected by Zubulake); *Zubulake I*, 217 F.R.D. at 315-18 (discussing application of Rules 26 and 34 of Federal Rules of Civil Procedure in discovery disputes); *Zubulake v. UBS Warburg*, 02 Civ. 1243 (SAS), 2003 U.S. Dist. LEXIS 7940 (S.D.N.Y. May 13, 2003) [hereinafter *Zubulake III*] (providing additional information regarding district court's denial of plaintiff's motion for order permitting release to securities regulators of manager's testimony in deposition). In *Zubulake I*, the court stated that the eight-factor test for cost shifting set forth in *Rowe* was incomplete because it omitted factors identified in the Federal Rules of Civil Procedure ("Rules") as important for courts to consider when granting orders that require cost splitting. See 217 F.R.D. at 320-21 (delineating missing elements in test, which undercut presumption that responding party should cover costs of production). The *Zubulake I* court further listed seven factors that courts should consider when deciding whether to grant cost shifting. See id. at 322 (articulating seven factors). These modifications to the *Rowe* test were influenced by the Rules because six out of seven of the factors came directly from Rule 26. See id. (explaining how test set forth mirrors considerations of Rule 26(b)(2)(iii)). The *Zubulake I* court stated that the first six factors of the seven-factor test "correspond to the three explicit considerations of Rule 26(b)(2)(iii)." Id. at 323. These changes were necessary because the *Rowe* test, by demanding that plaintiffs show the requested electronic discovery will yield a "gold mine" of information, was contrary to the plain language of Rule 26(b)(1). Id.; see also Fed. R. Civ. P. 26(b), 34 (providing federal rule of discovery); Julius Levine, Symposium, *Lawyers Online: Discovery, Privilege, and the Prudent Practitioner*, 3 B.U. J. SCI. & TECH. L. 5, para. 50 (1997) (stating Rules adequately direct electronic discovery disputes).

2. See *Oppenheimer Fund, Inc. v. Sanders*, 437 U.S. 340, 358 (1978) (stating that under Rules "the presumption is that the responding party must bear the expense of complying with discovery requests, but he may invoke the district court's discretion under Rule 26(c) to grant orders protecting him from 'undue burden or expense' in doing so, including orders conditioning discovery on the requesting party's payment of the costs of discovery"); see also Fed. R. Civ. P. 26-37 (393)

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cost splitting a critical issue at the forefront of civil litigation. Litigants are frustrated, however, with the Rules’ apparent lack of specific direction regarding electronic discovery. Critics fear that the Rules are outdated and unable to provide courts with guidance on whether electronic discovery is permitted and who should bear the costs. Prior cases do establish that electronic discovery is permitted under the Rules; however, most of these cases have not adequately formulated factors rooted in the Rules that other courts can consider in cost-allocation disputes. Fortunately,

(governing discovery yet lacking rule dictating which party must bear cost of discovery production).

3. See Bills v. Kennecott Corp., 108 F.R.D. 459, 462 (D. Utah 1985) (stating that because computers are common, most discovery disputes involve electronic data); Albert Barsocchini, Electronic Data Discovery Primer, LEGAL INTELLIGENCER, Sept. 4, 2002, at 5 (explaining that electronic discovery is mainstream in civil litigation and that since 1999, more than ninety percent of all documents produced were in digital form); Joan Feldman, 10 Steps to Breakthrough E-discovery, DIGITAL DISCOVERY & E-EVIDENCE, Dec. 2000, at 1 (“Discovery without review of computer files is incomplete.”); see also, Gene J. Koprowski, Litigators Eyeing Digital Evidence in Cars, Homes, Handheld Devices, DIGITAL DISCOVERY & E-EVIDENCE, May, 2001, at 3 (quoting forensics expert as saying that high cost of electronic discovery will in some cases prevent discovery of significant amounts of data); Scott Sleek, Good E-recordkeeping Saves You Money, Protects You from Liability, DIGITAL DISCOVERY & E-EVIDENCE, Dec. 2000, at 1 (stating that estimates of searching through electronic data can approach $1 million). But see Mark Robins, Computers & the Discovery of Evidence—A New Dimension to Civil Procedure, 17 J. MARSHALL J. COMPUTER & INFO. L. 411, 419 (1999) (asserting that when information is produced in machine-readable form, discovery can be conducted quicker and cheaper because information is easier to search); Barsocchini, supra, at 5 (explaining that many attorneys fail to conduct electronic discovery because they incorrectly think it is costly, time-consuming and complicated, and arguing that electronic discovery can be cheaper than paper discovery for attorneys who utilize proper resources).

4. See Carol Eoannou, Conference Report: Judges Identify Hot Digital Discovery Issues Not Addressed by Federal Rules, DIGITAL DISCOVERY & E-EVIDENCE, Aug. 2003, at 6 (“Federal Rules of Civil Procedure haven’t changed, even though the storage medium of the information they address has . . . . [A]s helpful as the Federal Rules are, they are far from comprehensive where electronic data is concerned.”); Jason Krause, Discovery Channels, A.B.A. J., July 2002, at 49, 50 (stating that although Rule 34 allows discoverability of electronic documents and Rule 26 limits scope and process, Rules do not provide enough guidance for complications of electronic discovery); see also Shira A. Scheindlin & Jeffrey Rabkin, Electronic Discovery in Federal Civil Litigation: Is Rule 34 Up to the Task?, 41 B.C. L. REV. 327, 346 (2000) (“[T]he Rules provide only limited guidance with respect to electronic data and the extent to which it is discoverable.”).

5. See, e.g., Scheindlin & Rabkin, supra note 4, at 351, 369-70 (stating that it is unclear whether Rules permit discovery of cookies, temporary files and residual data, and asserting that Rule 34 does not address cost issues and Rule 26’s proportionality test is not helpful to judges); Corinne L. Giacobbe, Allocating Discovery Costs in the Computer Age: Deciding Who Should Bear the Costs of Discovery of Electronically Stored Data, 57 WASH. & LEE L. REV. 257, 260 (2000) (“[T]he time has come to bring the judiciary and the Federal Rules of Civil Procedure into the computer age.”). For more criticism of the Rules, see sources supra note 4.

6. See Zubulake I, 217 F.R.D. at 316, 323 (agreeing with Rowe that electronic data is discoverable under Rule 34, but insisting Rowe test is contrary to plain language of Rule 26(b)(1)); Anti-Monopoly, Inc. v. Hasbro, Inc., 94 Civ. 2120 (LMM
Zubulake answers the question whether cost splitting should be allowed in all electronic discovery disputes in two ways. First, Zubulake clarifies the appropriate situation in which courts should consider departing from the traditional presumption that the producing party must pay the costs of discovery. Second, Zubulake provides courts with a seven-factor test derived from the Rules to determine which party should pay.

Superficially, Zubulake proves that Rules 26 and 34 provide adequate guidance on what factors courts should consider when deciding whether to order cost shifting in electronic discovery disputes. The decision does this by formulating a cost-shifting analysis composed of seven factors, six of which were identified in Zubulake I, 217 F.R.D. at 318 (identifying problem that many courts assume electronic discovery will always place undue burden or expense on producing party). Zubulake I explained that the accessibility of the requested documents determines whether discovery is unduly burdensome or expensive because this distinction corresponds to the expense of production. See id. (explaining that production of all electronic evidence is not expensive). The court in Zubulake I emphasized that Rule 26(c) permits cost shifting only when the cost of electronic discovery imposes an "undue burden or expense" on the producing party. Id. (quoting FED. R. CIV. P. 26(c)). Zubulake I found that the burden of electronic discovery is "undue" when it "outweighs its likely benefit, taking into account the needs of the case, the amount in controversy, the parties' resources, the importance of the issues at stake in the litigation, and the importance of the proposed discovery in resolving the issues." Id. (quoting FED. R. CIV. P. 26(b)(2)(iii) for definition of "undue burden or expense"). Zubulake I concluded that cost shifting should not be considered for the discovery of accessible data because accessible data can be produced cheaply and quickly. See id. at 320 (emphasizing "accessible" data is in "readily usable format"). According to Zubulake I, however, it is appropriate to consider cost shifting for the discovery of inaccessible data because searching inaccessible data is costly and time-consuming. See id. (explaining inaccessible data must be made "usable" before it can be produced); see also Zubulake II, 216 F.R.D. 280, 284 (S.D.N.Y. 2003) (emphasizing cost shifting is only appropriate when discovery request seeks inaccessible data, not accessible data).

For a further discussion of the Zubulake test, see supra note 1 and accompanying text.
which come directly from Rule 26.\textsuperscript{10} The court in Zubulake, however, also presents a three-step analysis that includes the seven-factor test, which addresses the specific characteristics of electronic evidence that make electronic discovery costly.\textsuperscript{11} Although one may argue that the combination of the Rules and the process established by Zubulake provides courts with more than adequate guidance to determine cost allocation in electronic discovery disputes, Zubulake still leaves us with the unsettled issue whether case law is effective by itself in remediying the confusion associated with cost allocation.\textsuperscript{12}

This Note delves into the debate on electronic discovery by exploring the extent to which Zubulake clarifies the proper analysis courts should conduct in electronic discovery cost-shifting disputes. Part II of this Note discusses discovery in general and analyzes the important distinctions between paper and electronic discovery.\textsuperscript{13} Part III addresses the specific Rules that govern discovery.\textsuperscript{14} Part IV discusses Rowe Entertainment, Inc. v. William Morris Agency, Inc.,\textsuperscript{15} the only case prior to Zubulake to offer a significant and thorough test for courts to use when deciding whether to shift the costs of electronic discovery.\textsuperscript{16} Part V discusses Zubulake, focusing on the three-part analysis and seven-factor test set forth by the court.\textsuperscript{17} Part

\textsuperscript{10} See Zubulake I, 217 F.R.D. at 323 (finding that first six factors discussed correspond with three factors listed in Rule 26(b)(2)(iii)).

\textsuperscript{11} See id. at 318-20, 324 (analyzing factors that make electronic discovery expensive and summarizing three-step analysis).

\textsuperscript{12} See Scheindlin & Rabkin, supra note 4, at 378 (arguing that Rules need to be amended for clarification on electronic discovery, and case law alone cannot guarantee adequate, consistent and binding rules); see also Giacobbe, supra note 5, at 298-99 (asserting that proper solution is to amend Advisory Committee Notes to Rules so courts will have specific guidelines, rather than established formula or test).

\textsuperscript{13} For a discussion of the differences between paper and electronic discovery, see infra notes 19-64 and accompanying text.

\textsuperscript{14} See Fed. R. Civ. P. 26-37 (governing discovery). For a full discussion on relevant discovery rules, see infra notes 65-86 and accompanying text.

\textsuperscript{15} 205 F.R.D. 421 (S.D.N.Y. 2002) (providing eight-factor test for courts to use in deciding whether to shift costs in electronic discovery disputes).


\textsuperscript{17} For a further discussion of the three-step analysis and seven-factor test, see infra notes 132-73 and accompanying text.
VI offers thoughts on whether the Rules provide adequate guidance to courts faced with the issue of cost allocation in electronic discovery disputes, and whether the Zubulake test replaces the need for revision of the Rules. This Note concludes that although Zubulake clarifies how the Rules should be applied in cost-shifting disputes involving electronic discovery, the case neglects to explain how the factors it sets forth should be weighed in deciding whether to shift costs.

II. Discovery: Paper vs. Electronic

Discovery is the pre-trial process by which parties gain important knowledge about the issues surrounding their case. Traditionally, when a party asks another party to produce a document in discovery, the producing party pays the cost of retrieving the document and providing it for the requesting party’s use. Although cost of production can be substantial in paper discovery, the process of retrieving relevant documents in paper “hard copy format” and copying them for the requesting party, the Rules permit courts to shift the costs to a requesting party inflicting an “undue burden or expense” on a producing party. The Rules do not,

18. For a discussion of whether the Rules need revision in light of the Zubulake decisions, see infra notes 174-93 and accompanying text.

19. See Fed. R. Civ. P. 26-37 advisory committee’s notes, reprinted in West’s Federal Civil Judicial Procedure and Rules 144 (revised ed. 2003) (A Field Survey of Discovery Practice) (“[D]iscovery is in large measure extra-judicial. . . . Discovery frequently provides evidence that would not otherwise be available to the parties and thereby makes for a fairer trial or settlement”); REAGAN WM. SIMPSON, CIVIL DISCOVERY AND DEPOSITIONS § 1.1 (2d ed. 1994) (stating that discovery is pre-trial proceeding where parties can learn information prior to lawsuit); CHARLES WRIGHT ET AL., FEDERAL PRACTICE & PROCEDURE § 2001 (2d ed. 1994) (explaining that philosophy behind discovery rules is that each party is entitled to disclosure of all relevant, non-privileged information in possession of others before trial); Levine, supra note 1, para. 49 (observing that discovery conducted properly and thoroughly by both sides is beneficial because it imparts evidence parties would not have had otherwise, prevents surprise at trial, gives both sides time to analyze information and presents realistic view of evidence for consideration in settlement negotiations). In Hickman v. Taylor, the Court defined discovery:

(1) as a device . . . to narrow and clarify the basic issues between the parties, and (2) as a device for ascertaining the facts, or information as to the existence or whereabouts of facts, relative to those issues. Thus civil trials in the federal courts no longer need be carried on in the dark. The way is now clear, consistent with recognized privileges, for the parties to obtain the fullest possible knowledge of the issues and facts before trial.


See Oppenheimer Fund, Inc. v. Sanders, 437 U.S. 340, 358 (1978) (holding that under discovery rules, presumption is that producing party must pay cost of complying with discovery request); see also Zubulake I, 217 F.R.D. at 316 (quoting Oppenheimer rule that presumption is that producing party pays discovery costs).

however, specifically address the “undue burden or expense” problem in the electronic discovery context.22 Scholars criticize this shortcoming of the Rules, believing that the Rules inadequately provide courts and practitioners with guidance on the factors that should be considered in deciding cost allocation in electronic discovery disputes.23 The legal world’s fear that parties requesting electronic discovery will inflict “undue burden or expense” with impunity is so widespread that commentators believe rele-

supra note 4, at 349, 356-57 (stating there is decisional law governing paper discovery and implying Rules are generally accepted as adequately governing paper discovery because many courts analogize electronic discovery to paper discovery in order to resolve electronic discovery disputes). “[O]rdinarily, the respondent bears the cost of gathering and reviewing documents while the requesting party bears the cost of copying responsive documents. Rule 34, coupled with Rule 26(c), however, allows courts to shift costs between litigants upon a showing of ‘undue burden or expense.’” Id. One scholar acknowledges that Rule 26’s provision protecting parties from “undue burden or expense” specifically addresses paper discovery by stating that the Rules may need revision because they do not specifically address the distinct features of electronic discovery. See id. (stating that to resolve past courts’ confusion in analogizing paper discovery to electronic discovery, Rules should be amended).

22. See Giacobbe, supra note 5, at 267-69 (explaining that application of Rule 34 usually results in producing party bearing costs of production in electronic discovery, and this fact results in plaintiffs abusing discovery process by presenting defendants with broad, costly electronic discovery requests and forcing defendants into settlement). One scholar states that courts have been hesitant to use Rule 26(c) to shift costs to requesting parties in electronic discovery disputes. See id. (explaining lack of consistency among courts in analysis of cost shifting has led to uncertainty as to “what conditions must be present . . . for court to find discovery request . . . unduly burdensome or expensive”); see also Krause, supra note 4, at 50 (“In the world of paper discovery, courts typically have ruled that the producing party bears the financial burden of production. But in e-discovery proceedings, the matter of cost is often unsettled.”). But see Fed. R. Civ. P. 26-37 advisory committee’s notes, reprinted in West’s Federal Civil Judicial Procedure and Rules 144 (revised ed. 2003) (A Field Survey of Discovery Practice) (stating advisory committee invited Project for Effective Justice of Columbia Law School to conduct field survey of discovery, and Columbia survey concluded no changes needed to be made to discovery rules regarding costs of discovery because costs of discovery were not oppressive); Ken Withers, 2000 Amendments Help Federal Rules Adjust to the Digital Age, Digital Discovery & e-Evidence, Dec. 2000, at 11 (acknowledging rejection in 2000 by Judicial Conference of proposed amendment to Rules that “would have expressly allowed trial judges to assess all or part of the costs of the computerized discovery process against the party requesting the data from its opponent”).

23. See, e.g., Robins, supra note 3, at 473 (“Although the Rules provide tools to allocate such costs, the framework that the Rules provide for cost-allocation in conventional discovery does not precisely fit computer-related discovery, and the discretion that the Rules afford courts to adjust the allocation leaves much uncertainty as to how and when such adjustments should be undertaken.”); see also Giacobbe, supra note 5, at 271 (stating that case law shows that Rules and advisory committee notes are insufficient in guiding courts on how to properly apply rules in electronic discovery disputes); Stephen J. Snyder & Abigail E. Crouse, Models for Just & Inexpensive Resolutions of E-discovery Disputes, Digital Discovery & e-Evidence, Aug. 2003, at 11 (“To address the staggering costs and the lack of clarity regarding how electronic discovery should be handled, scholars and practitioners have made different proposals for changes to the Federal Rules or for the establishment of standards for conducting electronic discovery.”).
vant evidence is being ignored in some cases. This fear has also caused an increasing number of computer forensics firms to develop and specialize in consulting attorneys on efficient discovery techniques and to guide companies on cost-saving storage methods.

Some commentators believe that there is no need for the discovery rules to change because the existing Rules can easily apply to electronically stored data. Other commentators have responded to this claim by

24. See Steven C. Bennett & Thomas C. Niccum, Two Views from the Data Mountain, 36 CREIGHTON L. REV. 607, 617 (2003) (recognizing that even though attorneys and clients know their adversary probably has evidence important to their case in electronic form, they do not make electronic discovery requests because they do not want to search their own electronically stored data in return); Koprowski, supra note 3, at 3 (showing that simple electronic discovery requests can easily cost few thousand dollars, and quoting expert as speculating that more complicated requests will prevent much data from ever being discovered).

25. See Lisa M. Arent et al., EDiscovery: Preserving, Requesting & Producing Electronic Information, 19 SANTA CLARA COMPUTER & HIGH TECH. L.J. 131, 176 (2002) (insisting that attorneys should hire computer forensics firms to assist in searching, collecting and producing data in cases where client has great amount of electronic information because they are helpful in "streamlining the process and planning a strategy for discovery and production of electronic information"). Additionally, a computer forensics expert's testimony can be necessary in court if there is a dispute regarding cost splitting of electronic discovery costs. See id. (explaining necessity of educating court on technical issues surrounding electronic discovery); see also Giacobbe, supra note 5, at 259 ("Electronic discovery has become a 'mini-industry' in the legal field . . ."); Barsocchini, supra note 3, at 1 (stating that using computer forensic examiners can save lots of money in conducting electronic discovery); Molly George, Control the E-doc Explosion: Culling Options in Electronic Discovery, LJN'S LEGAL TECH NEWSLETTER, Sept. 2002, at 1 (stating that "it is the electronic vendor's job to reduce the documents to a manageable size without eliminating relevant data," and giving attorneys advice about how to pick vendors); Joseph Kashi, What to Find Out Before Starting E-discovery, DIGITAL DISCOVERY & E-EVIDENCE, Feb. 2001, at 3 (explaining that in order for attorneys to answer important questions about their client's computer systems, they need to hire experts); Gene J. Koprowski, Picking the Right Consultant to Help You with E-discovery, DIGITAL DISCOVERY & E-EVIDENCE, Feb. 2001, at 12-13 (giving attorneys advice on costs of hiring consultants, characteristics attorneys should look for when hiring consultants and amount of money consultants can save in long run, in addition to listing names and contact information of twelve consulting firms); Sleek, supra note 3, at 4 (advising companies on best methods for retaining electronic records for reduced costs in producing documents).

26. In Linnen v. A.H. Robins Co., Inc., the court stated that: A discovery request aimed at the production of records retained in some electronic form is no different, in principle, from a request for documents contained in an office file cabinet. While the reality of the situation may require a different approach and more sophisticated equipment than a photocopier, there is nothing about the technological aspects involved which renders documents stored in an electronic media "undiscoverable."

outlining the important differences that exist between paper evidence and electronic evidence and how these differences might hinder the application of the existing discovery rules to electronic discovery.\textsuperscript{27} Scholars have even insisted that the challenges offered by electronically stored data are so significant that they begin their analyses of electronic discovery simply by defining electronic evidence.\textsuperscript{28} The differences between electronic evidence and paper evidence that scholars suggest should be factored into courts' decisions regarding cost allocation in discovery disputes demonstrate why, how and when electronic discovery requests become costly.\textsuperscript{29} One commentator insists that the differences between electronically stored data and data in paper format must be outlined and understood before one can speculate about how to apply the Rules' discovery provisions to electronic discovery requests and disputes.\textsuperscript{30} An outline of the differences illustrates six important ar-
A. There Is More Electronic Data Than Paper Data

There are three reasons why there is more data in electronic form than in paper form: (1) electronic documents are created at greater rates; (2) electronic documents are easier to replicate and store in multiple locations; and (3) electronic documents are inexpensive to store.

Electronic documents are created at greater rates than paper documents because there has been a sharp increase in e-mail usage and computer-generated information. As one commentator notes, proof of the volume of documents produced in electronic form is the fact that the first thing people generally see when they walk into an office is a computer. In support of the proposition that electronic documents are created at a greater rate than paper documents, it is estimated that in 2003, 105 million people used e-mail in the United States alone, and these users sent over 1.5 billion e-mail messages per day.


32. For a discussion of the rate of production of electronic documents, see infra notes 35-37 and accompanying text.

33. For a discussion of the ease with which electronic documents are replicated and stored in multiple locations, see infra notes 38-40 and accompanying text.

34. For a discussion of the expense of electronic document storage, see infra notes 41-43 and accompanying text.

35. See Chung & Byer, supra note 27, paras. 10-11 (stating electronic data is generated at increased volume and speed than paper data, and, in many cases, electronic data is created and exists where paper records are not created and do not exist); Ealy & Schutt, supra note 27, at 122 (asserting that far more e-mail exists than paper documents); Krause, supra note 4, at 50 (using 2001 study from University of California Berkerly, which found that "ninety-three percent of all new information is created entirely in a digital format"); The Sedona Conference, supra note 27, at 3-4 (finding increase in e-mail usage and electronic file generation creates problems for large corporations because volume of electronic data created each day results in vast amounts of data being stored).

36. See Barsocchini, supra note 3, at 5 (stating that surveys showing that in 1999 more than ninety percent of documents were produced in digital form are not needed to prove increase in computer generated information because increase is evident by walking into offices and seeing computers); see also Bennett & Niccum, supra note 24, at 609 ("Nearly every business larger than a paper route uses computers as a normal part of daily operation.").

37. See The Sedona Conference, supra note 27, at 3 ("In 2003, it is projected that there will be 105 million e-mail users in the United States, who will send over 1.5 billion e-mail messages a day, or approximately 547.5 billion e-mail messages..."
The ease with which electronic documents are replicated and stored in multiple locations contributes to the fact that more data exists in electronic form than paper form.\textsuperscript{38} E-mail exemplifies this factor because e-mail can be sent to many recipients at once, forwarded continuously by each successive receiver and automatically saved within e-mail programs.\textsuperscript{39} In addition to being saved on servers, e-mail also can be saved in hard copy form if printed.\textsuperscript{40}

The final reason why there are more documents in electronic form than in paper form is that electronic documents are inexpensive to store.\textsuperscript{41} Paper takes up physical space and requires substantial overhead to store files.\textsuperscript{42} Most businesses can store every piece of electronic data they create, not only because it is inexpensive to store great amounts of information in a small physical space, but also because technological ad-

\begin{quote}
per year—nearly as many messages in a day as the U.S. Postal Service handles in a year.
\end{quote}

\textsuperscript{38} See Ealy & Schutt, \textit{supra} note 27, at 122 (stating that e-mail is stored in multiple locations because of ease with which it is sent and forwarded to multiple recipients); The Sedona Conference, \textit{supra} note 27, at 4 ("While paper documents can be copied, electronic information is subject to rapid and large-scale user-created and automated replication without degradation of the data."); see also Scheindlin & Rabkin, \textit{supra} note 4, at 365-66 (asserting that electronically stored data is "perfectly and easily emulatable" because (1) it is easily, quickly and inexpensively duplicated and (2) there is no visual difference between originals and copies).

\textsuperscript{39} See Ealy & Schutt, \textit{supra} note 27, at 122 (explaining how single e-mail message can be replicated and stored in multiple locations without e-mail creator's doing or knowledge); The Sedona Conference, \textit{supra} note 27, at 4 (stating that e-mail exemplifies fact that electronic documents are more easily replicated than paper documents).

\textsuperscript{40} See Ealy & Schutt, \textit{supra} note 27, at 122 (asserting printed e-mails may be kept in hard copy form).

\textsuperscript{41} See, e.g., Bennett & Niccum, \textit{supra} note 24, at 607-09 (stating that costs of electronic data storage are decreasing): see also Giacobbe, \textit{supra} note 5, at 262 (explaining that electronic discovery is expensive, in part, because electronic data is stored on magnetic tapes, which hold great amounts of data in small physical space). "[A] single eight-millimeter backup tape can maintain the equivalent of 1500 boxes of paper." Id.; see also Robins, \textit{supra} note 3, at 416-17 (stating that "word processing documents and e-mail messages that were deleted, erased, altered, or never saved" can be recovered in perfect condition because electronic data is stored in magnetic media, "such as hard disks, floppy diskettes, and magnetic tapes," or in optical media, "such as CD-ROMS," both of which do not allow information to be "deleted" without storage space being overwritten).

\textsuperscript{42} See, e.g., Giacobbe, \textit{supra} note 5, at 262 ("Specifically, unlike paper copies of documents that can fill numerous rooms and warehouses, electronically stored data takes up very little physical space."); see also Allman, \textit{supra} note 6, at 4 (noting storage system of paper documents in warehouses).
ances have made it highly efficient, in terms of time and costs, to search large quantities of computerized data. 43

B. Only Electronic Data Contains Hidden Information

A major difference between paper data and electronic data is that electronic data can contain information that is unable to be located in paper form. 44 For instance, many companies store records exclusively on computers, and these records do not exist in paper form. 45 Even if the documents needed actually do exist in paper form, computers can provide earlier drafts of documents that may not still exist in paper form. 46

Additionally, electronic documents contain metadata, software-generated data that is automatically created to trace the history of a document without the user’s initiation or knowledge. 47 Metadata cannot be retrieved from documents stored in paper form because it is generated by

43. See Bennett & Niccum, supra note 24, at 607-09 (maintaining that combination of increased storage capacities at decreased costs and efficient search techniques is reason why most businesses can retain all data created in electronic form); see also Itzenzon v. Hartford Life & Accident Ins. Co., No. CIV. A. 99-4475, 2000 U.S. Dist. LEXIS 14680 (E.D. Pa. Oct. 10, 2000), reviewed by Recent Decisions, Voluminous Files No Longer an Excuse in Computer Age, DIGITAL DISCOVERY & E-EVIDENCE, Feb. 2001, at 10 (dismissing defendant’s claim that searching thousands of insurance files for particular subject would be unduly burdensome because computer era should make it easier to identify files).

44. For a further discussion of the hidden information contained in electronic data, see infra notes 44-52 and accompanying text.

45. See Robins, supra note 3, at 414, 416 (explaining that many companies now keep records that were traditionally kept in paper form exclusively in electronic storage); see also Giacobbe, supra note 5, at 250 (“Experts estimate that computer users never convert up to thirty percent of all electronically stored documents into paper form.”).

46. See Giacobbe, supra note 5, at 261 (stating that electronically stored data is significant tool in contractual disputes because prior versions of contracts can be retrieved off of backup tapes and used to show parties' intent); see also Allman, supra note 6, at 4 (asserting that discovery request wanting “all copies” of document could entail producing party to spend much time looking through archived and deleted data in order to provide all drafts of that document). It is unlikely that every draft of a contract is retained by the parties in paper form. See Giacobbe, supra note 5, at 261 (stating significance of previous electronic versions of documents when compared with unlikelihood of similar paper-form retention); see also Robins, supra note 3, at 416 (discussing fact that computers may add depth to printed documents because they allow access to earlier drafts that may not exist in paper form).

47. See Allman, supra note 6, at 2-3 (defining metadata as “embedded data” providing history of process of creation of document that is not available to user, or bibliographic information automatically generated by software used to create electronic document); Stanley D. Ference III, Electronic Discovery in Civil Litigation, in ELECTRONIC DISCOVERY 73, 74 (Pa. B. Inst. 2002) (calling metadata “information about other data,” and listing metadata found in Microsoft Word); THE SEDONA CONFERENCE, supra note 27, at 5 (stating that metadata is “information used by the computer to manage and often classify the document that is not visible to the user”).
the computer's software and stored electronically on the computer. Without conducting electronic discovery by formatting codes in order to retrieve metadata, a party could miss valuable information such as the name of the document's creator and/or user(s), the date the document was created and/or modified and how the document has been edited.

Perhaps the most valuable information contained on computers that cannot be found through paper discovery is data that computer users intended to delete. Often, documents that parties thought had been deleted from their computers can be recovered from the computer's hard drive and made available for electronic discovery. In contrast, paper

48. See Giacobbe, supra note 5, at 260-61 (recognizing vast amount of information electronic versions of documents provide, in contrast to paper form, which does not reveal as much information); see also Allman, supra note 6, at 3 (acknowledging that information acquired through searching metadata is usually not seen or added by users while using software and concluding that "in contrast to a paper document that contains little or no clue as to its genealogy, an electronic document contains metadata that may be examined to reveal the document's provenance and much more").

49. See The Sedona Conference, supra note 27, at 5 (explaining that formatting codes and other information are means to manipulate electronic data); see also Allman, supra note 6, at 2-3 (stating that metadata tells "when the document was created, the identity of users who have accessed the document, [and] whether the document was edited"); Ference, supra note 47, at 74 (listing metadata found in Microsoft Word); Giacobbe, supra note 5, at 260-62 (giving specific example of how paper copies of e-mail differ from electronic copies of e-mail); The Sedona Conference, supra note 27, at 5 n.9 (giving examples of metadata).

50. See Chung & Byer, supra note 27, para. 12 (stating that electronic evidence is durable because hitting delete button does not guarantee destruction of computer records). As one commentator noted, the durable nature of electronic evidence can cause unexpected results in litigation disputes. See id. (noting impact of durability of electronic information in litigation). The Iran-Contra Affair exemplifies the impact electronic data can have on a case because "deleted" e-mails recovered off of the e-mail systems used by the Executive Office of the President and the National Security Council were introduced as evidence. See id. para. 13 (illustrating impact of electronic evidence on litigation); see also Robins, supra note 3, at 418 (asserting that recovered "deleted" data can be invaluable, not only for information actually attained through looking at documents, but also because seeing what was deleted can expose patterns that reveal motives or states of mind); The Sedona Conference, supra note 27, at 4 (stating that computers contain documents long after users think they are deleted and acknowledging existence of software that is designed to actually erase data by overwriting it). See generally McPeek v. Ashcroft, 202 F.R.D. 31, 34 (D.D.C. 2001) (holding that although defendants had searched available electronic documents for discovery requests, they had to also perform search of backup tapes for information deleted from computer but possibly stored on backup tapes).

51. See Allman, supra note 6, at 5-6 (explaining that when users delete files, they remain on hard drives and "can be recovered by someone who knows how to access hard drives"). Attempts to overwrite "deleted" files are frequently unsuccessful, and sometimes experts can recover parts of partially overwritten "deleted" files. See id. (explaining common lack of success in attempts to overwrite files and prevent their subsequent recovery); see also Ference, supra note 47, at 74 (including "deleted" files in definition of "residual data" and stating that deleted files are not erased off of hard drive "until overwritten with data from [another] file" or "wiped" by special programs); Robins, supra note 3, at 417 ("When a user clicks on
documents that have been shredded or destroyed in other ways cannot be recovered, and the information contained within the destroyed paper documents remains unavailable to the discovering parties.\footnote{52}

C. \textit{Electronically Stored Data Can Be Modified}

A disadvantage of electronic data is the ease with which it can be altered.\footnote{53} Electronic data is often unintentionally altered and can, for example, be changed by simply turning on the computer.\footnote{54} Additionally, changes to electronically stored data are difficult to detect without an expert's assistance.\footnote{55}

the delete option, the computer simply marks the file on the hard disk to be overwritten with new information. The file that was purportedly deleted, however, may not be overwritten for seconds, days, or even months.

One commentator also notes that experts can recover information from broken hard disks. \textit{See} Robins, \textit{supra} note 3, at 418 (discussing ways to recover electronic evidence). The commentator states that data that was never saved by the user can sometimes be recovered off the computer because when the "print" command is used, the computer often saves a copy of the document in the software's "print buffer." \textit{Id.} at 418 (noting that even unsaved data may be recovered); \textit{see also} Giacobbe, \textit{supra} note 5, at 264-65 (explaining that recoverability of deleted data contributes to expensive nature of electronic discovery, especially because it is expensive to have experts recover deleted information off of computers' hard drives).

\footnote{52} See Allman, \textit{supra} note 6, at 5 (explaining that, unlike paper documents that have been destroyed by "[being] shredded, incinerated, buried in a landfill, or otherwise rendered unavailable," supposedly "deleted" electronically stored data can still be recovered despite creator's intentions). One source questions the discoverability of "deleted" data. \textit{See} Scheindlin \& Rabkin, \textit{supra} note 4, at 365 (questioning whether "unknown and unseen" data are discoverable under Rule 34). Because Rule 34 only requires parties to produce documents as they are "kept in the ordinary course of business," it seems unfair to be required to produce residual data, such as deleted e-mail, when production of shredded documents is not required during discovery. \textit{See id.} at 365 (questioning possible scope of electronic data discovery).

\footnote{53} See Robins, \textit{supra} note 3, at 416 (mentioning that sophisticated computer users can be unsuspectingly caught tampering with evidence when it is seen that system history file was deleted); \textit{see also} Ference, \textit{supra} note 47, at 75 ("The simple acts of booting up a computer, opening a file, adding new data onto a hard disk, or running a routine maintenance program on a network can alter or destroy existing information without the user's knowledge.").

\footnote{54} See Ference, \textit{supra} note 47, at 75 ("The simple acts of booting up a computer, opening a file, adding new data onto a hard disk, or running a routine maintenance program on a network can alter or destroy existing information without the user's knowledge."); \textit{The Sedona Conference, supra} note 27, at 5 (explaining that accessing or moving data on computers can alter data).

\footnote{55} See Scheindlin \& Rabkin, \textit{supra} note 4, at 366 (stating that because regular people cannot tell when party has duplicated electronic evidence, it is easy for parties to alter evidence in their favor).
D. Electronic Data Often Contains Information Communicated Informally

Electronic data, especially e-mail, often contains damaging evidence because of its informal nature. Commentators state that e-mail has proven to contain the “smoking gun” in many cases. One commentator asserts that e-mail is the source of such honest and important information because it is a quick medium for dialogue that appears secure from eavesdroppers, due to the lack of personal interaction and minimal likelihood of being reduced to paper form.

E. Computer Programs Have a High Turnover Rate

An issue unique to the discovery of electronically stored data is that electronic evidence is sometimes unable to be read because the program on which the electronic evidence is stored has become obsolete. Sometimes parties claim that it is impossible to restore older data, often referred to as “legacy” data, because the program no longer exists. Courts,

56. See Ealy & Schutt, supra note 27, at 122 (explaining that “e-mail is informal,” and asserting that people communicate on e-mail as if talking in conversations, revealing information that they would never put in hard-copy documents); Sleek, supra note 3, at 4 (quoting attorney who stated that discovery of e-mail can reveal embarrassing information because people communicate on e-mail as if information “would never see the light of day”).

57. Scheindlin & Rabkin, supra note 4, at 338-39 (asserting that e-mail is focus for discovery litigation because its rise in office use, and tendency to contain things people would not normally write down, have made e-mail source of “smoking gun” in cases). The role e-mail has played in recent cases illustrates this point well. In both the Lewinsky case and the Microsoft antitrust trial, e-mail provided invaluable information that the parties were trying to hide. See id. at 329 (discussing role of e-mail in litigation). Ultimately, the use of information recovered from e-mail provided evidence critical to both cases’ holdings. See id. (discussing impact of information recovered from e-mail in civil litigation); see also Chung & Byer, supra note 27, paras. 19-21 (stating that because people speak freely on e-mail, it gives insight into “corporate knowledge and behavior” and providing examples of cases where discovery of e-mail has revealed information that did not exist in paper form).

58. See Robins, supra note 3, at 415 (recognizing that people reveal more information in e-mail because they are “inspired by an instantaneous and seemingly private form of communication in which the presence of the interlocutor is not felt”).

59. See Allman, supra note 6, at 5 (recognizing that although printed documents that are old can be read easily today, old electronic data cannot be read without proper software); The Sedona Conference, supra note 27, at 4 (stating that “the frequent obsolescence of numerous computer systems due to changing technology” is issue unique to electronic discovery). Corporations often update their software in order to remain competitive. See id. (stating that it is not unusual for organizations to update their software several times in only few years). Over the years, data stored on abandoned software can become hard to access because the software no longer exists to run it and the producing party is unfamiliar with the old software. See id. (expounding problems in recovering electronic documents posed by new technology).

60. See Rowe Entm’t, Inc. v. Wm. Morris Agency, Inc., 205 F.R.D. 421, 424 (S.D.N.Y. 2002) (exhibiting defendant’s contention that producing requested e-mails would be too expensive, and likely impossible, because defendant no longer had computer hardware or software to read backup tapes e-mails were stored on).
however, have required producing parties to acquire or develop programs to restore data.\textsuperscript{61}

\section*{F. Electronic Discovery May Require Experts' Aid}

Because of the highly technical nature of electronic discovery and the vast amount of electronic data available to discovering parties, many litigants must employ computer forensics technicians to recover the documents they need.\textsuperscript{62} Employing experts can be extremely expensive.\textsuperscript{63} Litigants may, however, be forced to hire experts because many do not have the technical background necessary to recover the electronically stored data.\textsuperscript{64}

Older, stored data may not be accessible to companies because their current software could be incompatible with the software that the older data is stored on. See Allman, \textit{supra} note 6, at 5 (explaining difficulties in accessing old, or legacy, data). In order to access the old data, which is called "legacy" data, companies may have to repurchase the old software, if it is available. \textit{See id.} at 5 (discussing means by which "legacy" data may be accessed).

\textsuperscript{61} See Bills v. Kennecott Corp., 108 F.R.D. 459, 461 (D. Utah 1985) ("[S]ome courts have required the responding parties to develop programs to extract the requested information and to assist the requesting party in reading and interpreting information stored on computer tape.").

\textsuperscript{62} See George, \textit{supra} note 25, at 1 (explaining that "[i]t is the electronic discovery vendor's job to reduce the documents to a manageable size without eliminating relevant data" and that "electronic document culling" performed by electronic discovery companies is cost-saving measure used by litigants during electronic discovery to guarantee they only look at relevant documents); Koprowski, \textit{supra} note 25, at 12 (assuming expert help is needed in most instances where attorneys need to gather electronic evidence). Not every consulting firm or expert will meet an attorney's needs during discovery. \textit{Cf} id. ("But how do you find the consultant that best meets your specific needs during the discovery phase of litigation?"). Consulting firms specialize in different areas and, therefore, it is crucial that litigants hire consulting firms or experts that can fulfill their needs and goals. \textit{See id.} (noting specializations of consulting firms). The consultants in the firms have "expertise in technology, law, and litigation strategy, attempt to help clients maintain control of the discovery process, attain discovery goals, and most importantly, avoid expensive mistakes and reduce the cost of electronic discovery by finding efficient ways to mine and organize data." \textit{Id.}

\textsuperscript{63} See Giacobbe, \textit{supra} note 5, at 265 (stating that it is "extremely costly" for litigants to hire computer experts to retrieve supposedly "deleted" data from computers). The cost of retrieving e-mail messages from one year's worth of monthly backup tapes, at $150 per hour, is $100,000. \textit{See id.} This figure includes almost "one hundred person hours to restore the monthly sessions to a computer drive," "estimated 250 person hours to redact the data to eliminate duplicate messages," "250 person hours to convert the messages to text" and "approximately sixty person hours to search and print the necessary data." \textit{Id.}; \textit{see also} Koprowski, \textit{supra} note 25, at 12-13 (explaining that long-range savings to litigants from hiring electronic discovery consulting firms is worth firms' average charge of $250 to $350 per hour).

\textsuperscript{64} For further discussion on the necessity of experts in recovering electronic data, see \textit{supra} notes 44-52, 59-61 and accompanying text. Conducting electronic discovery includes much more than "inserting a disk" and "copying . . . files." Giacobbe, \textit{supra} note 5, at 259 (discussing process of electronic discovery). The extremely technical nature of electronic discovery is evidenced by the huge increase
III. RULES GOVERNING DISCOVERY IN U.S. DISTRICT COURTS

The Rules governing discovery in civil actions in U.S. district courts are Rules 26 to 37. Specifically, Rules 26 and 34 apply to the discoverability of electronically stored data. The following analysis of Rules 26 and 34 focuses on whether the Rules adequately guide litigants and courts in deciding cost allocation in electronic discovery disputes.

Rules 26 and 34 allow for the discovery of electronically stored data. Rule 26 states that in their initial disclosures, parties must provide other parties with copies or descriptions of relevant "documents, data compilations in the number of electronic discovery consulting firms. See id. at 259 ("Electronic discovery has become a 'mini-industry' in the legal field . . . ."); see also Robins, supra note 3, at 418 (asserting that "competent computer forensics technician" can recover many documents thought to be irrecoverable); Koprowski, supra note 25, at 13 (discussing one case exemplifying need to hire qualified computer experts instead of relying on own computer expert because of computer expert's destruction of ten percent of information on opposing party's hard drive while examining files).


66. See Robins, supra note 3, at 425-27 (using only Rules 26 and 34 in discussion of rules governing electronic discovery); see also Giacobbe, supra note 5, at 266-70 (discussing only Rules 26 and 34 in analysis of rules applicable to electronic discovery); Marron, supra note 37, at 911 (stating that Rules 26 and 34 are specific rules that govern e-mail discovery).

67. For a discussion of Rules 26 and 34, see infra notes 68-86 and accompanying text. Besides cost allocation, scholars have identified additional topics relevant to electronic discovery that seem unaddressed by the Rules. See Eoannou, supra note 4, at 6 (outlining Judge Scheindlin and Judge Facciola's arguments regarding issues pertinent to electronic discovery, including argument that Rules do not provide guidance to litigants and courts). These additional topics will only be discussed here insofar as they relate to cost-allocation disputes.

68. See Arent et al., supra note 25, at 133 (recognizing that discoverability of electronic data is not new concept); Bacon, supra note 26, at 18 (stating there is uniform acceptance by state and federal courts that electronically stored data is discoverable); see also Fed. R. Civ. P. 34 advisory committee's notes, reprinted in West's Federal Civil Judicial Procedure and Rules 188 (revised ed. 2003) (1970 Amendment) (stating that in recognition of changing technology, description of "documents" was changed to include "electronics [sic] data compilations"); Allman, supra note 6, at 7 (claiming that Rule 34 clearly conveys that electronic documents are discoverable); The Sedona Conference, supra note 27, at 11 ("[E]lectronic data and documents are potentially discoverable under [Rule] 34 . . . ."). But see Scheindlin & Rabkin, supra note 4, at 350-51 (proposing that although doubts as to whether Rule 34 allows discovery of electronic documents like e-mail no longer exist, it is not clear whether Rule 34 allows discovery of "cookies, temporary files and residual data").
tions, and tangible things” that they possess or control. Similarly, Rule 34 provides that parties may request that opposing parties produce documents including “data compilations,” allow inspection of “tangible things” within the producing parties’ control and permit inspection of land, “other property” or any “designated object” within the producing parties’ possession. The 1970 Advisory Committee Notes to Rule 34 state that the addition of “data compilations” to the definition of “documents” was done specifically to include the discovery of electronic documents. Scholars have also argued that the discovery of computer hard drives is permitted by Rule 26’s and Rule 34’s reference to the discoverability of “tangible things.” It could also be asserted that because a computer is an “object,” it is discoverable under Rule 34.

Rule 26 provides that by making an order, courts may alter the discovery rules and limit the scope of discovery if discovery is “unreasonably cumulative or duplicative,” can be attained by “more convenient, less burdensome or less expensive” means or “the burden or expense of the proposed discovery outweighs its likely benefits.” The Rules further explain what factors courts should consider when deciding if the “burden or expense of the proposed discovery outweighs its likely benefit.” In deciding whether to shift costs, the Rules state that courts should consider the case’s needs, the money at stake, the wealth of the parties, the importance of the issue presented and what the discovery at issue reveals about the case.

The Rules do not state which party is responsible for paying the costs of discovery. The notes to the 1970 Amendment to Rule 34, however, do imply that, unless otherwise ordered by the court, the producing party is expected to pay the costs of discovery. Case law and tradition solidify

69. Fed. R. Civ. P. 26(a)(1) (establishing that parties are not exempt from providing electronically stored data in their initial disclosures).
70. See Fed. R. Civ. P. 34(a) (allowing parties to request discovery of electronically stored data).
72. See Levine, supra note 1, para. 51 (insisting that hard drives of computers are discoverable because hard drives are “tangible things” storing information similar to information found in documents); cf. Bacon, supra note 26, at 18 (implying that Rule 34’s reference to discovery of “data compilations” and “tangible things” allows for discovery of electronically stored data).
73. See Fed. R. Civ. P. 34(a)(2) (stating that parties can request permission from other parties to inspect, measure, photograph, test or sample “property or any designated object”).
77. See generally Fed. R. Civ. P. 27-38 (containing discovery rules); see also Fed. R. Civ. P. 34 advisory committee’s notes, reprinted in West’s Federal Civil Judicial
the presumption that the producing party pays the costs of discovery. The 1970 Amendment to Rule 34 states that, under Rule 26, courts have the power to prevent "undue burden or expense" on the producing party by issuing an order limiting the scope of discovery or shifting the costs of discovery to the requesting party. Therefore, according to the Rules, the test outlined in Rule 26 for determining whether proposed discovery is an "undue burden or expense" is a test for when courts should shift the costs of discovery from the producing party to the requesting party.

Because it is recognized that the Rules allow the discovery of electronically stored data, the Rules are considered to govern electronic discovery. Therefore, the test outlined in Rule 26 is the present cost-shifting analysis courts are to apply to electronic discovery disputes where the producing party alleges injuries of "undue burden or expense." The quarrel among legal scholars is whether there should be different rules

**Procedure and Rules 188 (revised ed. 2003) (1970 Amendment) (explaining that respondent may be protected by court against incurring "undue burden or expense" by court ordering that party conducting discovery pay costs of discovery).**

78. For a further discussion of the presumption that the producing party pays for discovery, see supra note 20 and accompanying text.


80. **See Fed. R. Civ. P. 26(b)(2)(iii) (outlining test courts should use when considering cost shifting); Fed. R. Civ. P. 94 advisory committee's notes, reprinted in West's Federal Civil Judicial Procedure and Rules 188 (revised ed. 2003) (1970 Amendment) (stating that under Rule 26(c) courts can order cost shifting to prevent "undue burden or expense" on producing party); Allman, supra note 6, at 7, 7 n.1 (explaining courts can limit discovery under Rules 26(b)(2) and 26(c) and stating that "although the 1970 Committee notes only mention Rule 26(c), courts frequently place more reliance on Rule 26(b)(2) in limiting discovery"); The Sedona Conference, supra note 27, at 13 n.16 (same); see also Fed. R. Civ. P. 26 advisory committee's notes, reprinted in West's Federal Civil Judicial Procedure and Rules 157-58 (revised ed. 2003) (1980 Amendment) (stating that elements in Rule 26(b)(2)(iii) are standard courts should use in determining whether to grant 26(c) protective order imposing cost shifting); Fed. R. Civ. P. 26 advisory committee's notes, reprinted in West's Federal Civil Judicial Procedure and Rules 167 (revised ed. 2003) (2000 Amendment) (GAP Report) (explaining that sentence was added to call attention to limitations expressed in 26(b)(2) so that courts will use test set forth to limit discovery).**

81. **See Anti-Monopoly, Inc. v. Hasbro, Inc., 94 Civ. 2120 (LMM) (AJP), 1995 U.S. Dist. LEXIS 16355, at *4 (S.D.N.Y. Nov. 3, 1995) ("Thus, today it is black letter law that computerized data is discoverable if relevant."). For a discussion of whether the Rules govern electronic discovery, see supra notes 66, 68-73 and accompanying text.**

82. **See Fed. R. Civ. P. 26(b)(2)(iii) (stating cost-shifting test); Fed. R. Civ. P. 34 advisory committee's notes, reprinted in West's Federal Civil Judicial Procedure and Rules 188 (revised ed. 2003) (1970 Amendment) (defining cases in which courts should order cost shifting as those where producing party suffers "undue burden or expense"); The Sedona Conference, supra note 27, at 13 (asserting that when balancing electronic discovery costs, courts should use test set forth in Rule 26(b)(2)). But see Eoannou, supra note 4, at 6 (quoting Judge Faci- ola as stating that Rules do not address whether cost shifting is always appropriate).**
governing cost allocation in electronic discovery disputes because courts prior to *Zubulake* inconsistently applied the cost-shifting test set forth in Rule 26. In a memorandum, the Discovery Subcommittee of the U.S. Judicial Conference Advisory Committee on Civil Rules implied that Rule 26 provides adequate guidance to courts in electronic discovery cost-shifting disputes. In the proposed amendment to Rule 26 that specifically addresses electronic discovery, Rule 26’s proportionality test is cited as limiting cost-shifting orders. Further, the comment to the proposed amendment lists Rule 26’s cost-shifting factors and states that courts should apply them in electronic discovery disputes over cost allocation.

**IV. A Starting Point: Rowe Entertainment, Inc. v. William Morris Agency, Inc.**

The U.S. District Court for the Southern District of New York in *Rowe Entertainment, Inc. v. William Morris Agency, Inc.* set forth an eight-factor test to guide courts in deciding whether to shift costs in electronic discovery disputes. No court prior to *Rowe* had set forth such an elaborate, specific and thorough test. *Rowe* test is extremely important to the analysis.

83. See Arent et al., supra note 25, at 161-62 (explaining that federal district courts have reached different conclusions in balancing factors for cost shifting); Martin H. Redish, *Electronic Discovery & the Litigation Matrix*, 51 DUKE L.J. 561, 578-79 (2001) (insisting that Rule 26(b) and Rule 26(c) are too broad to provide courts with guidance and arguing that Rules’ inadequacy in addressing cost shifting in electronic discovery will continue to result in courts using primarily discretion to decide whether costs should be shifted); Scheindlin & Rabkin, supra note 4, at 351, 374-76 (stating that within past fifteen years, case law addressing electronic discovery under Rule 34 has been both inconsistent and unclear and providing model amendments to Rule 34 for solving its alleged ambiguity regarding cost shifting).


85. See id. at 20 (proposing amendment stating that court may order party to produce inaccessible data subject to limitations of Rule 26(b)(2)).

86. See id. at 22-23 (maintaining that courts should look at factors in Rule 26(b)(2) when deciding whether to shift electronic discovery costs).


88. See Allman, supra note 6, at 10 (proclaiming that court in *Rowe* established “more rigorous analysis” of when electronic discovery costs should be shifted than other courts). One commentator identifies *In re Brand Name Prescription Drug Antitrust Litigation*, [hereinafter *Brand Name*], as the only case prior to *Rowe* to state factors courts should consider when deciding whether cost shifting is appropriate. Civ. A. No. 94C897, MDL No. 997, 1995 WL 360526 (N.D. Ill. June 15, 1995); see also Marron, supra note 37, at 915-18 (outlining case law prior to *Rowe*). The *Brand Name* court considered the cost of electronic discovery production, the benefit of producing the electronically stored data, both parties’ ability to bear the costs of production and both parties’ ability to limit the cost of production as important factors for deciding whether the costs of electronic discovery should be shifted. See
of Zubulake because the Zubulake court relied on Rowe's thorough contemplation of prior case law. Furthermore, the court in Zubulake analyzed and modified the Rowe test.

In Rowe, the plaintiffs were black concert promoters who promoted events with white musicians, and the defendants were promoters and booking agencies who represented white artists. The plaintiffs alleged that the defendants worked together in a discriminatory and anticompetitive fashion to monopolize the concert industry. Pursuant to Rules 26(b)(2)(iii) and 26(c), the defendants moved for a protective order relieving them of the alleged burden and high expense of producing e-mails that could contain information relevant to the plaintiffs' discovery requests.

89. See generally Zubulake I, 217 F.R.D. 309, 316 (S.D.N.Y. 2003) (basing analysis on Rowe's eight-factor test); Rowe, 205 F.R.D. at 429 (piecing eight-factor test together by analyzing prior court decisions regarding cost shifting in electronic discovery disputes); see also Carol L. Eoannou, Zubulake Court Allocates 75% of E-discovery Costs to Producing Party, 25% to Requester, DIGITAL DISCOVERY & E-EVIDENCE, Aug. 2003, at 2 (stating that Rowe was controlling case prior to Zubulake).

90. See generally Zubulake I, 217 F.R.D. at 309-24 (revising Rowe test); see also Eoannou, supra note 89, at 2 (recognizing that in Zubulake I, Judge Scheindlin modified eight-factor test established in Rowe).

91. See Rowe, 205 F.R.D. at 423-24 (stating facts of case).

92. See id. (stating plaintiff's allegations).

93. See id. at 423-24, 433 (describing defendant's motions and holding protective order denied as to prevention of discovery, but granted as to shifting costs of production); Marron, supra note 37, at 919 (explaining that four defendants who motioned for protective order produced estimates that demonstrated costs of compliance with discovery request ranging from $84,000 to $403,000); see also Allman, supra note 6, at 10 (discussing facts of Rowe).
After concluding that e-mail is discoverable, and that the e-mail sought was relevant to the plaintiffs' case, the court held that the plaintiffs had to pay the costs of obtaining discovery of the e-mails. The court also ordered the defendants to bear the costs of reviewing the e-mails for privileged and confidential information. In reaching its decision, the Rowe court analyzed the facts of the case with an eight-part test established by the court to help decide whether the burden of production was "undue." Under this eight-part test, the court found that making the defendants bear the burden of producing the e-mails would be an "undue burden," and, thus, the court shifted the cost of the electronic discovery to the plaintiffs.

The eight factors used in Rowe to evaluate the burdens of production assess (1) whether the discovery request is specific; (2) whether produc-

94. See Rowe, 205 F.R.D. at 428 (finding that plaintiffs demonstrated discovery sought was relevant and holding that electronic documents are discoverable). The Rowe court explained that the factors weighed heavily in favor of shifting the costs of discovery to the plaintiffs, and the court held that while the plaintiffs had to pay the costs of producing the e-mail, the defendants had to pay the extra costs associated with creating the TIFF files. See id. at 432-33; Allman, supra note 6, at 10-12 (reiterating court's analysis in Rowe).

95. See Rowe, 205 F.R.D. at 432 (holding that cost of reviewing e-mail for privileged information prior to production is defendants' burden to pay).

96. See id. at 429-32 (analyzing facts of case under eight-part test). The Rowe court explained that the main focus in deciding whether electronic discovery costs should be shifted is the determination of whether the cost of producing electronic documents is an "undue burden or expense" under Rule 26(c). Id. at 428-29. Rowe introduced an eight-factor test for courts to use to decide whether electronic document production is an "undue burden or expense" according to Rule 26(c). Id. at 429; see also Marron, supra note 37, at 919 (explaining that Rowe court established eight-factor test after rejecting presumption in Brand Name that high costs of electronic discovery should be paid by producing parties because they chose to use computers).

97. See Rowe, 205 F.R.D. at 429-32 (using eight-factor test to determine whether production of discovery is "undue burden or expense" according to Rule 26(c) and holding that eight-factor test revealed costs of e-mail production should be shifted to plaintiffs).

98. See id. at 429-30 (listing specificity of request as first prong of test). The Rowe court stated that the less specific a discovery request is, the more likely it is appropriate for a court to order a shifting of the costs of discovery from the producing party to the requesting party. See id. (discussing relationship between specificity of discovery request and cost shifting). Cost shifting is appropriate where the discovery request lacks specificity because broad requests are burdensome to the producing party and often force the producing party to pay higher discovery costs. See id. at 450 ("Where a party multiplies the litigation costs by seeking expansive rather targeted discovery, that party should bear the expense."); see also Allman, supra note 6, at 11 (explaining eight-factor test set forth in Rowe). In support of its proposition, the Rowe court cited In re General Instrument Corp. Securities Litigation, which denied a motion to compel production of e-mails because the requesting parties' discovery request was overbroad. See Rowe, 205 F.R.D. at 429; see also In re Gen. Instrument Corp. Sec. Litig., No. 96 C 1129, 1999 U.S. Dist. LEXIS 18182, at *6 (N.D. Ill. Nov. 18, 1999) (denying motion to compel discovery). The Rowe court also cited McPeek v. Ashcroft in support of this factor, because in McPeek, instead of shifting costs, the court sought to narrow the scope of the discovery re-
tion will reveal critical information; how the information requested is available from other sources; why the producing party retains the data; whether the producing party benefits from production by requiring the producing party to perform a limited search of its backup files and present a report outlining the result of the search and the expenses incurred.

See Rowe, 205 F.R.D. at 430 (explaining that in McPeek, court only required production of e-mails of specific people); see also McPeek v. Ashcroft, 202 F.R.D. 31, 34-35 (D.D.C. 2001) (ordering producing party to perform "test run" of backup files and to supply detailed report of findings and expenses incurred).

99. See Rowe, 205 F.R.D. at 430 (contending that likelihood that discovery in question will lead to critical information is important because it is unfair to make producing party bear costs of production if information requested is unlikely to lead to material critical to requesting party's case). The Rowe court looked to McPeek when formulating this prong of the test. See id. (relying on precedent in determining that utility of information sought should be considered in cost-shifting analysis). In McPeek, the court used a marginal utility test by stating that the more likely it is that the search will reveal relevant data, the fairer it is to make the producing party pay for production. See 202 F.R.D. at 34 (using marginal utility test). The less likely it is that the search will reveal relevant information, the more unjust it is to make the producing party pay the expense. See Rowe, 205 F.R.D. at 430 (reasoning that relevance of information sought dictates who should bear costs of its production).

100. See Rowe, 205 F.R.D. at 430 (relying on prior case law in establishing this factor). The Rowe court found that if the information requested is available from another source at less expense, then the requesting party should pay the costs of acquiring the information at greater expense. See id. (asserting that because requested information was not available elsewhere, producing party was required to bear expense of production). In concluding that the availability of the requested information from other sources is an important consideration when deciding whether electronic discovery costs should be shifted from one party to another, the Rowe court looked to the holdings in Anti-Monopoly, Inc. v. Hasbro, Inc. and Williams v. E.I. du Pont de Nemours & Co. See id. (analyzing precedent). See generally Anti-Monopoly, Inc. v. Hasbro, Inc., 94 Civ. 2120 (LMM) (AJP), 1996 U.S. Dist. LEXIS 563 (S.D.N.Y. Jan. 23, 1996); Williams v. E.I. du Pont de Nemours & Co., 119 F.R.D. 648 (W.D. Ky. 1987). In Anti-Monopoly, the court held that because the defendant had already provided the plaintiff with the requested information in paper form, the plaintiff would have to pay the costs of the second request to produce the same data in electronic form. See 1996 U.S. Dist. LEXIS 563, at *6-7 (holding that requesting party must pay for expenses involved in retrieval of requested information). Similarly, in Williams, the court held that in order for the defendant to gain access to the database created by the plaintiff, which contained data originally produced by the defendants in paper form, the defendants had to pay a share of the costs incurred by the plaintiffs in creating the database. See 119 F.R.D. at 651 (providing holding of case).

101. See Rowe, 205 F.R.D. at 430-31 (maintaining that parties who store data for current business purposes must pay for its production in discovery, while parties who store information for noncurrent business purposes, such as for emergencies or because of neglect to discard it, should not pay for its production in discovery). In establishing this factor, the Rowe court followed the analysis in Daewoo Electronics Co. v. United States, where the U.S. Court of International Trade held that electronic information stored for current business use should be available for discovery similar to paper documents. See id. at 431 (citing Daewoo, 650 F. Supp. 1003 (Ct. Intl'l Trade 1986)). The Rowe court, however, extended the analysis to specifically include e-mail by recognizing that because a producing party would not be required to search through trash in order to retrieve requested infor-
ing the information; \(^{102}\) (6) whether the total cost of production is substantial; \(^{103}\) (7) each party's ability to control costs; \(^{104}\) and (8) each party's

\[^{102}\text{See id. (stating that if producing party benefits from retrieving requested information, by either creating computer program beneficial to future business for retrieving data or discovering information useful to own side in litigation, costs of production should not be shifted to requesting party). The } Rowe\text{ court cited Bills v. Kennecott Corp. for the proposition that costs should not be shifted to the requesting party if the producing party benefits from retrieving the information. See id. (citing Bills v. Kennecott Corp., 108 F.R.D. 459, 464 (D. Utah 1985)). In Bills, the court refused to shift the costs of discovery to the plaintiffs partly because the defendant benefited from producing the requested information. See 108 F.R.D. at 464 (identifying factors important in deciding whether electronic discovery costs should be shifted).}\]

\[^{103}\text{See Rowe, 205 F.R.D. at 431 (stating that if total cost of production is insubstantial, there is no need to deviate from presumption that producing party pays discovery costs by ordering cost shifting). The court in Rowe used the findings in Oppenheimer Fund, Inc. v. Sanders, 437 U.S. 340, 358 (1978), and Anti-Monopoly to measure what a substantial cost is in electronic discovery disputes. See id. (recounting findings in Oppenheimer and Anti-Monopoly). The Rowe court noted that in Oppenheimer, the Court held that $16,000 worth of discovery costs was substantial for the defendant to bear, even though the defendant had assets exceeding one-half billion dollars. See id. (discussing substantiality of discovery costs in determination of whether to shift costs in Oppenheimer); see also Oppenheimer, 437 U.S. at 361-62 (holding appropriate test is whether cost of discovery is substantial, not whether it is "modest" in comparison to party's ability to pay). Rowe cited Anti-Monopoly to show that costs of $1,680 and $5,000-$6,000 have been held to be sufficient to order cost shifting. See Rowe, 205 F.R.D. at 431 (discussing Anti-Monopoly); see also Anti-Monopoly, 1996 U.S. Dist. LEXIS 563, at *5-7 (following analysis in Oppenheimer by holding that regardless of party's financial situation, $1,680 and $5,000-$6,000 are substantial costs to bear for discovery).}\]

\[^{104}\text{See Rowe, 205 F.R.D. at 431-32 (stating that where costs of discovery are substantial, courts should consider shifting burden of paying costs onto party responsible for deciding scope of discovery). The Rowe court acknowledged that a party's ability to control costs should not be the only factor motivating a court's order to shift costs. See id. ("Of course, this factor alone does not dictate cost-shifting . . ."). Bills was cited for refusing to shift costs where the burden and expense of discovery would be greater to the requesting party. See id. (citing Bills); see also Bills, 108 F.R.D. at 464 (setting standard followed by Rowe). In Bills, however, the court also refused to shift costs because the cost of discovery was not substantial and the producing party benefited from production. See id. (using four factors to explain holding not to shift costs to requesting party). It appears that the Rowe court cited Bills as an example of how this factor is not to be the sole determining factor for granting an order to shift costs. See id. at 463-64 (stating factors considered in deciding whether to shift costs are not set forth as "ironclad formula" for all cases and considering fact that requesting party controlled scope and costs of discovery as one factor out of four discouraging cost shifting); see also Rowe, 205 F.R.D. at 432 (citing Bills, 108 F.R.D. at 464). The Rowe court stated that requiring the party that has the ability to control costs, by limiting the scope of discovery, to pay the costs of discovery could prove to make discovery more efficient because bearing the burden of the expense could serve as an incentive to narrow the request. See id. at 431-32 (stating it is more efficient to place burden of expense on party who has ability to limit costs of discovery and citing McPeek as holding that presumption producing party always pays is disincentive to requesting party to limit scope of discovery).}\]
ability to pay for production. 105 In *Rowe*, the court held in favor of cost shifting because the majority of factors showed that not shifting the costs of production would impose an "undue burden or expense" on the defendants. 106 Although the e-mails were not available from another source and both parties had the financial resources to fund production, the factors weighed in favor of the defendants because (1) the plaintiffs' discovery requests were overly broad; 107 (2) there was no proof that the requested e-mails contained a "gold mine" of relevant information; 108 (3) the plaintiffs did not show that the defendants retained the electronically stored e-mails in order to regularly access them; 109 (4) the defendants would not benefit from the production; 110 (5) production would be expensive; 111 and (6) the plaintiffs had a greater ability than the defendants to control the cost of production. 112

105. See *Rowe*, 205 F.R.D. at 432 (citing *Bills* and *Oppenheimer* for proposition that courts should consider parties' resources when deciding whether to order cost shifting); see also *Oppenheimer*, 437 U.S. at 361 (asserting that only in some circumstances is it appropriate to consider parties' resources); *Bills*, 108 F.R.D. at 432 (holding costs of discovery should not be shifted to requesting party because producing party is better able to bear financial burden).

106. See *Rowe*, 205 F.R.D. at 428 (stating that analysis for cost shifting should determine whether costs of discovery are "undue"). The *Rowe* court concluded that the factors "tip heavily in favor" of cost shifting. *Id.* at 432. *Rowe* found one factor to be neutral, one factor in favor of not shifting costs and six factors in favor of cost shifting. See *id.* at 429-32; see also *Ealy & Schutt*, *supra* note 27, at 134 (explaining that court in *Rowe* ordered cost shifting because six of eight factors showed plaintiffs should carry financial burden of production). But see Marron, *supra* note 37, at 919 (stating that *Rowe* found one factor to be neutral, two factors in favor of not shifting costs and five factors in favor of cost shifting); see also *Shifting the Costs of E-Discoveery to Your Opponent in Civil Litigation*, at http://www.torys.com/publications/pdf/cm3-22N.pdf (last visited Aug. 22, 2003) (asserting that *Rowe* established factors courts use when determining whether discovery will cause undue burden or expense).

107. See *Rowe*, 205 F.R.D. at 430 (stating requests were too broad); *Ealy & Schutt*, *supra* note 27, at 134 (analyzing which of eight factors made cost shifting appropriate).

108. See *Rowe*, 205 F.R.D. at 430 (noting modest likelihood search of e-mails requested would reveal pertinent information).

109. See *id.* at 430-31 (asserting parties should only be required to produce archived backup tapes at own cost if information retained for business use); see also *Ealy & Schutt*, *supra* note 27, at 134 (analyzing which of eight factors made cost shifting appropriate).

110. See *Rowe*, 205 F.R.D. at 431 (deciding production of e-mails would not benefit defendants).

111. See *id.* (explaining that if total cost of production is insubstantial, there is no need to consider cost shifting).

112. See *id.* at 431-32 (recognizing that plaintiffs had greater ability to control costs of production); see *Ealy & Schutt*, *supra* note 27, at 134 (listing which of eight factors contributed to cost shifting).
V. THE LATEST DEVELOPMENT IN ELECTRONIC DISCOVERY: ZUBULAKE v. UBS WARBURG

Scholars believe Zubulake answers two questions surrounding electronic discovery. First, Zubulake defines the scope of electronic discovery. Second, Zubulake retains the traditional presumption that the producing party pays for discovery, while formulating a fact-specific cost-shifting analysis that examines which party should pay for the production of electronic data.

A. Facts and Procedural Background of Zubulake

There are three federal court decisions from the Southern District of New York on the Zubulake case. Two of the opinions ("Zubulake I" and "Zubulake II") provide courts and litigants with guidance on the discoverability of electronic data and cost allocation in electronic discovery disputes. A third opinion ("Zubulake III") considers Laura Zubulake's ethical obligation to report alleged securities violations by UBS Warburg.

113. See Zubulake I, 217 F.R.D. 309, 311 (S.D.N.Y. 2003) (explaining that issue in Zubulake is "[t]o what extent is inaccessible electronic data discoverable, and who should pay for its production"); S.D.N.Y. Revises Rowe Standards, supra note 9, at 1 (asserting that Zubulake provides solutions to two problems in civil litigation regarding discoverability of electronic data and payment for electronic data production).

114. See Zubulake I, 217 F.R.D. at 317 (finding that deleted information stored on backup tapes is just as discoverable as electronic documents currently in use or paper records).

115. See id. at 316 (explaining that under Rules, presumption is that producing party pays expense of fulfilling discovery request, unless court grants 26(c) protective order denying discovery or conditioning discovery on shifting costs). The application of the discovery rules to electronically stored information is complicated, and courts have devised various responses to the problem of cost shifting. See id. ("Courts generally engage in some sort of cost-shifting analysis, whether the refined eight-factor Rowe test or a cruder application of Rule 34's proportionality test, or something in between."). Zubulake I set forth a three-step electronic discovery cost-shifting and scope-defining analysis to guide courts in dealing with electronic evidence. See id. at 317-24 (outlining three-part analysis); see also S.D.N.Y. Revises Rowe Standards, supra note 9, at 1 (stating that Zubulake I court rejected rationale that cost shifting should be considered whenever there is electronic discovery, and instead, maintained that cost shifting should only be considered by courts when discovery imposes undue burden or expense on producing party).


117. See Zubulake I, 217 F.R.D. at 324 (outlining three-part analysis for deciding electronic discovery disputes); see also Zubulake II, 216 F.R.D. at 284-91 (applying seven-factor cost-shifting test to specific facts of case).
Laura Zubulake was an equities trader suing UBS, a securities trader, for "gender discrimination, failure to promote, and retaliation under federal, state, and city law." In her discovery request, Zubulake asked that UBS produce all documents relating to her, including electronic and computerized data compilations. During discovery, UBS objected to part of the discovery requests. After a conference before a U.S. magistrate judge on September 12, 2002, UBS agreed to attempt to produce e-mails sent between August 1999 and December 2000 that were saved on the company's computer system. In return, Zubulake narrowed the discovery request by naming specific individuals whose e-mails she wanted UBS to produce.

118. See Zubulake III, 2003 U.S. Dist. LEXIS 7940, at *11 (holding Zubulake had no ethical obligation to report securities violations by UBS because Zubulake did not hold membership to New York Stock Exchange or National Association of Securities Dealers). The deposition of a manager employed by UBS Warburg allegedly revealed to Zubulake that UBS Warburg violated securities laws governing document retention by brokerage firms. See id. at *2-3 (documenting how Zubulake received information). Zubulake sought to discharge her ethical obligation to report securities violations by disclosing the manager's deposition to the New York Stock Exchange and National Association of Securities Dealers. See id. at *4 (stating claim). The court found that because Zubulake was not a listed member of either association, and therefore did not have a professional duty to report the violations, the only reason to disclose the information would be to gain an advantage over UBS Warburg in the gender discrimination suit. See id. at *9-10 (explaining why court denied motion to permit Zubulake to release transcript of deposition).

119. For a further discussion of ethical obligations to disclose securities violations, see Zubulake III, 2003 U.S. Dist. LEXIS 7940. For a further discussion of the three-part analysis, see infra notes 132-70 and accompanying text. For a further discussion of how the cost-shifting test was applied to the facts of Zubulake, see infra notes 171-73, 184-90 and accompanying text.

120. Zubulake II, 216 F.R.D. at 281 (stating that Zubulake earned $650,000 per year working for UBS and is now suing UBS); Jason Krause, E-discovery Order Changing the Rules, 2 A.B.A. J. E-REPORT No. 22, at 1 (June 16, 2003), available at http://www.abanet.org/litigation/programs/ediscoveryarticle.pdf (stating Zubulake was fired after filing complaint with Equal Employment Opportunity Commission); S.D.N.Y. Revises Rowe Standards, supra note 9, at 1 (explaining that Zubulake earned high salary before discharged and that UBS is "multi-million dollar securities trader").

121. See Zubulake I, 217 F.R.D. at 312-13 (explaining that UBS objected to discovery request number twenty eight, which asks for "all documents concerning any communication by or between UBS employees concerning Plaintiff" and documenting that UBS produced 350 pages of information, including one hundred pages of e-mails, after being served with first document request); S.D.N.Y. Revises Rowe Standards, supra note 9, at 1 (recognizing that "document" was defined by Zubulake in discovery request to include "without limitation, electronic or computerized data compilations").

122. See Zubulake I, 217 F.R.D. at 313 (stating UBS "objected to a substantial portion of Zubulake's requests").

123. See id. (recounting attempts to resolve dispute).
to produce.\textsuperscript{124} UBS, however, never produced additional e-mails and claimed that it had already produced the requested information.\textsuperscript{125} Furthermore, UBS informed Zubulake that the estimated $300,000 cost of producing e-mails from the company's backup files prohibited further production.\textsuperscript{126}

The parties once again appeared before a U.S. magistrate judge on December 2, 2002, and the judge ordered UBS to depose an employee who knew about the company's computer e-mail retention policies.\textsuperscript{127} After UBS deposed a manager on January 14, 2003, Zubulake motioned the court to order UBS to produce the requested e-mails at its own expense.\textsuperscript{128} On May 13, 2003, a federal judge ordered UBS to conduct a sample restoration from five backup tapes chosen by Zubulake and to present the court with a report on the contents of the e-mails recovered, the time restoration took and the cost of production.\textsuperscript{129} After applying a cost-shifting analysis to the facts documented in the report, the federal judge issued an opinion on July 24, 2003, ordering Zubulake to pay twenty-five percent of the production costs for the requested information.\textsuperscript{130} Below

\begin{itemize}
\item \textsuperscript{124.} See \textit{id.} (explaining who Zubulake specifically named). UBS agreed unconditionally to produce e-mails sent and received by five named individuals: Matthew Chapin, the director Zubulake alleged made discriminatory remarks about her; Rose Tong, the human relations representative who was in charge of handling Zubulake's issues; two of Zubulake's co-workers, Vinay Datta and Andrew Clarke; and finally, Jeremy Hardisty, Chapin's supervisor to whom Zubulake first complained about Chapin's alleged sexist comments. See \textit{id.} (naming persons UBS agreed to provide responsive e-mails pursuant to September 12, 2002 agreement).
\item \textsuperscript{125.} See \textit{id.} (claiming that UBS never searched its backup files according to September 12, 2002 agreement for requested data).
\item \textsuperscript{126.} See \textit{id.} (clarifying that at time of informing Zubulake that cost of production would prohibit searching backup files, UBS estimated production costs to reach $300,000); \textit{S.D.N.Y. Revises Rowe Standards}, supra note 9, at 1 (asserting that UBS's estimated cost of retrieving e-mails from backup files was $175,000, without costs for attorney time for review).
\item \textsuperscript{127.} See \textit{Zubulake I}, 217 F.R.D. at 313 (documenting Judge Gorenstein's order for UBS to depose employee with knowledge about e-mail backup procedure).
\item \textsuperscript{128.} See \textit{id.} (stating UBS deposed Christopher Behny, Manager of Global Messaging).
\item \textsuperscript{129.} See \textit{generally id.} at 323-24 (following \textit{McPeek} by ordering sample restoration in order to do cost-shifting analysis with more certain facts about content, time and cost of producing requested discovery); see also \textit{Eoannou}, supra note 89, at 1 (stating that UBS conducted sample restoration on five backup tapes, out of possible ninety-four backup tapes, chosen by Zubulake).
\item \textsuperscript{130.} See \textit{Zubulake II}, 216 F.R.D. 280, 284-89, 91 (S.D.N.Y. 2003) (applying cost-shifting analysis to facts and containing Judge Scheindlin's final holding on Zubulake discovery dispute); see also \textit{Eoannou}, supra note 89, at 1 (asserting that \textit{Zubulake II} court shifted twenty-five percent of discovery costs to Zubulake because Zubulake was not able to show that data requested would show direct evidence of discrimination).
\end{itemize}
is an analysis of the May 13, 2002 opinion and the July 24, 2003 opinion.131

B. Zubulake I: Setting Forth the Three-Step Analysis

Zubulake I provides guidance in electronic discovery cost-allocation disputes by establishing a three-step analysis for courts to perform when faced with whether to shift electronic discovery costs.132 The first step addresses whether courts should even consider cost shifting.133 The second step establishes the necessity of production by revealing the subject matter of the information contained on the electronic storage device and the time and cost required to produce the requested information.134 The third step is a cost-shifting analysis developed to help courts weigh the different factors involved in electronic discovery disputes.135

1. Considering Cost Shifting

In insisting that an examination of the accessibility of the requested data should be the courts’ focus in electronic discovery cost-shifting disputes, the Zubulake I court revolutionized how scholars and practitioners

131. For a further discussion of Zubulake I, see infra notes 132-70 and accompanying text. For a further discussion of Zubulake II, see infra notes 171-73 and accompanying text.


133. See Zubulake I, 217 F.R.D. at 318, 320 (explaining that cost shifting is only appropriate for courts to consider when production of electronic discovery causes undue burden or expense on producing party and that cost shifting is not appropriate when requested data is accessible because producing data stored in accessible formats is quick and inexpensive); Virginia Llewellyn, Shifting Costs: “Zubulake” Helps Clarify Who Pays for What in E-discovery, N.Y. L.J. 1, June 17, 2003, at http://www.applieddiscovery.com/NewsEvents/PDFs/200306nylj-Zubulake.pdf (recognizing that Zubulake I held that courts should consider cost shifting only when requested data is stored in inaccessible format).

134. See Zubulake I, 217 F.R.D. at 324 (requiring producing party to conduct sample of requested inaccessible data in order for court to know cost of production, time spent on restoration and subject matter of data stored when performing cost-shifting analysis); Thomas Y. Allman, A Preservation Safe Harbor in E-discovery, ANTITRUST SOURCE 2, July 2003, available at http://www.abanet.org/antitrust/source/july03/allman.pdf (acknowledging that sampling techniques determine whether production is warranted); Arkfeld, supra note 132 (stating that fact-intensive nature of cost-shifting analysis necessitates having producing party to conduct small sample of inaccessible data).

think about electronic discovery. The simple fact that electronically stored information is requested during discovery no longer justifies courts in holding that discovery will impose an undue burden or expense on the producing party. In Zubulake I, the court outlined when it is easy and inexpensive for parties to search electronic databases and produce electronically stored information.

The Zubulake I court listed and defined five types of electronic storage media in descending order of accessibility. The most accessible category is "active, online data," which is stored on magnetic disks and used when information is being "created or received and processed." The next accessible storage media is "near-line data," which is usually stored on removable media like optical disks or magnetic tape. The final category of accessible media, "offline storage/archives," is data stored on removable media that can be placed on a shelf for archival or disaster relief purposes. "Backup tapes" are inaccessible media that contain vast amounts of compressed data stored according to the computer's structure, making

136. See Allman, supra note 134, at 3 (stating "underlying considerations" for cost shifting are now clear because Zubulake court has made accessibility of requested data main distinction in electronic discovery); Llewellyn, supra note 133, at 1 (maintaining that Zubulake I decision "compels a fundamental shift in how attorneys, litigants, and the courts must approach electronic discovery" because main focus of analysis is whether requested electronically stored data is in accessible or inaccessible form).

137. See Zubulake I, 217 F.R.D. at 318 (explaining that whether discovery of electronically stored data inflicts undue burden or expense on producing party depends on whether information is stored in accessible or inaccessible format); Llewellyn, supra note 133, at 2 (asserting that Zubulake I court questioned other courts, which have held that requesting party imposed undue burden or expense on producing party just because electronic data discovery was involved).

138. See Zubulake I, 217 F.R.D. at 318-20 (proposing that electronic information is cheaper and usually easier to produce than paper documents). Zubulake I outlined, from most accessible to least accessible, five categories of electronically stored data. See id. (explaining which categories of electronically stored data are accessible in order to provide guidance on when courts should consider cost shifting); Llewellyn, supra note 133, at 1 (summarizing Zubulake I court's categories of electronically stored data); S.D.N.Y. Revises Rowe Standards, supra note 9, at 6 (listing categories of electronic storage mentioned in Zubulake I).

139. See Zubulake I, 217 F.R.D. at 318-19 (listing and defining five categories of storage); S.D.N.Y. Revises Rowe Standards, supra note 9, at 6 (registering categories of electronic storage "from most to least accessible, as follows: active, online data; nearline data; offline storage/archives, backup tapes, and erased, fragmented or damaged data. Active, online and nearline data are considered accessible and backups and erased, fragmented, or damaged data are considered inaccessible").

140. See Zubulake I, 217 F.R.D. at 318-19 (defining active, online data); see also Llewellyn, supra note 133, at 1 (recognizing that examples of active, online data include hard drives or active network servers).

141. See Zubulake I, 217 F.R.D. at 318-19 (stating nearline data "consists of a robotic storage device (robotic library) that houses removable media, uses robotic arms to access the media, and uses multiple read/write devices to store and retrieve records"); see also Llewellyn, supra note 133, at 1 (explaining nearline data).

142. See Zubulake I, 217 F.R.D. at 318-19 (maintaining that offline storage/archives is "removable optical disk or magnetic tape media" that is traditionally
it difficult to restore individual documents or files. 143 “Erased, fragmented or damaged data” is the least accessible category because, instead of being deleted as the user anticipated, this information sits in the free space of the computer’s memory until partially or fully overwritten by other files. 144

Because accessible data does not need to be manipulated in order to be used, the court in Zubulake I found that cost shifting is always inappropriate to consider when the requested information is accessible. 145 In contrast, the court found that the production of inaccessible data could possibly inflict undue burden or expense on a producing party because it is unable to be used without restoration or manipulation. 146 Therefore, it is only appropriate for courts to conduct a cost-shifting analysis when the disputed production includes inaccessible, electronically stored data. 147

2. Necessity of the Requested Production

The second step of Zubulake I’s three-step analysis involves courts ordering producing parties to conduct a sample restoration before determining whether the requested production is necessary. 148 The “test run” is necessary to gain information pertinent to the cost-shifting analysis because, in most cases, discovery has not commenced and the electronically stored materials have not been produced. 149 Zubulake I followed McPeek v. Ashcroft 150 in ordering a “test run,” because both courts found that the cost-shifting test must be applied to facts acquired on the specific production used to make copies of records in case of emergencies); see also Llewellyn, supra note 133, at 1 (summarizing definition of offline storage/archives).

143. See Zubulake I, 217 F.R.D. at 319 (stating that disadvantage of backup tapes is that to read specific block of data, must read all preceding blocks); Llewellyn, supra note 133, at 1 (asserting data on backup tapes is not easily accessible because does not parallel office filing system).

144. See Zubulake I, 217 F.R.D. at 319 (explaining that “erased, fragmented or damaged data” can only be retrieved after “significant processing”).

145. See id. at 320 (maintaining that accessible data is stored in “readily usable format” that does not need to be restored or manipulated). Zubulake I held that it is inappropriate for courts to consider cost shifting when the requested information is stored in an accessible format. See id.

146. See id. (detailing restoration and reconstruction process used to make inaccessible data usable).

147. See id. (stating it is appropriate for courts to consider cost shifting when requested data is inaccessible because producing inaccessible information is costly and time-consuming).

148. See id. at 324 (requiring producing party to conduct sample restoration before conducting cost-shifting analysis); see also Arkfeld, supra note 132 (maintaining sample restoration is “sensible approach”).

149. See Zubulake I, 217 F.R.D. at 323 (recognizing that proof of requested discovery revealing information critical to requesting party’s case rarely exists before discovery is conducted).

tion at issue.\footnote{151} Although \textit{McPeek} proposed the "test run" to courts in 2001 as an alternative to basing the cost-shifting analysis on assumptions about the information likely to be attained in production, time required to retrieve data and cost of complying with the request, \textit{Rowe} did not include the practice as part of its analysis.\footnote{152}

3. \textit{The Revised Rowe} Test for Cost Shifting

To eliminate the tendency to favor shifting costs to the requesting party, \textit{Zubulake I} revised the eight-factor \textit{Rowe} cost-shifting test.\footnote{153} According to \textit{Zubulake I}, there are three reasons why the \textit{Rowe} test usually overcomes the presumption that the producing party bears its own discovery costs.\footnote{154}

First, courts have not always applied the \textit{Rowe} test with knowledge of the full factual record of production.\footnote{155} To remedy this problem, \textit{Zubulake I} followed \textit{McPeek} and included sample restoration of the evidence as part of the three-prong analysis.\footnote{156}

\begin{itemize}
\item \footnote{151} See \textit{Zubulake I}, 217 F.R.D. at 323 (insisting "test run" established in \textit{McPeek} is best solution for preventing courts from basing cost-shifting analysis on assumptions). The \textit{Zubulake I} court maintained that the cost-shifting test is "fact-intensive," and requires a sample restoration to inform courts as to the details of production before holdings can be issued. \textit{Id.} at 324; see also \textit{Llewellyn}, supra note 133, at 2 (stating \textit{Zubulake I} court needed sample in order to fairly apply cost-shifting test).
\item \footnote{152} See generally \textit{Zubulake I}, 217 F.R.D. at 323 (explaining that all courts applying \textit{Rowe} test have ordered cost shifting because they assumed relevant information would not be found in requested discovery). \textit{Zubulake I} quoted \textit{Rowe} as guessing about the "probability" that the requested discovery could reveal critical information. \textit{Id.} (quoting \textit{Rowe}, 205 F.R.D. at 430); see also \textit{McPeek}, 202 F.R.D. at 35 (ordering producing party to perform test run and record time and money spent and subject matter of information retrieved).
\item \footnote{153} See \textit{Zubulake I}, 217 F.R.D. at 320 (accusing \textit{Rowe} factors of favoring cost shifting). The new seven-factor \textit{Zubulake} test devised from the factors set forth in \textit{Rowe} is:

\begin{enumerate}
\item The extent to which the request is specifically tailored to discover relevant information;
\item The availability of such information from other sources;
\item The total cost of production, compared to the amount in controversy;
\item The total cost of production, compared to the resources available to each party;
\item The relative ability of each party to control costs and its incentive to do so;
\item The importance of the issues at stake in litigation; and
\item The relative benefits to the parties of obtaining the information.
\end{enumerate}
\textit{Id.} at 322; see also \textit{Eoannou}, supra note 89, at 2 (stating \textit{Zubulake} test intended to simplify application of Rule 26(b)(2) test to electronic data and reinforce traditional presumption that producing party pays for own discovery).
\item \footnote{154} See \textit{Zubulake I}, 217 F.R.D. at 320-21 (listing three reasons).
\item \footnote{155} See \textit{id.} (stating lack of facts as third reason).
\item \footnote{156} For a further discussion of sample restoration as a means of developing a full factual record for application of the cost-shifting test, see supra notes 148-52 and accompanying text.
\end{itemize}
Second, the Rowe test automatically favors cost shifting to the requesting party because it is incomplete. Rowe omits two factors listed in Rule 26(b)(2)'s proportionality test and includes two factors that should be eliminated. Zubulake I modified the Rowe test to include analysis of the "amount in controversy" and the "importance of the issues at stake in litigation" because these two factors help to balance the Rowe test's tendency to favor cost shifting. They neutralize the test by countering the "total cost associated with production," an often large amount that favors cost shifting when considered alone.

Zubulake I revised the Rowe test so that not only is the "total cost of production" considered in relation to the amount of money at stake in the litigation, but it is also compared with the wealth of each party. Furthermore, Zubulake I's new cost-shifting test eliminates two of Rowe's factors. First, Zubulake I combined the first two factors of the Rowe test into one factor that scrutinizes whether the scope of the discovery request is appropriately narrowed to reveal only critical information. Second, Zubulake I eliminated as a factor consideration of why the responding party stores the requested data because the court found that the reason information is retained is not determinative of the data's accessibility, which is the basis of the cost-shifting analysis.

The third reason why the Rowe test favors cost shifting, according to Zubulake I, is that Rowe weighed each factor equally, treating the factors as a checklist instead of a guide. To guarantee that the focus of the cost-shifting analysis remains on whether discovery imposes an undue burden on the producing party, Zubulake I provides instructions for applying the factors. Whether the information is available from other sources and whether the discovery request is tailored to find relevant information are the most important factors because they determine the fairness of order-

158. See id. at 320-22 (revising Rowe test).
159. Id. at 320-21 (adding two factors stated in Rule 26(b) to neutralize Rowe test); see also Fed. R. Civ. P. 26(b)(2)(iii) (stating proportionality test).
160. Zubulake I, 217 F.R.D. at 321 (implying discovery may not seem unduly burdensome if courts compare cost of production to amount in controversy).
161. See id. (comparing cost of production with amount in controversy and wealth of parties).
162. See id. at 321-22 (eliminating two Rowe factors).
163. See id. at 321 (combining first and second factors in Rowe test because they are duplicative).
164. See id. at 321-22 (asserting reason for data retention is unimportant because accessibility of data determines whether it should be produced).
165. See id. at 320-21 (listing problems with Rowe). Zubulake I found that many courts tend to treat multifactor tests like checklists. See id. at 322.
166. See id. at 322-23 (stating mechanical application of test ignores test’s purpose of determining burden).
ing the producing party to pay for discovery. Each party's ability and incentive to control costs, the total cost of production compared to the amount in controversy and the total cost of production compared to the wealth of each party rank second in importance. Zubulake I states that the sixth factor, the significance of the litigation, has the ability to predominate over the others. Finally, the seventh factor, assessing which party benefits more from production, is least important because discovery generally favors the requesting party.

C. Zubulake II: Applying the Seven-Factor Test

After applying the new cost-shifting test to the results of the sample restoration, the Zubulake II court shifted twenty-five percent of the cost of restoring and searching the backup tapes to Zubulake. Although four factors weighed against cost shifting, two factors were neutral and only one factor favored shifting costs, minimal cost shifting was ordered because Zubulake could not prove that the requested data would reveal direct evidence of discrimination against her. Had the Zubulake II court used the factors as a checklist, rather than a guide, when determining the burden imposed by discovery, no costs would have been shifted.

VI. Zubulake's Impact on the Federal Rules

Zubulake has an impact on the application and perception of the Rules by courts, litigants and scholars engaged in the legal debate over the adequacy of the Rules in providing courts and litigants with guidance in

167. See id. at 323 (explaining first two factors are most important because they compose marginal utility test).
168. See id. (ranking factors).
169. See id. (stating sixth factor stands alone in importance and is rarely used).
170. See id. (asserting that when production benefits both parties, there is less reason to shift costs).
171. See Zubulake II, 216 F.R.D. 280, 284-89 (S.D.N.Y. 2003) (analyzing facts under seven-factor test). Because the search's ability to reveal critical information was speculative, the court shifted twenty-five percent of the discovery costs to prevent undue burden or expense on UBS. See id. at 289 (explaining courts may exercise discretion in determining amount of cost to be shifted).
172. See id. at 289 (listing results of test). Although the discovery request was tailored to find relevant information, the information could not be attained from another source, the total cost of production was not disproportionate to the case's value, UBS had more resources to fund production than Zubulake, the parties' ability and incentive to control costs were equal and the importance of the issue at stake was found to be neutral, the court shifted costs because Zubulake was unable to show that the request would reveal direct evidence of discrimination and stood to gain more from production than UBS. See id. at 284-89 (conducting analysis under seven-factor test and concluding that "Zubulake has not been able to show that there is indispensable evidence on those backup tapes").
173. See id. at 289 (admitting use of factors as guide).
electronic discovery cost-shifting disputes. Zubulake affects perceptions of the Rules because it validates the view that the Rules are as pertinent to electronic discovery as to paper discovery. Zubulake influences how the Rules are applied by interpreting the provisions in light of the distinctions between electronic evidence and paper evidence. Yet, for all of Zubulake's strengths in developing a three-step analysis specifically designed for electronic evidence and providing a seven-factor test rooted in the Rules for examining cost allocation in electronic discovery disputes, the decision will not be an effective guide to courts and practitioners because it vaguely delineates the weight of each factor in determining the extent to which costs should be shifted.

The Zubulake court shows that the Rules are adequate in providing guidance in electronic discovery disputes over cost allocation because it adopted a cost-shifting test that emphasizes the unique nature of electronic evidence, where the "first three groups" of factors correspond to the three factors listed in Rule 26. Therefore, the first six of the seven Zubulake factors came from the Rules. The last factor, which has little basis in the Rules, was deemed the least important in the analysis.

Zubulake influences the application of the Rules to electronic data by demarcating the inaccessibility of evidence as the point where cost shifting

174. For a discussion of Zubulake's impact on the electronic discovery debate, see supra note 136-38 and infra notes 175-93 and accompanying text.

175. For a discussion of Zubulake's treatment of the Rules, see supra notes 157-60 and infra notes 178-80 and accompanying text.

176. For a discussion of the distinctions made by Zubulake I, see supra notes 136-70 and infra notes 191-93 and accompanying text. Zubulake I distinguished inaccessible data from accessible data in order to define an exception to the traditional presumption that the producing party pays for discovery. The burden and expense of producing inaccessible data was held to be an exception worthy of the cost-shifting analysis.

177. For a detailed discussion of Zubulake I's three-step analysis, see supra notes 132-70 and accompanying text.


179. See id. (discussing first six factors of test as three groups that correspond to Rule 26(b)(2)(iii)); S.D.N.Y. Revises Rowe Standards, supra note 9, at 1 (acknowledging that seven-part test "relies heavily on the traditional discovery tenets embodied in the Federal Rules").

180. See Zubulake I, 217 F.R.D. at 323 (stating party benefiting more from production is least important factor because it is generally assumed requesting party benefits). The court stated that this factor is only important when production benefits the responding party, because then it may weigh against cost shifting. See id. (noting production favoring responding party is unusual). In applying this factor in Zubulake II, however, the court found that it favored cost shifting because only the requesting party benefited from production. See Zubulake II, 216 F.R.D. 280, 289 (S.D.N.Y. 2003). Zubulake II's application of the factor is inconsistent with the hierarchy of importance constructed in Zubulake I. See id. (explaining seventh factor is only factor favoring cost shifting, but still shifting twenty-five percent of costs to Zubulake).
can be considered. According to Zubulake, courts cannot grant protective orders to shift costs if the data is accessible. Also, Zubulake shows that traditional discovery concerns, such as the amount in controversy and the importance of the issues at stake, are also relevant in the discovery of electronic data.

Zubulake’s cost-shifting analysis is weakened, however, by the court’s final application of the factors in Zubulake II. In Zubulake I, the court stated that the factors were a guide, not a checklist, in determining whether discovery imposes an undue burden, and the factors were listed in a hierarchy of importance. After applying the factors to the results of the sample in Zubulake II, the court stated that the factors weighed against cost shifting, but ordered cost shifting because the first factor, the possibility that production will reveal critical information, only slightly weighed against shifting costs. The court reneged on its original statement that the first factor weighed against cost shifting and gave the unconvincing excuse that the test is meant only to be a guide. Implicit in allowing the first factor to determine cost shifting is the use of the other factors as mere aids in assessing the amount that should be shifted. This model was not presented in

181. For a discussion of when courts should consider cost shifting, see supra notes 136-47 and accompanying text.

182. See Zubulake I, 217 F.R.D. at 320 (stating when courts should consider cost shifting).

183. See id. at 320-21 (adding these factors to Rowe).

184. See Zubulake II, 216 F.R.D. at 284-89 (applying seven-factor test to results of sample).

185. See Zubulake I, 217 F.R.D. at 322-23 (listing order of importance for groups of factors).

186. See Zubulake II, 216 F.R.D. at 289 (ordering cost shifting despite results of test).

187. See id. (stating first four factors weighed against shifting costs but ordering cost shifting because first factor only slightly disfavored cost shifting).

188. See id. (maintaining that only seventh factor favored cost shifting). Zubulake I stated that the seventh factor is the least important factor; however, costs were shifted in Zubulake II where the seventh factor was the only factor completely favoring cost shifting. See id. (explaining that first six factors either cut against cost shifting or are neutral). The court stated that factor one slightly tipped against cost shifting, but then ignored this assessment by determining that the factor found costs should be shifted. See id. (showing court’s use of discretion). The degree to which a factor favors cost shifting was never stated as an important consideration in the cost-shifting analysis. See Zubulake I, 217 F.R.D. at 320-23 (outlining cost-shifting analysis).

189. See Zubulake II, 216 F.R.D. at 289 (using only first factor to determine whether costs should be shifted while determining percentage to shift by weighing entire seven factors as checklist). In stating, “because the seven factor test requires that UBS pay the lion’s share, the percentage assigned to Zubulake must be less than fifty percent,” the court used the seven-factor test as a checklist, not a guide, in determining the financial amount to shift.
Zubulake I, but it was proposed and advanced by the court's decision in Zubulake II.\textsuperscript{190}

Although Zubulake proves that the Rules adequately guide courts in electronic discovery cost-shifting disputes, Zubulake confuses the application of the Rules by inconsistently applying its vague hierarchy of importance in balancing the factors.\textsuperscript{191} Zubulake's three-step cost-shifting analysis overshadows this weakness by synthesizing the Rules with the intricacies of electronic evidence.\textsuperscript{192} Nevertheless, until courts are provided with more guidance on how to use the factors in determining whether to shift costs, cost-shifting decisions will be solely within each court's discretion.\textsuperscript{193}

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\textsuperscript{190.} See id. (using fact that seven factors, as checklist, weigh against cost shifting to determine percentage of costs to be shifted to Zubulake). The use of the seven-factor test as a checklist was chastised in Zubulake I, but in Zubulake II, the court used the factors as a checklist, not to determine whether costs should be shifted, but instead to determine how much of the costs should be shifted. See Zubulake I, 217 F.R.D. at 322-23 (criticizing use of multifactor test as checklist). When to use the factors as a checklist appears discretionary, for the court contradicted itself in applying the factors as a checklist in Zubulake II after criticizing use of the factors in this way in Zubulake I. See Zubulake II, 216 F.R.D. at 289 (using seven factors as checklist when deciding what percentage of costs to shift to Zubulake). In Zubulake II, the court repeatedly justified shifting costs, despite the contrary conclusion revealed by the factors, by stating that the new test is only a guide. See id. (justifying cost shifting in light of assessment). See generally Zubulake II, 216 F.R.D. at 289 (using only first factor as guide in determining whether costs should be shifted, but using seven factors as checklist when deciding percentage of costs to shift).

\textsuperscript{191.} See id. (applying factors inconsistently).

\textsuperscript{192.} For a discussion of the three-part analysis, see supra notes 132-70 and accompanying text.

\textsuperscript{193.} See Zubulake I, 217 F.R.D. at 322-23 (affording weight to groups of factors).