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Moore's Federal Practice: Discovery of Electronically Stored Information

Volume 7: Analysis: Civil Rules 30-37A
Chapter 37A Discovery of Electronically Stored Information

7-37A Moore's Federal Practice: Electronic Discovery 37A.syn

AUTHOR: by John K. Rabiej

§ 37A.syn Synopsis to Chapter 37A: Discovery of Electronically Stored Information

by John K. Rabiej n*

FOOTNOTES:

(n1)Footnote *. John K. Rabiej is Chief of the Rules Committee Support Office, Administrative Office of the United States Courts. His office staffs the Advisory Committees on Appellate, Bankruptcy, Civil, Criminal, and Evidence Rules and the Committee on Rules of Practice and Procedure of the Judicial Conference of the United States. Mr. Rabiej acknowledges the contribution of Kristin Schwaighart, a member of the California Bar.

Moore's Federal Practice: Discovery of Electronically Stored Information

Volume 7: Analysis: Civil Rules 30-37A
Chapter 37A Discovery of Electronically Stored Information

7-37A Moore's Federal Practice: Electronic Discovery Scope

AUTHOR: by John K. Rabiej

Scope

by John K. Rabiej n* **Scope of Chapter**

This chapter analyzes issues arising from the discovery of electronically stored and other electronic records. Part A of the chapter begins with a brief overview of the special characteristics of electronic information that raise problematic issues when applying traditional discovery principles and standards to a new setting. Part B focuses on the parties' discovery obligations. Part C briefly discusses the procedures governing discovery of electronic records. Part D describes limits on discovery of electronic records, highlighting Rule 26's overarching requirement that discovery be reasonable by weighing its likely benefits against its costs and burdens. Part E addresses production requirements governing electronically stored information. Part F discusses sanctions for discovery violations, including sanctions for destroying relevant electronic records.

Much of the chapter applies traditional discovery principles to a new setting, with citations to developing case law. A comprehensive discussion of the underlying traditional discovery issues appears in *Ch. 16, Pretrial Conferences; Scheduling; Management* ; *Ch. 26, Duty to Disclose; General Provisions Governing Discovery* ; *Ch. 33, Interrogatories to Parties* ; *Ch. 34, Producing Documents, Electronically Stored Information, and Tangible Things, or Entering onto Land, for Inspection and Other Purposes* ; and *Ch. 37, Failure to Make Disclosures or to Cooperate in Discovery; Sanctions.*

FOOTNOTES:
(n2)Footnote *. John K. Rabiej is Chief of the Rules Committee Support Office, Administrative Office of the United States Courts. His office staffs the Advisory Committees on Appellate, Bankruptcy, Civil, Criminal, and Evidence Rules and the Committee on Rules of Practice and Procedure of the Judicial Conference of the United States. Mr. Rabiej acknowledges the contribution of Kristin Schwaighart, a member of the California Bar.

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Moore's Federal Practice: Discovery of Electronically Stored Information

Volume 7: Analysis: Civil Rules 30-37A
Chapter 37A Discovery of Electronically Stored Information
A. DESCRIPTION OF ELECTRONICALLY STORED INFORMATION

7-37A Moore's Federal Practice: Electronic Discovery § 37A.01

AUTHOR: by John K. Rabiej

§ 37A.01 Electronically Stored Information Is Distinct From Discovery of Paper-Based Information

[1] Federal Rules of Civil Procedure Apply to Electronically Stored Information

Technology has created tremendous opportunities for enhanced fact finding in litigation. The virtually limitless potential of that same technology to store and manage electronic documents poses serious challenges to the bench and bar in applying traditional discovery principles to electronically stored records.

A basic understanding of the new technology's special characteristics is indispensable in applying the federal rules to electronic information.

Many of the same issues that are encountered in traditional discovery of paper documents arise in the discovery of electronically stored information. Until the discovery-related rules were amended in 2006, applying the Federal Rules of Civil Procedure to electronically stored information was not always a neat fit because most rules had not been drafted with electronic information in mind. Although the federal rules provided an adequate framework within which to resolve many issues arising from discovery of electronically stored information, n1 the developing case law was not always consistent. To provide greater uniformity, the 2006 amendments clarified procedures, modernized language, and directly addressed specific issues arising from discovery of electronically stored information (*see § 37A.11[1]*). For further analysis of the reasons behind the 2006 electronic discovery rule changes, see Scheindlin, *E-Discovery: The Newly Amended Federal Rules of Civil Procedure*, Part I., *Background--The Need for the New Rules* (Matthew Bender 2006).

Although computers have been in operation for several decades, the development of pertinent case law governing the subject matter has been slow, sporadic, and uneven. Judicial decisions in this area are particularly fact driven. Drawing a general inference or conclusion from a limited number of cases and applying it to other cases is not without risk. However, a growing awareness in the bench and bar of the value of electronically stored information is accelerating the development of a larger body of law and precedent. n2 In addition, the application of the 2006 electronic discovery rule amendments will raise the consciousness of the bench and bar about these issues. On the other hand, it is doubtful

whether the development of a jurisprudence will ever keep pace with new inventions and technological advancements. n2.1 Practitioners will continue to be forced to apply established principles and traditional concepts to new settings.

[2] General Differences Between Paper-Based and Electronically Stored Documents

The vast data that can be stored in a computer poses significant discovery problems. Identifying and locating relevant information among the mass of irrelevant information is particularly challenging. Similar problems can arise in traditional discovery when relevant information is sought from a warehouse containing paper files. However, electronically stored information is distinct from paper files in several important respects.

First, electronically stored documents contain information that is not contained within its four corners. A computer-generated document often contains metadata, which does not appear in a printed paper copy (*see § 37A.03[1]*).

Second, "deleted" computer-generated documents, unlike shredded paper documents in most cases, are not immediately, irretrievably lost, at least for a potentially long time. Recovering deleted files is often possible, although the process may be time-consuming and costly (*see § 37A.03[3]*). n3

Third, a significant proportion of documents is created electronically and is never downloaded and converted into a hard copy printout (*see §§ 37A.03[1]*; *37A.34[1][c]*).

Fourth, the biggest difference between electronically stored files and hard-copy paper files is the sheer magnitude of data that can be stored in computers. Locating relevant files among many potential computers, retrieving non-privileged relevant files, and discarding duplicates of files that proliferate in a computer system are significantly larger tasks than those involved with paper files (*see § 37A.34*). n4

Unless reasonably limited, discovery requests can be overly broad and may lead to production of too many electronically stored documents. Effective search engines and word searches can ameliorate some of the burden in locating relevant information. Nevertheless, the volume of data can overwhelm the attorneys reviewing discovery material and lead to absurd predicaments in which both the producing and requesting parties are unaware of relevant electronic evidence produced during discovery. n5 Moreover, not all electronically stored documents can be searched by key words found within the four corners of a document. For example, some scanned documents may be searched only by key words found within an abstract or index prepared for each imaged document (*see § 37A.02[4]*).

The alternative of releasing all electronically stored information in response to a discovery request risks unnecessary disclosure of privileged material, such as work product or attorney-client privileged documents (*see § 37A.32[5]*). It may also overwhelm the ability of the requesting party to sort through enormous amounts of dumped computer data--with very little of it relevant or useful (*see § 37A.10[4]*).

For further analysis of the differences between electronic and paper discovery, see Scheindlin, *E-Discovery: The Newly Amended Federal Rules of Civil Procedure*, Part I., *Background--The Need for the New Rules* (Matthew Bender 2006).

[3] Chapter Terminology

This chapter uses the terms "electronically stored information" and "electronically stored documents" interchangeably to refer to all types of evidence that may be found on a computer and other electronic media. n6 As used in this chapter, "electronic information" includes electronically stored information.

The term "email" as used in this chapter typically refers only to electronic messages appearing on a computer screen, PDA, cell phone, or similar device, and excludes other communications sent by electronic means, including fax, telex,

or video conferencing (*see § 37A.02[3]*).

Legal Topics:

For related research and practice materials, see the following legal topics:
Civil ProcedureDiscoveryGeneral OverviewCivil ProcedureDiscoveryElectronic DiscoveryGeneral OverviewComputer & Internet LawCivil ActionsGeneral OverviewComputer & Internet LawPrivacy & SecurityAttorney-Client Communications

FOOTNOTES:
(n1)Footnote 1. **Traditional rules adequate for electronic discovery issues.** *See Jones v. Goord, 2002 U.S. Dist. LEXIS 8707, at *17-18 (S.D.N.Y. May 15, 2002)* ("The rules cited above [Federal Rules of Civil Procedure], albeit for the most part drafted in an earlier era, deal perfectly well with problems occasioned by the discovery of electronic 'documents' ").

(n2)Footnote 2. **Growing body of electronically stored information precedent developing.** *See Bills v. Kennecott Corp., 108 F.R.D. 459, 462 (D. Utah 1985)* ("Computers have become so commonplace that most court battles now involve discovery of some type of computer-stored information.").

(n3)Footnote 2.1. **Law governing discovery of electronically stored information still developing.** *See Dahl v. Bain Capital Partners, LLC, 2009 U.S. Dist. LEXIS 52551, at *3 (D. Mass. June 22, 2009)* ("proper handling of electronic discovery is a new and developing area of law practice ... court appreciates that it treads in what still are largely unknown waters").

(n4)Footnote 3. *See generally* Rosenbaum, *In Defense of the Delete Key,* 3 Green Bag 2d. 393, 393 (Summer 2000) ("The deception is pure, and inheres in the key's name: When the Delete key is used, nothing is deleted").

(n5)Footnote 4. **Search of computer-generated documents can be burdensome.** *See In re Brand Name Prescription Drugs Antitrust Litig., 1995 U.S. Dist. LEXIS 8281, at *2 (N.D. Ill. June 13, 1995)* (search required of 30 million pages of email stored on backup tapes); *see generally* Rosenbaum, *In Defense of the Delete Key, 3 Green Bag 2d. 393, 393 (Summer 2000)* ("This durability of computerized material compounds itself, because once a computer file is generated--let alone disseminated--internal and external copies proliferate.").

(n6)Footnote 5. **Electronically stored information can overwhelm parties.** *See Danis v. USN Communs., Inc., 2000 U.S. Dist. LEXIS 16900, at *14, *58 (N.D. Ill. Oct. 20, 2000)* (parties squeezed too much discovery--involving over one million hard copy documents, computer tapes containing countless additional documents, and backup tapes, and multiple computer systems--in the six months available to them and were unable to master the types of documents generated by defendant).

(n7)Footnote 6. *See Fed. R. Civ. P. 34(a)(1)(A), (b)(2)(E).*

Volume 7: Analysis: Civil Rules 30-37A
Chapter 37A Discovery of Electronically Stored Information
A. DESCRIPTION OF ELECTRONICALLY STORED INFORMATION

7-37A Moore's Federal Practice: Electronic Discovery § 37A.02

AUTHOR: by John K. Rabiej

§ 37A.02 Technological Innovations

[1] Use of Computers Expanding

The first digital computer was invented in 1939 and has spawned waves of technological innovations engulfing virtually every aspect of personal and business lives. Bulky computers initially stored the data, but they have been replaced with more powerful and sleek mobile units. This trend in computer downsizing is driven by constant advances in miniaturization. Small devices, like "thumb drives," now store enormous amounts of data. The steady improvement of computers has been marked by several key enhancements: In 1947 Bell Laboratories invented transistors, replacing vacuum tubes; in 1951 magnetic tapes were introduced as a storage media; in the late 1960's and 1970's integrated circuits were produced in silicon chips; and in the 1980's and 1990's further miniaturization markedly increased the density of computer chips. n1 The steady stream of technological advancements has vastly expanded the capacity and increased the speed of computers.

Computers are household items in most American homes, components in most electrical machinery and equipment, and essential tools in American businesses. n2 Individuals and businesses are increasingly relying on computers to conduct business and transmit personal and business messages. n3 The records of these communications and transactions are generated and stored in computers. Estimates suggest that about one-third of business data in the United States is contained solely in computer form. Email traffic is expanding exponentially (*see § 37A.04*). Documents are prepared on desktop word-processing applications, spread-sheets are composed on special database applications, and email messages now serve as a substitute for telephone communication. All this information is stored in various electronic and magnetic media, which provide vast resources that can be mined in discovery (*see* [2], *below*). Computerized data is so pervasive that discovery battles involving electronically stored information are increasingly common in litigation. n4

The practice of law daily confronts the many opportunities and challenges posed by technology. Not surprisingly, courts and the legal profession are adapting to the new changes at an uneven pace (*see § 37A.01[1]*). Some judges and lawyers are embracing the new opportunities, while others are only slowly and begrudgingly beginning to learn to work with this technology. n5 A basic knowledge of the rapid technological advancements in communication, and the storage,

presentation, and management of electronically stored information, is becoming essential to the effective practice of law.

[2] Storage Media

Computers have reduced the need for storage of hard-copy files and greatly increased the speed of retrieving documents. Data in computers is contained on hard disks and can be stored on various media, such as floppy diskettes, CD-ROMs (Compact Disc Read Only Memory), laser discs, thumb drives, zip drives, or DVDs (Digital Video Disc). A CD-ROM can hold approximately 325,000 pages of text. n6 A laser disc can hold up to 108,000 documents and can be used to play a videotaped deposition with audio or run computer-generated graphics or animations. DVDs offer tremendous enhancement of storage capability, versatility, and speed. A DVD can hold up to 4.7 gigabytes of data, or the equivalent of 7 CD-ROMs.

Unlike paper files, which are indexed and grouped by category in cabinets for record-keeping purposes, electronically stored information is often stored haphazardly in large directories. The ability of a computerized word-search engine to identify individual files eliminates the need to index files. However, despite the advantages of a word-search engine, the search of a large computer system with many individual components can be time consuming and expensive. n7

Businesses with large databases are increasingly using internet-based hosting services to provide inexpensive storage for electronically stored information. Storing the data on the internet is expected to reduce storage costs significantly. The trend towards off-site storage has been called "cloud computing." n7.1

[3] Internet

The power of individual computers is magnified by the Internet, which connects computers and their databases around the world. Information located anywhere on the world-wide Internet computer network can be instantaneously accessed, retrieved, and downloaded. Information posted on web sites can be relevant to litigation, but pose unique authentication issues and significant hearsay problems. n8

Web sites comprise three types of information: information posted on the web site by the site owner; information posted by others with the site owner's permission; and information posted by others without the site owner's permission. n9 Authentication of web site information can be difficult, depending on the type of web site and the type of information at issue. n10 Government web sites that publish official documents typically do not present authentication problems as official government reports are self-authenticating. n11 As to non-official sites, a witness can ordinarily testify to what he or she observed on the site. Absent a challenge as to its trustworthiness, this testimony is ordinarily sufficient for authentication purposes. n12 However, the site owner may challenge this testimony factually, or may proffer evidence to show that the site owner did not place the information on the site. n13

Depending on the purpose for which the web site evidence is offered, hearsay issues may arise. If information from a web site is offered for the truth of its content, the information must satisfy an exception to the hearsay rule. n14

The Seventh Circuit has rejected the argument that web site postings constitute a business record n15 of the Internet service provider (e.g., AOL or Gmail), concluding that the providers are merely conduits: In this case, the providers did not post the challenged information on the web sites; no evidence suggested that the providers even monitored the contents of the web sites; and the fact that the providers could retrieve postings did not convert that material into a business record. n16

HTML is a markup language that helps define the appearance of a web site page. HTML pages may also include visual images of evidence. When relevant, HTML codes are admissible, and are sufficiently similar to photographs as to make the criteria for admission of photographs applicable to the admission of HTML codes. n17

The Internet also serves as a vehicle for the transmission of electronic messages (emails). Documents prepared on a computer word-processing software program or other data can be attached to an email message and transmitted via the Internet. n18 Email evidence presents unique authentication n19 and hearsay issues, n20 and potentially enormous retrieval costs (*see § 37A.04*). For further discussion of web site information issues, see Joseph, *Internet Evidence*, Nat. L.J., June 11, 2001 and Joseph, *Internet Evidence II*, Nat. L.J., July 30, 2001.

[4] Scanner

Although many documents are created and exist only in a computer, other documents are hard copy paper documents that can be converted into digital information by scanning them into a computer. Scanning equipment converts and stores paper hard-copy documents into computer databases that can be retrieved instantaneously. A scanned document may be: (1) "imaged," or (2) duplicated using an Optical Conversion Recognition (OCR) process.

A scanned document that is "imaged" is analogous to a photocopied document. The imaged document is a faithful duplicate and cannot be easily altered. Although an imaged document faithfully copies the original document and becomes part of a computer database, an imaged document does not contain embedded data and residual-deleted data cannot be recovered from it. A computer software program may be necessary to search descriptions that have been manually input as abstracts or indices for each scanned document.

The text of documents scanned using the Optical Character Recognition (OCR) software is converted into data that can be entered into a word processing program. Because they are word-processing documents, OCR documents can be searched directly and easily altered. Although the accuracy and quality of the OCR conversion varies, the technology continues to improve.

Legal Topics:

For related research and practice materials, see the following legal topics:
Civil ProcedureDiscoveryElectronic DiscoveryGeneral OverviewCommunications LawInternet ServicesComputer & Internet LawCivil ActionsGeneral OverviewComputer & Internet LawInternet BusinessInternet & Online ServicesService ProvidersComputer & Internet LawPrivacy & SecurityAttorney-Client Communications

FOOTNOTES:
(n1)Footnote 1. *See* Loevinger, *Reflections on Computer Technology and the Law: The Invention and Future of the Computer, 15 J. Marshall J. Computer & Info. L. 21, 29 (1996).*

(n2)Footnote 2. Huey, *Waking Up to the New Economy,* Fortune, June 27, 1994, at 36.

(n3)Footnote 3. **Computers are being used more often.** *See Bills v. Kennecott Corp., 108 F.R.D. 459, 462 (D. Utah 1985)* ("From the largest corporations to the smallest families, people are using computers to cut costs, improve production, enhance communications, store countless data and improve capabilities in every aspect of human and technological development.").

(n4)Footnote 4. **Discovery battles involving electronically stored information are common.** *See Fed. R. Evid. 1001(1)* (*writing* as used in Rules defined to include "letters, words, or numbers, or their equivalent, set down by ... magnetic impulse, mechanical or electrical recording, or other form of data compilation"); *Bills v. Kennecott Corp., 108 F.R.D. 459, 462 (D. Utah 1985)* (commenting on impact of computer revolution on discovery).

(n5)Footnote 5. **Computer illiteracy no excuse for failing to comply with discovery obligations.** *See* Martin v. Northwestern Mutual Life Ins. Co., 2006 U.S. Dist. LEXIS 2866, at *6 (M.D. Fla. Jan. 19, 2006) (court found that attorney's claim "that he is so computer illiterate that he could not comply with production is frankly ludicrous").

(n6)Footnote 6. Scheindlin and Rabkin, *Electronic Discovery in Federal Civil Litigation: Is Rule 34 up to the Task?, 41 B.C. L. Rev. 327, 335 (2000)*.

(n7)Footnote 7. **Comprehensive search of computer system can be time consuming and expensive.** *See Danis v. USN Communs., Inc., 2000 U.S. Dist. LEXIS 16900, at *13-14 (N.D. Ill. Oct. 20, 2000)* (both defendants and plaintiffs did not know what documents they possessed during extensive discovery, and after six months they were still trying to learn different software applications and backup systems containing electronic information).

(n8)Footnote 7.1. **Access to data stored off-site on internet by third-party host**. See *SEC v. Strauss, 2009 U.S. Dist. LEXIS 101227, at *5-7 (S.D.N.Y. Oct. 28, 2009)* (though plaintiff had access to off-site database, plaintiff was not required to share access because plaintiff had obtained access through investigative subpoena and fee arrangement).

(n9)Footnote 8. **Web site data present hearsay and authentication issues.** *See, e.g.,* Joseph, *Internet Evidence II,* Nat'l L.J., July 30, 2001.

*7th Circuit Superhighway Consulting, Inc. v. Techwave, Inc., 1999 U.S. Dist. LEXIS 17910, at *6 (N.D. Ill. Nov. 15, 1999)* (emails in this case were self-authenticating).

*9th Circuit Columbia Pictures Indus. v. Bunnell, 2007 U.S. Dist. LEXIS 46364, at *10-11 n. 7 (C.D. Cal. June 19, 2007)* (link from computer to web site provided by Internet Service Provider can be tracked and authenticated by reference to unique IP (Internet Protocol) address).

(n10)Footnote 9. *See* Joseph, *Internet Evidence,* Nat'l L.J., June 11, 2001; *see also Ferron v. Echostar Satellite, LLC, 2009 U.S. Dist. LEXIS 66637, at *14 (S.D. Ohio, July 30, 2009)* (defendant may be obligated to preserve website information referenced and hyperlinked in ESI produced in discovery when the website is later disabled if defendant owned or otherwise controlled the website).

(n11)Footnote 10. *See Fed. R. Evid. 901*.

(n12)Footnote 11. **Governmental reports are self-authenticating.** *See Fed. R. Evid. 902(5)*.

2d Circuit See Elliott Assocs., L.P. v. Banco de la Nacion, 194 F.R.D. 116, 121 (S.D.N.Y. 2000) (interest rates published on Federal Reserve Board web site satisfies *Fed. R. Evid. 803(17)* hearsay exception).

*7th Circuit See Sannes v. Jeff Wyler Chevrolet, Inc., 1999 U.S. Dist. LEXIS 21748, at *10 & n.3 (S.D. Ohio Mar. 31, 1999)* (Federal Trade Commission press releases posted on web page are self-authenticating).

(n13)Footnote 12. *See Fed. R. Evid. 901(a)*; *see also Fed. R. Evid. 104* (admissibility).

(n14)Footnote 13. **Authentication requires proof of who posted challenged information.** *See Fed. R. Evid. 901*; *United States v. Jackson, 208 F.3d 633, 638 (7th Cir. 2000)* (proponent needed to show that group alleged to have posted material actually posted it, instead of proponent who was skilled computer user); *United States v. Croft, 750 F.2d 1354, 1367 (7th Cir. 1984)* (business records are inadmissible if source of information or method or circumstances of preparation indicate lack of trustworthiness).

(n15)Footnote 14. **Web site information offered for truth of content must satisfy hearsay rule**. *See Fed. R. Evid. 801*.

7th Circuit United States v. Jackson, 208 F.3d 633, 637 (7th Cir. 2000) (web postings were hearsay as not made by declarants at trial and offered for truth of content).

9th Circuit See Van Westrienen v. Americontinental Collection Corp., 94 F. Supp. 2d 1087, 1109 (D. Ore. 2000) (discussing whether web site contents were hearsay).

(n16)Footnote 15. *See Fed. R. Evid. 803(6)*.

(n17)Footnote 16. **Internet service providers are conduits.** *United States v. Jackson, 208 F.3d 633, 637 (7th Cir. 2000)* .

(n18)Footnote 17. **Admissibility of HTML codes similar to photos.** *ACTONet, Ltd. v. Allou Health & Beauty Care, 219 F.3d 836, 848 (8th Cir. 2000)* (probative value of codes outweighed any possible prejudicial value; extensive testimony laid sufficient foundation).

(n19)Footnote 18. **Word-processing documents can be attached to email message.** *See Danis v. USN Communs., Inc., 2000 U.S. Dist. LEXIS 16900, at *28 (N.D. Ill. Oct. 20, 2000)* (sales reports and data transmitted by email to contractor over dedicated lines for processing).

(n20)Footnote 19. **Email presents authentication issues.**

*7th Circuit See Superhighway Consulting, Inc. v. Techwave, Inc., 1999 U.S. Dist. LEXIS 17910, at *6 (N.D. Ill. Nov. 15, 1999)* (fact that party produces email from that party that appears to be from that party may suffice).

11th Circuit See United States v. Siddiqui, 235 F.3d 1318, 1322 (11th Cir. 2000) (authenticity of email evidence is governed by *Fed. R. Evid. 901*).

(n21)Footnote 20. **Email presents hearsay issues.** *See, e.g., United States v. Ferber, 966 F. Supp. 90, 98-99 (D. Mass. 1997)* .

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Chapter 37A Discovery of Electronically Stored Information
A. DESCRIPTION OF ELECTRONICALLY STORED INFORMATION

7-37A Moore's Federal Practice: Electronic Discovery § 37A.03

AUTHOR: by John K. Rabiej

§ 37A.03 Types and Special Characteristics of Electronically Stored Information

[1] Metadata

Metadata is commonly defined as "data about data." n1 Metadata is generated by the computer software program operating a particular application. Most metadata is not visible on the computer screen, does not appear on the electronic file when a copy is printed, and is often completely unknown to the person who generates the file. n2 The software program metadata function can be deactivated, preventing the creation of metadata in the first place. But once the metadata has been generated, its removal from an electronic document usually requires an affirmative alteration of that document, through scrubbing or converting the file from its native format to an image file, for example. n3

Basic types of similar metadata are generated by most software programs, though they typically use different naming conventions. n4 Two common types of metadata are system-file metadata and application metadata, sometimes referred to as substantive metadata. n5

System-file metadata is automatically affixed to electronically stored information by most operating software programs when the file is created, accessed, or modified. n6 The metadata affixes specific source code markers for each file, including a file name, author identity, and creation and modification dates. New markers may be created every time a document is accessed or modified. n6.1

System-file metadata may also contain a list of authors, modification dates, the time spent on edits, name of the network server or hard disk where the file is saved, other file properties and summary information, and hyper links to other documents. Software applications that are very interactive, like those creating spreadsheets, generate more extensive system-file metadata that may be essential to understand the application's output. n6.2 Computer systems can generate other system-file metadata that may be relevant and important under certain circumstances, e.g., copyright or camera model markers. The system-file metadata for emails is affixed as the header information and includes the following: To; From; Date; and Subject line items. Email metadata is valuable to link emails and attachments.

System-file metadata is external and physically located outside the file. The metadata remains on a computer's hard drive and can be retrieved when the information is stored on a CD-ROM, floppy diskette, or other media.

System-file metadata can reveal the evolution of a document. It can record dates of revisions or deletions and the identities of persons revising the file. System-file metadata may also identify anyone downloading, printing, or copying a specific file. This type of metadata is typically useful in evaluating the authenticity of electronically stored information. The identification of the author of an electronic document is not foolproof. Metadata identifying the author only reflects the use of a computer whose access is limited to persons issued a specific password identification number. The password must be used to log on to the computer's database, and the presumption is that the user of the computer generated the file. n6.3 Because others may have access to the computer in a networked system, the potential use of the computer by someone other than its owner may raise authentication issues. For instance, many computer systems authorize a selected network administrator to override individual password identifications to gain access to a computer when necessary. In addition, a document or database located on a networked computer system can be viewed by persons on the network, other than the document's author, who may make modifications.

System-file metadata has been used to authenticate electronically stored information other than by means of the author's name. For example, the relationship and arrangement of a particular file with other electronic files in a directory listing may offer helpful information regarding its authenticity. This data can be particularly useful when earlier drafts differ or the authenticity of an original document is disputed. n6.4 In general, system-file metadata associated with word-processing documents is of limited evidentiary value (with the exception of proving alterations or deletions); however, it can contain formulas used to generate spreadsheets, which may be essential to understand the spreadsheets' calculations.

Though system-file metadata can have evidentiary value if files have been deliberately deleted or modified to avoid detection, such metadata is often most valuable in sorting and searching electronically stored information. In particular, system-file metadata that categorizes electronically stored information by custodians' names or range of dates is often relied on as a basic review technique to narrow the scope of a search quickly and efficiently. This metadata "significantly improves a party's ability to access, search, and sort large numbers of documents efficiently." n6.5

Application metadata, sometimes referred to as substantive metadata, is information added by the user embedded in the file or a record of tracked changes that reveal edits to the document. n6.6 The metadata is embedded in the file. Microsoft Word, for example, generates two popular substantive types of metadata, including features that save all versions of and track all edits to a document. Selected passages can also be inserted into a document as hidden text, which is not printed in the text of the printed document in various software programs. n6.7 Under this option, comments can be inserted in the margins or directly in the text of an electronic document that are visible only when viewed on a video monitor. Passages in the document may also be highlighted in color for emphasis. A hard-copy printout or an imaged file will not necessarily reveal embedded comments inserted in an electronic document. Other application metadata may include: user's name; user's initials; company's or organization's name; name of the network; names of previous document authors; document revisions; and template information.

In total, there are more than 80 accessible system-file and application metadata generated for each Microsoft Word and Excel document Much of this metadata is not useful for litigation, but the circumstances of each case can make particular metadata important. For example, metadata showing that an application is supported by another software application that was only recently released can substantiate allegations of recent tampering with a given file, which was produced using the recently released application. Some of this metadata is readily accessible, but other types require a special utility to read them. n6.8

Parties are increasingly requesting that electronically stored information be produced in its native format because TIFF or PDF images do not contain metadata. Sometimes, the metadata may be essential to a full understanding of the document. For example, an image of an email message may include only a generic reference to a distribution list that

fails to refer to the individuals who received the message or may exclude the names of any recipients receiving blind copies. n6.9 In many cases, however, parties typically request a native-file production format so that they can use the system-file metadata to easily search and sort the files. Though parties are routinely requesting electronically stored information in native file format because of this useful feature, such a format raises concerns for both requesting and responding parties. Whether metadata must be produced depends on the facts in an individual case, and the issue continues to be determined on a case-by-case basis. n6.10

The searching capability of system-file metadata can be provided by alternative means without disclosing substantive-application metadata. Electronically stored information can be produced in image PDF or TIFF format accompanied by load files, which contain selected metadata that is linked to the images. But extracting metadata once embedded can be difficult. Because extracting metadata can be burdensome and often its evidentiary value is low, many courts embrace a standard that places the burden of persuasion on the requesting party to show a particularized need for the metadata, especially if the responding party had already produced electronically stored information in a format that did not contain metadata. n6.11 But other courts are moving in the opposite direction, requiring metadata because it makes searching and sorting electronically stored information easier, especially if the request is made before the responding party produces the electronically stored information. n6.12

[2] Hidden Data and Other Markers

Selected passages, which are not visible when the document is printed, can be marked as hidden text under options in various software programs. n7 This option provides an opportunity to insert comments in the margins or directly in the text of an electronic document that are visible only on a video monitor. Passages in the document may also be highlighted in color for emphasis. A hard-copy printout does not reveal embedded comments inserted in an electronic document.

[3] Residual-Deleted Data

Electronically stored information is constantly revised, edited, and ostensibly discarded by clicking on the computer's "delete" button. However, the deletion process does not permanently or completely destroy a document. The name of the file is removed from the computer's directory, or index. The file remains within the computer as a magnetic image, until it is overwritten by a new file. Deleted data is also referred to as "residual data."

A computer executes a delete command by designating the space on the magnetic tape, that is, a computer's hard drive or a floppy diskette, on which the selected file is located as "free space" that can be reused in the future for any of the computer's functions, including performing a word-processing application or even turning on the machine. Significantly, the deleted file is also removed from the computer's directory and remains unclassified within the computer. If the "free space" allotted to a "deleted" file is later reused when, for example, it is overwritten by a new document or by executing a computer function, the original document is erased. n8 Accordingly, residual data may be lost every time new data is entered or information is downloaded. Data can also be deleted intentionally by commercial software that "wipes clean" a computer's hard drive spaces by overwriting the entire disk. n9

Computers often allocate more "free space" to a given document than is required. Remnants of "deleted" files, often called "fragments," can remain on the hard drive, even though parts of the original document have been overwritten and lost.

Rewriteable CD-ROMs usually do not have the same residual-deleted issues as hard drives. Files copied to a rewriteable CD-ROM only contain active data. However, some word-processing software programs retain some earlier edits in their active data as part of their "undo" function. Accordingly, it is possible that some earlier rejected edits will be transferred to a rewriteable CD-ROM.

Defragging does not solve the deleted/residual problem. Portions of an electronic file are randomly placed within a hard drive. Defragging merely copies the relevant parts of a document, including deleted portions, and places them in close proximity to each other so that the computer can read them faster. During the process, it is possible that deleted files may be overwritten and destroyed if the newly arranged sequence of files happens to fall on that part of the hard drive on which they were located. However, because modern hard drives are so large, the possibility of overwriting is relatively small. Nonetheless, because its deletive effect is uncertain and potentially prejudicial, repeated defragging after the duty to preserve attaches may be a matter of concern to the court. n9.1

[4] Manageability of Electronically Stored Information

The information contained in a computer storage medium can include enormous amounts of data and files, much of it irrelevant or privileged. Information contained in an electronic format is manageable and can be searched by a word-search engine and sorted by defined terms or events. Specific documents that contain a specific word, name, or other item can be located quickly. However, not all electronic files and metadata are searchable. For example, a document contained in a scanned file that has been imaged might not be searchable (*see § 37A.02[4]*). Moreover, a search becomes very difficult if many different computers or computer systems are involved.

A computer software program can store, retrieve, sort, and make sophisticated calculations using data input into an electronic database. The software program is often an essential tool to read and use the data input into a database. Information cannot be easily retrieved and manipulated from an electronic information system without the software program that generated it. If the software program or underlying source code of the software program, together with a codebook explaining the code symbols, is provided, not only can the data be retrieved, but the program can be modified to provide different types of data, reports, and calculations.

Although the enhanced manageability of electronic documents eliminates some discovery burdens, others are exacerbated. For example, the potentially greater number of electronic documents produced in discovery requires more attention to determine whether they may contain privileged matter, which typically is identified by manual review (*see § 37A.32[5]*). n10 Moreover, many large organizations operate many different software applications, some of which may have been retired and no longer in use, that may require different types of search engines. n11

Legal Topics:

For related research and practice materials, see the following legal topics:
Civil ProcedureDiscoveryGeneral OverviewCivil ProcedureDiscoveryElectronic DiscoveryGeneral OverviewCivil ProcedureDiscoveryPrivileged MattersGeneral OverviewComputer & Internet LawCivil ActionsGeneral OverviewComputer & Internet LawPrivacy & SecurityAttorney-Client Communications

FOOTNOTES:
(n1)Footnote 1. **Common term.** *See Williams v. Sprint/United Management Co., 230 F.R.D. 640, 646 (D. Kan. 2005)* ; *The Sedona Conference, The Sedona Guidelines: Best Practice Guidelines & Commentary for Managing Information & Records in the Electronic Age*, at 94 (Sept. 2005).

(n2)Footnote 2. **Common features of metadata**. *See Autotech Tech. Ltd. v. Automationdirect.com, Inc., 2008 U.S. Dist LEXIS 27962, at *n.1 (N.D. Ill. Apr. 2, 2008)* (detailed description of metadata); *Fed. R. Civ. P 26(f)* committee note (2006) (*reproduced verbatim at § 26App.11[2]*).

(n3)Footnote 3. **Removal of metadata.** *See Wyeth v. Impax Labs., Inc., 248 F.R.D. 169, 171 (D. Del. 2006)* (removing metadata requires affirmative action; most metadata is of limited evidentiary value, and reviewing it can waste litigation resources).

(n4)Footnote 4. **Basic types of metadata.** *See Williams v. Sprint/United Management Co., 230 F.R.D. 640, 647*

(D. Kan. 2005) ("metadata varies with different applications").

(n5)Footnote 5. **Differences between system-file metadata and application metadata.** *See Aguilar v. Immigration and Customs Enforcement Div. of the U.S. Dep't of Homeland Security, 2008 U.S. Dist. LEXIS 97018, at *13-15 (S.D.N.Y. Nov. 21, 2008)* (explaining differences between application and system-file metadata).

(n6)Footnote 6. **System-file metadata automatically affixed.** *See Williams v. Sprint/United Management, 230 F.R.D. 640, 646 (D. Kan. 2005)* (quoting App. F to *The Sedona Guidelines: Best Practice Guidelines and Commentary for Managing Information & Records in Electronic Age*).

(n7)Footnote 6.1. **Identification markers created for every electronic document.**

1st Circuit See Fennell v. First Step Designs, Ltd., 83 F.3d 526, 530 & n.4 (1st Cir. 1996) (names of markers can be misleading; for example, document's "modification" date may change simply when document is saved to different location).

3d Circuit Wyeth v. Impax Labs., Inc., 248 F.R.D. 169, 171 (D. Del. 2006) (metadata is "information describing the history, tracking, or management of an electronic document").

7th Circuit See Autotech Techs. Ltd. P'ship v. AutomationDirect.com, Inc., 248 F.R.D. 556, 557 n.1 (N.D. Ill. 2008) (metadata, commonly described as "data about data," describes how, when, and by whom data was collected, created, accessed, or modified, and how it is formatted).

D.C. Circuit Onofrio v. SFX Sports Group, Inc., 247 F.R.D. 43, 46 (D.D.C. 2008) (metadata has been defined as "information about a particular data set which describes how, when, and by whom it was collected, created, accessed, or modified and how it was formatted" (quoting The Sedona Guidelines: Best Practice Guidelines and Commentary for Managing Information & Records in the Electronic Age, App. F)).

(n8)Footnote 6.2. **Some system-file metadata can be critical to understanding document**. *See Williams v. Sprint/United Management Co., 230 F.R.D. 640, 647 (D. Kan. 2005)* (metadata concerning relationships between data essential to understand "undifferentiated mass of tables of data").

(n9)Footnote 6.3. **Computer password identification number.** *See Gates Rubber Co. v. Bando Chem. Indus., 167 F.R.D. 90, 116 (D. Colo. 1996)* ("only persons who know the password can enter the computer and do work on it").

(n10)Footnote 6.4. **Metadata can authenticate disputed document**. *See Gates Rubber Co. v. Bando Chem. Indus., 167 F.R.D. 90, 112 (D. Colo. 1996)* (creation dates of files that may have overwritten and destroyed "deleted" files were relevant to determine whether overwriting was done before certain date).

(n11)Footnote 6.5. **System-file metadata enhances searching electronically stored information**. *See Aguilar v. Immigration and Customs Enforcement Div. of the U. S. Dep't of Homeland Security, 2008 U.S. Dist. LEXIS 97018, at *14 (S.D.N.Y. Nov. 21, 2008)* (court cites approvingly The Sedona Principles, Second Edition: *Best Practices Recommendations and Principles for Addressing Electronic Document Production* Cmt. 12a (Sedona Conference Working Group Series 2007)).

(n12)Footnote 6.6. **Application metadata is added by user.** *See* District of Maryland, *Suggested Protocol for Discovery of Electronically Stored Information ("ESI"),* at 11(B) http://www.mdd.uscourts.gov/news/news/ESIProtocol.pdf ("Substantive Meta-Data is data that reflects the substantive changes made to the document by the user."); Payne, *Metadata: the Good, the Bad, and the Ugly*,

www.payneconsulting.com/pub_books/articles/ (Corel WordPerfect's metadata records the last 300 actions made to a document).

(n13)Footnote 6.7. Robins, *Computers and the Discovery of Evidence--A New Dimension to Civil Procedure, 17 J. Marshall J. Computer & Info. L. 411, 414*-415 (1999).

(n14)Footnote 6.8. **Special utility software required to read some types of metadata.** *See Hidden and Collaboration Data Removal* at < www.microsoft.com>; Ball, *Beyond Data About Data: The Litigator's Guide to Metadata* found at < www.craigball.com/articles>.

(n15)Footnote 6.9. **Metadata can contain information about its distribution**. *See Armstrong v. Executive Office of the President, Office of Admin., 1 F.3d 1274, 1280 (D.C. Cir. 1993)* (without "non-screen information," a later reader may not be able to glean from hard copy basic facts such as who sent or received message or when it was received).

(n16)Footnote 6.10. **Production of metadata.** *See* District of Maryland, *Suggested Protocol for Discovery of Electronically Stored Information ("ESI"),* at (11(C) http://www.mdd.uscourts.gov/news/news/ESIProtocol.pdf (protocol states that metadata need not be produced routinely, especially substantive-application metadata, though system-file metadata should be produced if not burdensome and it facilitates searching).

> *3d Circuit See, e.g., Wyeth v. Impax Labs., Inc., 248 F.R.D. 169, 171 (D. Del. 2006)* (because parties never agreed that electronic documents would be produced in any particular format, plaintiff complied with its discovery obligation by producing image files).
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> *10th Circuit See, e.g., Bray & Gillespie Management LLC v. Lexington Ins. Co., 259 F.R.D. 568, 587 (M.D. Fla. 2009)* (responding party was required to produce metadata because requesting party specifically asked for information in "native format" with metadata included and responding party never objected to form of production, but simply produced TIFF images).

(n17)Footnote 6.11. *See Wyeth v. Impax Labs., Inc., 248 F.R.D. 169, 171 (D. Del. 2006)* (producing party still must preserve integrity of electronic documents it produces, even if document is produced without metadata).

(n18)Footnote 6.12. **Court rulings requiring production metadata.** *See Aguilar v. Immigration and Customs Enforcement Div. of the U.S. Dep't of Homeland Security, 2008 U.S. Dist. LEXIS 97018, at *22-27 (S.D.N.Y. Nov. 21, 2008)* (discussing line of cases (1) approving metadata request if made at the time when documents are initially requested, and (2) denying request when responding party has already produced documents).

(n19)Footnote 7. Robins, *Computers and the Discovery of Evidence--A New Dimension to Civil Procedure, 17 J. Marshall J. Computer & Info. L. 411, 414-415 (1999).*

(n20)Footnote 8. **Overwriting allotted free space erases former document.** *See Alexander v. FBI, 188 F.R.D. 111, 116-117 (D.D.C. 1998)* .

(n21)Footnote 9. **Software available that "wipes" clean electronic information.** *See Gates Rubber Co. v. Bando Chem. Indus., 167 F.R.D. 90, 120 (D. Colo. 1996)* (hard drive wiped clean but use of "wipe-clean" application leaves an imprint or footprint that is readily identified on inspection).

> *7th Circuit See Kucala Enters. v. Auto Wax Co., 2003 U.S. Dist. LEXIS 8833, at *5 (N.D. Ill. May 23, 2003)* (plaintiff deleted approximately 15,000 files using "Evidence Eliminator" software program immediately before desktop computer was to be inspected by opposing party).
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> *10th Circuit See Gates Rubber Co. v. Bando Chem. Indus., 167 F.R.D. 90, 120 (D. Colo. 1996)* (hard

drive wiped clean but use of "wipe-clean" application leaves imprint or footprint that is readily identified on inspection).

(n22)Footnote 9.1. **Defragging may delete relevant evidence.** *See Plunk v. Village of Elwood, 2009 U.S. Dist. LEXIS 42952, at *38 (N.D. Ill. May 20, 2009)* ("Once defragmentation occurs, it is impossible to determine whether files were deleted to a certainty.").

(n23)Footnote 10. **Electronically stored documents may contain privileged matter requiring review.** *See Procter & Gamble Co. v. Haugen, 179 F.R.D. 622, 632 (D. Utah 1998)* (original court order requiring party to search computer using 25 search terms modified because results would have been too extensive and would reveal general commercial and competitive information).

*2d Circuit See Jones v. Goord, 2002 U.S. Dist. LEXIS 8707, at *34 (S.D.N.Y. May 15, 2002)* (no software program is available to redact privileged material from electronically stored document; manual data inputting required to redact information from electronic document).

10th Circuit See Procter & Gamble Co. v. Haugen, 179 F.R.D. 622, 632-633 (D. Utah 1998) (original court order requiring party to search computer using 25 search terms modified because results would have been too extensive and would reveal general commercial and competitive information).

(n24)Footnote 11. **Large corporations may operate many different software applications.** *See, e.g., Linnen v. A.H. Robins Co., 1999 Mass. Super. LEXIS 240, at *3 (June 15, 1999)* (company used different software systems for its email communications over decade).

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Moore's Federal Practice: Discovery of Electronically Stored Information

Volume 7: Analysis: Civil Rules 30-37A
Chapter 37A Discovery of Electronically Stored Information
A. DESCRIPTION OF ELECTRONICALLY STORED INFORMATION

7-37A Moore's Federal Practice: Electronic Discovery § 37A.04

AUTHOR: by John K. Rabiej

§ 37A.04 Emails

[1] The Nature of Emails

Electronic mail (commonly referred to as email) is transmitted electronically between computers. n1 Email has rapidly become an essential tool in virtually all organizations and businesses.

Email messages may be transmitted within a cabined network system or via the Internet. In executing the transmission of an email message, a computer makes a copy of the message, retains the original, and sends a copy. Once an email message has been sent, its author loses control over its later dissemination; however, some technology may allow the author to track the email after sending it. The redundancy and duplication inherent in email messages make searches difficult.

[2] Emails Can Contain Critical Evidence

The often informal nature of email messages and the false sense of confidentiality associated with them can have devastating evidentiary effects in a given case and, thus, are routinely sought in discovery. n2 For example, in a securities fraud case the plaintiff alleged that it relied on the defendant's representations that a certain technological process developed by the defendant was commercially viable. However, the internal emails of several of the defendant's employees showed that the defendant's statements about the commercial viability of the process were false. n3 In another case, email messages that contained inappropriate sexual comments by the defendant's employees were admitted over the defendant's objection. n4 The court ruled that the plaintiff could argue before the jury that the email comments demonstrated that she was fired in retaliation for claiming that she was denied a promotion because of her gender. n5

[3] Relevant Emails Are Discoverable

Email correspondence, if otherwise relevant, is subject to discovery. n6 A discovery request for relevant documents includes email. n7 The duty to preserve relevant evidence (*see § 37A.10*) applies to electronically stored information,

including email messages contained in various computer storage media, such as a backup tape system (*see § 37A.05[2]*). n8 The duty to disclose and preserve email remains unchanged under the 2006 amendments to the federal discovery rules. However, because of the unique nature of emails, preservation and retrieval of emails can be a significant discovery expense.

Emails are typically maintained in an electronic format and may never be reduced to hard copy. As with other electronic information, email messages can be downloaded and converted into a hard-copy format. Parties seeking discovery of email may request that they be produced in hard copy, often entailing enormous expense. n9 In addition, hard copies may not contain important information, such as the identity of the sender and the recipients, and the date and time of transmission. n10 The costs incurred in searching inaccessible backup tape systems for relevant emails can be prohibitive. n11 For further discussion of email issues, see *§ 37A.35[3][a]*.

[4] Privacy Rights of Employees

[a] Employees Have No Reasonable Expectation of Privacy in Employer's Email System

Electronic information, including email messages, may be relevant to the claims or defenses of a party. Production of employees' email messages is routinely requested as part of discovery. Although an email message may contain personal and private matters about an employee, it must be produced, if otherwise discoverable, in response to a Rule 34 motion. n12

A court has wide discretion to limit discovery "to protect a party or person from annoyance, embarrassment, oppression, or undue burden or expense." n13 An email message or personal computer file can contain private information that was produced or transmitted under a mistaken belief that it would remain private. This misplaced reliance gives a false sense of security that may lead to the transmission of personal and private thoughts. Nonetheless, email messages and private files have been routinely subject to disclosure in accordance with a reasonable discovery request. However, on a satisfactory showing, a court may issue a protective order to limit disclosure. Courts also have held that an employee may have a reasonable expectation of privacy sufficient to protect these communications against unconstitutional government intrusions. n14 However, no decision has recognized a privacy right of an employee to defeat a discovery request for employee email messages as part of an employer's business records. n15

An employee's privacy rights regarding email messages are limited. For example, an employer is entitled to monitor employees' work by reading their email messages transmitted on company equipment. Recent federal regulations governing disclosure of electronic medical and other personal records and ongoing congressional activity are focusing attention on the privacy interests of citizens in electronic communications. However, the general rule remains that an employees' emails are subject to disclosure in response to a valid discovery request.

[b] Application of Electronic Communications Privacy Act

Chapter 119 of Title 18, United States Code, Wire and Electronic Communications Interception and Interception of Oral Communications, generally referred to as the Electronic Communications Privacy Act, prohibits interception of, and unauthorized access to, electronic communications, including email messages. n16 Although the statutory provision appears at first glance to affect emails significantly, the courts have construed "intercept" literally and narrowly to apply only to acquisition of a message while in transit, which requires a significant amount of technical sophistication. n17

The Act provides two exceptions that further narrow its application. First, no violation is committed if a person consents to the interception. n18 Consent may be given expressly or implicitly. n19 Provisions in employment contracts recognizing the employer's authority to monitor electronic communications can be sufficient proof of an employee's consent. n20 The second exception exempts interceptions made in accordance with "business use." n21 A provider of the email system who intercepts an email message while performing a business use is exempted from the Act. n22

[c] Application of Stored Wire and Electronic Communications and Transactional Records Access

The Stored Wire and Electronic Communications and Transactional Records Access Act (Stored Communications Act) prohibits unlawful access to stored electronic communications. n23

The Stored Communications Act prohibits two categories of service providers from divulging stored electronic communications. A person or entity providing "electronic communication service"--defined as "any service which provides to users thereof the ability to send or receive wire or electronic communications"--cannot "knowingly divulge to any person or entity the contents of a communication while in electronic storage by that service." n24 In addition, a person or entity providing "remote computing service" to the public cannot "knowingly divulge to any person or entity the contents of any communication which is carried or maintained on that service." n24.1 The Act establishes more liberal access and broader consent standards governing emails stored by remote computing service providers than for emails stored by electronic communication service providers. n24.2 A key distinction is that the provider of remote computing services may disclose communications with the service subscriber's consent, while the provider of electronic communications services may disclose stored communications only with the consent of the originator or an addressee or intended recipient of the communication. n24.3 A corporation, for example, may consent to the disclosure of employee emails stored by a remote computing service provider, but only the employee email originator or recipient may give consent to disclosure of emails stored by an electronic communication service provider. Additionally, an electronic communication service provider is not prohibited from disclosing communications unless the electronic communication is divulged during transmission before being opened by the recipient or while it is stored solely for backup protection purposes.

Courts have held that the Stored Communications Act precludes a party from using a subpoena to obtain another party's emails from an internet service provider. n24.4 Although the Act lists exceptions, and also provides instances related to ongoing criminal investigations, which require a service provider to disclose the contents of customers' electronic communications or subscriber information, n24.5 it does not include an exception authorizing the disclosure of electronic communications pursuant to a civil discovery subpoena. Thus, unauthorized private parties and governmental entities are prohibited from using Rule 45 civil discovery subpoenas to circumvent the Act's protections. n24.6

The obligations imposed by the Stored Communications Act vary, depending upon the category of service provider under consideration. An "electronic communication service provider" cannot divulge emails that are pending delivery or emails that are stored "for purposes of backup protection of such communication." Though one court interpreted the Act's backup protection to be temporary, applicable only during the transmission of the email, n24.7 another court disagreed, finding that the plain language of the Act extended the protection to emails post-transmission. n24.8 There is less uncertainty about the obligations of a "remote computing service provider." It cannot divulge any stored emails.

The line between "electronic communication service" and "remote computing service" providers is not always clear. Service providers can perform both services. In determining whether the Stored Communications Act applies to a particular electronic communication, some courts have taken an all-or-nothing approach, identifying a service provider either as an electronic communications service or a remote computing service provider and then applying the Act's requirements. n24.9 The better practice is to adopt a flexible, functional approach and identify the service being provided in the case, either electronic service or storage service, and then apply the Act's requirements. n24.10

Although the Stored Communications Act prohibits a service provider from divulging emails pursuant to a Rule 45 subpoena under most circumstances, the Act expressly permits disclosure with the consent of the email's originator and in the case of a remote computing service provider with the service subscriber's consent. Instead of pursuing discoverable information from a nonparty service provider by means of a subpoena, which may raise difficult questions of interpretations of the Act, one court has recommended avoiding such issues by routing the discovery request directly through the producing party by compelling the party to give its consent to the disclosure of the communications. The court's analysis starts by recognizing the party's obligation to produce relevant, non-privileged matter "within its

control" pursuant to a Rule 34 request. A party has "control" of the requested discoverable matter if it has the legal right to obtain the material. n24.11 The power to give consent to a nonparty to disclose discoverable information qualifies as a "legal right to obtain" the material. n24.12 The analysis goes on to recognize that a court is authorized to enforce the parties' discovery obligations. In response to a Rule 34 discovery request, the court can compel the party under Rule 37 to comply with the discovery request and give its consent authorizing the service provider to divulge the communications. The court's approach is consistent with the practices of other courts in analogous situations, which have compelled parties to act in compliance with the discovery rules.

[d] Application of State and Common Law Governing Privacy Rights

State statutes may govern the interception and acquisition of electronic communications. However, many state laws are based on the federal law and have been similarly construed narrowly. n25 Nonetheless, several state statutes expand the privacy protections of employees. n26

Acquiring another's email message may theoretically violate a common law right against invasion of privacy. It is arguably analogous to a diary entry. However, claims that access to employees' email messages violates state wiretap statutes have been rejected. n27 Courts have routinely dismissed privacy claims based on implied consent or authorized access defenses. n28

Legal Topics:

For related research and practice materials, see the following legal topics:
Civil ProcedureDiscoveryElectronic DiscoveryGeneral OverviewCommunications LawPrivacyStored Communications ActComputer & Internet LawCivil ActionsGeneral OverviewComputer & Internet LawInternet BusinessInternet & Online ServicesService ProvidersComputer & Internet LawPrivacy & SecurityAttorney-Client Communications

FOOTNOTES:
(n1)Footnote 1. Email as used here refers only to electronic messages appearing on a computer screen, PDA, cell phone, or similar device, and excludes other communications sent by electronic means, including fax, telex, or video conferencing.

(n2)Footnote 2. **Informal nature of email communication**. *See, e.g., Owens v. Morgan Stanley & Co., 1997 U.S. Dist. LEXIS 20493, at *1-2 (S.D.N.Y. Dec. 23, 1997)* (racist remark sent over company email system led to employment discrimination lawsuit).

(n3)Footnote 3. **Internal emails contradicted litigation position.** *Siemens Solar Indus. v. Atlantic Richfield Co., 1994 U.S. Dist. LEXIS 3026, at *5 (S.D.N.Y. Mar. 16, 1994)* (emails "revealed beyond peradventure" that commercial process was not viable).

(n4)Footnote 4. **Inappropriate remarks contained in emails.** *See Strauss v. Microsoft Corp., 1995 U.S. Dist. LEXIS 7433, at *11-12 (S.D.N.Y. June 1, 1995)* (supervisor's inappropriate email messages determined to be probative evidence in retaliatory discharge case); *see also Owens v. Morgan Stanley & Co., 1997 U.S. Dist. LEXIS 20493, at *1-2 (S.D.N.Y. Dec. 23, 1997)* (racist remark sent over company email system led to employment discrimination lawsuit).

(n5)Footnote 5. **Emails generally admissible**. *Strauss v. Microsoft Corp., 1995 U.S. Dist. LEXIS 7433, at *11-12 (S.D.N.Y. June 1, 1995)* (court rejected defendant's claims that email messages should be found inadmissible because they were irrelevant or too prejudicial).

(n6)Footnote 6. **Relevant email is discoverable.**

*2d Circuit See Strauss v. Microsoft Corp., 1995 U.S. Dist. LEXIS 7433, at *11-12 (S.D.N.Y. June 1,*

1995) (inappropriate emails of male supervisor relevant to issue of whether gender played role in supervisor's decision not to promote female employee to higher position).

4th Circuit See Thompson v. U.S. Dept. of Housing and Urban Dev., 219 F.R.D. 93, 96 (D. Md. 2003) (emails subject to disclosure requirements and discovery request for production).

*7th Circuit See In re Brand Name Prescription Drugs Antitrust Litig., 1995 U.S. Dist. LEXIS 8281, at *1 (N.D. Ill. June 13, 1995)* (email is discoverable).

*11th Circuit See Gale v. Levi Strauss & Co., 1999 U.S. Dist. LEXIS 9387, at *8-11 (N.D. Ga. April 26, 1999)* (email provided evidence that plaintiff's supervisors had knowledge of and permitted plaintiff's uncompensated overtime work).

(n7)Footnote 7. **Specific reference to "email" unnecessary in discovery request.**

3d Circuit See MOSAID Techs. Inc. v. Samsung Elecs. Co., 348 F. Supp. 2d 332 (D.N.J. 2004) .

*9th Circuit See J & M Assoc., Inc. v. Nat'l Union Fire Ins. Co. of Pittsburgh, PA, 2008 U.S. Dist. LEXIS 97542, at *9-10 (S.D. Cal. Dec. 2, 2008)* (court required plaintiff to produce emails even though defendant's discovery request referred only to production of "documents").

(n8)Footnote 8. **Duty to preserve extends to emails.** *See* American Bar Association Civil Discovery Standards 29(a)(i) (1999).

2d Circuit See Metropolitan Opera Ass'n v. Local 100, Hotel Employees & Rest. Employees Int'l Union, 212 F.R.D. 178, 222 (S.D.N.Y. 2003) (defendant's counsel violated Rule 26(g) duty to certify that discovery requests comply with federal rules when counsel, among other things, failed to inform client that emails are "documents" for purposes of discovery); *New York State NOW v. Cuomo, 1998 U.S. Dist. LEXIS 10520, at *2-6 (S.D.N.Y. July 13, 1998)* (computer database included letters and reports, outgoing letters, internal memoranda, monthly summary reports, and emails).

*7th Circuit See In re Brand Name Prescription Drugs Antitrust Litig., 1995 U.S. Dist. LEXIS 8281, at *1-2 (N.D. Ill. June 13, 1995)* (email is discoverable).

10th Circuit See Procter & Gamble Co. v. Haugen, 179 F.R.D. 622, 632 (D. Utah 1998) (emails subject to discovery; deliberate destruction subject to sanction).

(n9)Footnote 9. **Production of emails in hard copy expensive.** *See Sattar v. Motorola, Inc., 138 F.3d 1164, 1171 (7th Cir. 1998)* (instead of requiring hard copies of 210,000 pages of emails, court instructed defendant to produce emails in electronic format on diskette and provide plaintiff with compatible computer equipment to read it; alternatively, each party would bear half the cost of making hard copies).

(n10)Footnote 10. **Hard copies may omit significant information.** *See Armstrong v. Executive Office of the President, Office of Admin., 1 F.3d 1274, 1280 (D.C. Cir. 1993)* (hard copies of email messages may not include information contained in electronic version, which identifies, for example, who sent message, who received it, and when it was received).

(n11)Footnote 11. **Potentially prohibitive costs of retrieving emails from backup systems.** *See, e.g., In re*

*Brand Name Prescription Drugs Antitrust Litig., 1995 U.S. Dist. LEXIS 8281, at *2-4 (N.D. Ill. June 13, 1995)* (30 million pages of email stored on backup system; cost of search $50,000 to $75,000).

(n12)Footnote 12. *Fed. R. Civ. P. 34(a)(1)(A).*

(n13)Footnote 13. *Fed. R. Civ. P. 26(c)(1).*

(n14)Footnote 14. ***Fourth Amendment* right of privacy.**

*2d Circuit See In re Asia Global Crossing, Ltd., 2005 Bankr. LEXIS 415, at *18-23 (S.D.N.Y. Mar. 21, 2005)* (four-factor test used to assess reasonableness of employee's expectation of privacy).

*4th Circuit See Sprenger v. Rector and Bd. of Visitors of Virginia Tech, 2008 U.S. Dist. LEXIS 47115, at *9-13 (W.D. Va. June 17, 2008)* (court looked to " *Fourth Amendment* reasonable expectation of privacy standard to determine the reasonableness of intent that [privileged marital] communication" located on employer's email system remain confidential).

8th Circuit See United States v. Bailey, 272 F. Supp. 2d 822, 835 (D. Neb. 2003) (citing *United States v. Slanina, 283 F.3d 670, 676 (5th Cir. 2002) , remanded on other grounds, 537 U.S. 802 , vacating judgment and remanding, 313 F.3d 891 (5th Cir. 2002)* and noting that "[e]mployees may have reasonable expectations of privacy within their workplaces which are constitutionally protected against intrusions by police").

(n15)Footnote 15. **Employee emails subject to production in discovery.** *See Strauss v. Microsoft Corp., 1995 U.S. Dist. LEXIS 7433, at *11-12 (S.D.N.Y. June 1, 1995)* (emails are admissible); *see generally* Rosenbaum, *In Defense of the Hard Drive, 4 Green Bag 2d. 169, 169-171 (Winter 2001)* (employees have no right or expectation of privacy in personal material stored on employer's computer, but author suggests employees should receive reasonable notice of employer's concerns and an opportunity to limit or define scope of hard drive examination).

(n16)Footnote 16. *18 U.S.C. §§ 2510-2520* (Electronics Communications Privacy Act--Act applies to "electronic communication," defined as any "transfer of signs, signals, writing, images, sounds, data, or intelligence of any nature transmitted in whole or in part by a wire, radio, electromagnetic, photoelectronic or photooptical system that affects interstate commerce," including email messages).

(n17)Footnote 17. **"Intercept" construed narrowly.**

1st Circuit See Thompson v. Thompson, 2002 U.S. Dist. LEXIS 9940, at *7-9 (D.N.H. May 30, 2002) (alleged copying of 1,760 files from personal computer, including 324 email messages, did "not qualify as the interception of electronic communications").

3d Circuit See Fraser v. Nationwide Mut. Ins. Co., 352 F.3d 107, 113 (3d Cir. 2003) ("Every circuit court to have considered the matter has held that an 'intercept' under the ECPA must occur contemporaneously with transmission.").

5th Circuit See Steve Jackson Games, Inc. v. United States Secret Serv., 36 F.3d 457, 461-462 (5th Cir. 1994) (intercept does not apply to electronic communications that are stored).

9th Circuit See Bohach v. City of Reno, 932 F. Supp. 1232, 1236 (D. Nev. 1996) (distinguishing between electronic messages intercepted contemporaneously with transmission and communications accessed while in storage).

(n18)Footnote 18. *18 U.S.C. § 2511(2)(d).*

(n19)Footnote 19. **Consent to interception may be express or implicit.**

9th Circuit See Bohach v. City of Reno, 932 F. Supp. 1232, 1236-1237 (D. Nev. 1996) (consent likely implied when employee aware before transmission that electronic communications are stored in computer).

11th Circuit But see Watkins v. L.M. Berry & Co., 704 F.2d 577, 584 (11th Cir. 1983) (implied consent narrowly construed when telephone call intercepted; employer authorized to monitor its sales persons' calls as part of training program but must stop once it determines call is personal).

(n20)Footnote 20. **Employee contract may include waiver of privacy.** *See Smyth v. Pillsbury Co., 914 F. Supp. 97, 98 (E.D. Pa. 1996)* (no reasonable expectation of privacy even if employer earlier assured employees that emails would not be intercepted).

(n21)Footnote 21. *18 U.S.C. § 2511(2)(a)(i).*

(n22)Footnote 22. **Provider of system exempted.** *See Bohach v. City of Reno, 932 F. Supp. 1232, 1236 (D. Nev. 1996)* (defendant city police department was provider of electronic communication system, which allows it to access communications in its storage whenever it wishes).

(n23)Footnote 23. **Act is derivative of original wiretap law enacted in 1968.** *See Fraser v. Nationwide Mut. Ins. Co., 135 F. Supp. 2d 623, 632-633 (E.D. Pa. 2001)* ("The [Act] has been noted for its lack of clarity." Stored Communications Act codified in *18 U.S.C. § 2701 et seq.*, enacted as Title II of the Electronics Communications Privacy Act of 1986, Pub. L. No. 99-508).

(n24)Footnote 24. **Restrictions on providers of electronic communication service.** *18 U.S.C. § 2702(a)(1).* For purposes of this section, "electronic storage" is defined as the temporary, intermediate storage of electronic communications incidental to electronic transmission, but it also includes any storage of communications by the service provider "for purposes of backup protection." *18 U.S.C. § 2510 (17).*

(n25)Footnote 24.1. **Restrictions on providers of remote electronic storage.** *18 U.S.C. § 2702(a)(2).* Remote computing services includes storage and processing services.

(n26)Footnote 24.2. **Access requirements governing remote computing service providers not as stringent as standards governing electronic communication service providers.** *See Theofel v. Farley-Jones, 359 F.3d 1066, 1076 (9th Cir. 2003)* .

(n27)Footnote 24.3. **Consent required to divulge communications.** *18 U.S.C. § 2702(b)(3).*

*6th Circuit See Flagg v. City of Detroit, 2008 U.S. Dist. LEXIS 64735, at *11-12 (E.D. Mich. Aug. 22, 2008)* (contents of communications can also be divulged under other conditions specified in the Act).

9th Circuit See Quon v. Arch Wireless Operating Co., 529 F.3d 892, 900-903 (9th Cir. 2008) (disclosing email messages stored by "electronic communication service" provider to defendant City who subscribed to the service absent permission of intended recipient of communication violated Stored Communications Act).

(n28)Footnote 24.4. **Subpoena cannot be used to obtain emails from service provider.** *See In re Subpoena Duces Tecum to AOL, LLC, 550 F.Supp. 2d 606, 608 (E.D. Va. 2008)* (Act prohibited AOL from producing emails in response to subpoena because civil subpoena is not a disclosure exception under Act).

(n29)Footnote 24.5. *See 18 U.S.C. § 2702(b)(1)-(8).*

(n30)Footnote 24.6. **Rule 45 subpoenas not included among exceptions permitting disclosure of emails stored by internet service provider.** *See In re Subpoena Duces Tecum to AOL, LLC, 550 F. Supp. 2d 606, 611 (E.D. Va. 2008)* (court held that subpoena could not be enforced consistent with "plain language" of Stored Communications Act because plaintiffs had legitimate interest in confidentiality of their personal emails being stored electronically by AOL).

(n31)Footnote 24.7. **Backup protection applies only during email transmission.** *Fraser v. Nationwide Mut. Ins. Co., 135 F. Supp. 2d 623, 637 (E.D. Pa. 2001)* ("Stored Communications Act, like the original Wiretap Act, provides protection for communication only while it is in the course of transmission").

(n32)Footnote 24.8. **Emails protected if stored by electronic service provider for backup purposes.** *See Theofel v. Farley-Jones, 359 F.3d 1066,1075-1077 (9th Cir. 2003)* (court held that backup protection continued after email was delivered, but noted that if the remote computing service was the only place a user stores messages, the emails would not be stored for backup purposes).

(n33)Footnote 24.9. **Service provider identified.** *See* Quon v. Arch Wireless Operating Co., 529 F.3d 892, 900-903 (9th Cir. 2008) , *rev'd and remanded on other grounds, 2010 U.S. LEXIS 4972 (U.S. June 17, 2010)* (circuit court reversed lower court's ruling, holding that though subscriber's consent can lawfully authorize disclosure of emails stored by remote computing service provider, originator's consent is required to disclose emails stored by electronic communications service provider).

(n34)Footnote 24.10. **Unitary approach classifying service provider as electronic communication service or remote computing service provider flawed.** *See Flagg v. City of Detroit, 2008 U.S. Dist. LEXIS 64735, at *11-12 (E.D. Mich. Aug. 22, 2008)* (all-or-nothing approach rejected by court, which adopted a functional, context specific definition of remote computing service and electronic service provider).

(n35)Footnote 24.11. **Variety of circumstances showing party's control over discoverable materials not in party's possession.** *See Flagg v. City of Detroit, 2008 U.S. Dist. LEXIS 64735, at *25-31 (E.D. Mich. Aug. 22, 2008)* ("request for production need not be confined to documents or other items in a party's possession, but instead may properly extend to items that are in that party's control").

(n36)Footnote 24.12. **Party can be compelled to give consent to service provider to disclose emails.** *See Flagg v. City of Detroit, 2008 U.S. Dist. LEXIS 64735, at *23-34 (E.D. Mich. Aug. 22, 2008)* (internet service provider can disclose emails on consent of party compelled under Rule 37).

(n37)Footnote 25. **State statutes governing interception of electronic communications.** *See* Flanagan v. Epson Am., Inc., No. BC 00703036 (Sup. Ct. Cal. Jan. 4, 1991) (court declined to extend California's constitutional protection against invasion of privacy to interception of employees' email messages).

(n38)Footnote 26. *See* Cal. *Const., Art. 1, § 2*; *see also* Richard M. Schall, *Employee Privacy Rights,* 581 PLI Lit 865, 920 (1998).

(n39)Footnote 27. **Claims that acquiring employee emails violate wiretap statutes rejected.** Bourke v. Nissan Motor Corp., No. YC003979 (Sup. Ct. Cal. 1991), *aff'd*, No. B068705 (Cal. Ct. App. July 26, 1993) (order not to be published).

(n40)Footnote 28. **Privacy claims rejected by courts**. *See Smyth v. Pillsbury Co., 914 F. Supp. 97, 101 (E.D. Pa.*

1996) (no reasonable expectation to privacy to email communications despite employer's promise of confidentiality).

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Moore's Federal Practice: Discovery of Electronically Stored Information

Volume 7: Analysis: Civil Rules 30-37A
Chapter 37A Discovery of Electronically Stored Information
A. DESCRIPTION OF ELECTRONICALLY STORED INFORMATION

7-37A Moore's Federal Practice: Electronic Discovery § 37A.05

AUTHOR: by John K. Rabiej

§ 37A.05 Location of Electronically Stored Information

[1] Data Files

Information in a computer is stored in files designated by the computer user. The files are accessed by the computer's software. Files that can be accessed on a daily basis are "active" files. They can be modified and saved as part of ongoing personal or business operations. An active file is dynamic, subject to daily revisions, and can include word-processing documents, calendars, spread-sheets, databases, and email messages. Once a document attains a final form, it is often stored as an "inactive" file. Once "inactive," it can no longer be modified.

Files are normally organized under "directories" and "subdirectories." Email messages are exceptions and typically are lumped together in one database without any indexing or other classification. Emails may contain extensive attachments.

Files in a computer hard drive also contain residual data that is not visible on the computer's video monitor. The most important example of residual data is "deleted" data (*see § 37A.03[3]*). Other examples of residual data include electronically stored information on temporary files or information contained in the memories of fax and printer machines. Electronically stored information that was transmitted to a printer, but never "saved," may still be recovered from the printer's memory.

[2] Files on Backup Tape Systems

[a] Automatic Backup of Files by Computer

Some computer software applications include an automatic backup system that makes temporary copies of documents at timed intervals determined by the user. These transient backup copies create a record of revisions to a document, which includes information that may have been discarded. The safeguard feature prevents the loss of information input into the computer were the computer to shut down improperly, e.g., during a power loss. n1 The information is stored in the computer as a separate file. Earlier backups of a file are designated as free space on the disk and deleted. The most

recent file backup and any deleted but not overwritten file backup can be checked to determine whether the file had been revised or deleted.

[b] Backup of Files in Accordance With Established Policy

Under catastrophic records-retention policies, businesses and other organizations routinely retain records off-site on magnetic backup tapes. Although practices vary, a computer's active data files are typically copied daily and sent to a separate file server, usually a large computer. The backup tapes usually include all word-processing files, spread-sheets, models, and email messages. n2 The daily backups ordinarily include only new files or modifications of existing files that are on a network system. Typically, after one week, these backups are downloaded onto a magnetic tape. The tapes are retained for about a month and are usually reused in accordance with a set schedule to store subsequent monthly backups. When reused, earlier records on the tape are overwritten and erased. The tape, though, may still contain remnants of files from earlier backups. Depending on the organization's rotational cycle, backup records may be retained for several months or longer. n3

Usually only information contained in a networked system is backed up to an off-site location. Files entered in a non-network drive, such as files on personal drives, most often the "C" drive, are not automatically backed up. A separate copy of a file may be made to a floppy diskette or CD-ROM to safeguard against loss, which also is not routinely backed up. Furthermore, residual-deleted data files are not copied to the backup system by most commercial backup software.

Individual computer users can make duplicates of documents on portable computer storage media, such as floppy diskettes, CD-ROMs, or zip drives, to preserve their work in the event that their computers shut down improperly.

[3] Archived Files

Archived data are permanent records, which are stored at locations apart from active files. This safeguard ensures against loss due to a catastrophe, such as destruction caused by a fire or an explosion. Many businesses and organizations have a comprehensive records retention and disposition policy that sets out procedures for archiving selected data as permanent records. In some industries and commerce, federal regulations require permanent archiving of certain records. Temporary archives can also be established for specific reasons. For example, a "snapshot" duplicate of databases contained on a backup tape may be taken to ensure against potential loss when, for example, new software replaces an older one. n4

Search of archived data may pose problems if it is contained in retired "legacy" computer systems, which requires different search engines that may no longer be available. In such cases, searches of archived electronically stored files can be burdensome and expensive.

[4] Files on Computer Storage Media

Data files can be stored in numerous media, including magnetic tapes contained in a computer's internal hard drive, on a portable floppy diskette, thumb drives, or on zip drives. Electronically stored information can also be "burned" into optical storage media by laser, including a CD-ROM (single use or rewritable), laser disc, and DVD (Digital Video Disc).

[5] Files in Computer Systems

[a] "Computer System" Defined

A computer system includes all computers within an organization, including large servers, which connect many smaller computers (*see* [b], *below*), and desktop computers, which operate individually or are linked together within a network (

see [c], *below*). A computer system includes all hardware (such as modems, printers, data storage) and software (such as program applications). A computer-networked system connects computers and allows users to share and modify information on a particular network drive within the system. Users usually have access to a personal local drive, such as the "C" drive, to store non-networked matter. Significantly, information stored in a local, non-networked drive is usually not backed up together with information on a networked system.

[b] Mainframe Computers

Large databases were usually stored on mainframe computers. n5 However, the expanding capacity of personal computers has nearly eliminated the need for mainframe computers, many of which are often only used as servers linking multiple personal computers. Large databases can also be stored on these servers. n6

[c] Desktop Personal Computers

Individuals may work on personal computers in their offices, which may or may not be networked. Businesses often establish a local area network system (LANS) to link personal computers located within a discrete office, suite, division, or other organizational unit to a network server so that users of the unit can easily share data. Individual users can, through their desktop personal computer, access the LANS where all the data can be shared by everyone on the network. Only information stored on networked drives, however, may be shared. Information stored on a desktop computer's hard drive that is not earmarked for the shared network remains closed to other LANS computer users.

Data contained in a shared network is routinely backed up automatically under a company's records retention and disposition policy. Usually only documents and files contained in computer hard drives that are shared on a network are backed up. Individual users may "back up" other personal files, however, by copying them on a floppy diskette or other electronic or magnetic media.

[d] Home and Laptop Computers

The ubiquitous presence of personal computers increases the probability that work-related information is generated or stored in home personal computers, expanding the sources of electronically stored information that are subject to discovery. n7 Some companies have encouraged their employees to work at their homes through telecommuting programs. Others have developed employee-benefit programs that provide individual personal computers for home use. Although intended for the personal use of the employee, the computers are often linked to the office computer to permit access to data and a company's email system (*see § 37A.04[1]*).

At the same time, employees on travel status are increasingly relying on laptop computers to do work. The computers are becoming lighter and more powerful, and their use is growing. n8

[e] "Retired" Computer Systems

Some organizations have gone through several generations of computers and software programs. New generations of computers are being developed at a rapid pace, and earlier computer systems quickly become outdated and are replaced. A thorough search of information contained in these outdated and unused systems poses especially vexatious problems.

Often information contained in an earlier computer system, referred to as "legacy data," is incompatible with the newer generations of computer software applications and cannot be easily transferred to existing databases. As a result, information contained in an earlier computer system cannot be retrieved from operational computers, but must be retrieved from older, retired models. Retrieving legacy data from retired computer systems can become extremely difficult with the passage of time as the number of qualified technicians experienced with the older models declines. n9 Some organizations have retired several generations of computer systems, which exacerbates these problems. Even locating all retired computer systems can be difficult, particularly when no formal retirement policy has been followed.

[6] Random Access Memory (RAM)

Random Access Memory (RAM) is the working storage of a computer that is used when performing software program operations. RAM is designed to improve a computer's efficiency. It is very fast and impermanent. The information held in RAM is purged when the computer is turned off or when the data is overwritten with new information as part of the regular computing process. Unless affirmative steps are taken to capture and download data held in RAM to a hard disk drive, the data is effectively lost when the power to the computer is turned off or when communication between two or more computers ends. n10

Information held in RAM, however temporary, is "electronically stored information" for purposes of Rule 34. n11 Whether the information in RAM must be preserved will depend on the circumstances in the case. Unless a court orders otherwise and absent exceptional circumstances, a party should not be sanctioned if it fails to take steps to preserve data held in RAM, nor should a party be obligated to employ software programs to retain data stored in RAM because of its ephemeral nature (*see § 37A.57[1]*). n12 However, if information held in RAM is relevant evidence and not available from other sources, a court may require the party to take steps to retain it if reasonable conditions are imposed consistent with the proportionality analysis under Rule 26(b)(2)(C)(iii) (*see § 37A.33[2]*). n13

Legal Topics:

For related research and practice materials, see the following legal topics:
Civil ProcedureDiscoveryGeneral OverviewCivil ProcedureDiscoveryElectronic DiscoveryGeneral OverviewComputer & Internet LawCivil ActionsGeneral OverviewComputer & Internet LawInternet BusinessInternet & Online ServicesService ProvidersComputer & Internet LawPrivacy & SecurityAttorney-Client Communications

FOOTNOTES:
(n1)Footnote 1. Johnson, *A Practitioner's Overview of Digital Discovery, 33 Gonz. L. Rev. 347, 361 (1997-1998).*

(n2)Footnote 2. **Backup systems may contain different types of electronically stored information.** *See Linnen v. A.H. Robins Co., 1999 Mass. Super. LEXIS 240, at *1 (June 15, 1999)* (backup tapes containing all email messages requested in discovery).

(n3)Footnote 3. **Backup tapes recycled on periodic schedule.** *See, e.g., Linnen v. A.H. Robins Co., 1999 Mass. Super. LEXIS 240, at *3 (June 15, 1999)* (recycling backup tapes after three months is widely accepted business practice).

(n4)Footnote 4. **Archived data provide snapshot record of electronically stored information.** *See Danis v. USN Communs., Inc., 2000 U.S. Dist. LEXIS 16900, at *73 (N.D. Ill. Oct. 20, 2000)* (database was archived on backup computer tape).

(n5)Footnote 5. **Mainframe computers used to store huge databases.** *See Daewoo Elecs. Co. v. United States, 650 F. Supp. 1003, 1005 (Ct. Int'l Trade 1986)* (Department of Commerce stored data on mainframe computer that required special programs to extract it in usable form).

(n6)Footnote 6. **Servers may store large databases.** *See Danis v. USN Communs., Inc., 2000 U.S. Dist. LEXIS 16900, at *32-33 (N.D. Ill. Oct. 20, 2000)* (several databases stored on UNIX server and NT server, which could be accessed using different software applications).

(n7)Footnote 7. **Home computers used for business purposes.**

1st Circuit See McGuire v. Acufex Microsurgical, Inc., 175 F.R.D. 149, 151-152 (D. Mass. 1997) (relevant document found in home computer files).

7th Circuit Simon Prop. Group, L.P. v. mySimon, Inc., 194 F.R.D. 639, 641 (S.D. Ind. 2000) (inspection of computers, including computers at home, used by four named employees ordered by court).

(n8)Footnote 8. **Laptop computers can store much information.**

1st Circuit See Century ML-Cable Corp. v. Carrillo, 43 F. Supp. 2d 176, 179 (D.P.R. 1998) (defendant used laptop computer to clone cable television converter decoder electronic keys and maintained records of clients to whom sales were made).

8th Circuit See LEXIS-NEXIS v. Beer, 41 F. Supp. 2d 950, 952 (D. Minn. 1999) (employee loaded employer's database on laptop computer and retained database after accepting employment offer from rival employer).

*9th Circuit See Dawe v. Corrections USA, 2009 U.S. Dist. LEXIS 96461, at *15-20 (E.D. Cal. Oct. 1, 2009)* (court ordered inspection of laptop computer owned by plaintiff employee who reimbursed defendant company for full cost of computer after leaving the company).

(n9)Footnote 9. **Data from legacy systems difficult to restore.**

2d Circuit See Rowe Entertainment, Inc. v. William Morris Agency, Inc., 205 F.R.D. 421, 424 (S.D.N.Y. 2002) (defendant argued that restoration of old emails backed up by obsolete software program "would be exorbitantly expensive and, to some extent, a technical impossibility," but court ordered defendant to attempt restoration by other methods at plaintiff's expense).

*7th Circuit See Byers v. Illinois State Police, 2002 U.S. Dist. LEXIS 9861, at *34-35 (N.D. Ill. May 31, 2002)* (court shifted cost of producing emails to requesting party because search of legacy backup tapes for relevant emails would require responding party to license legacy email program at cost of $8,000 per month and benefits of search were likely marginal).

(n10)Footnote 10. **RAM defined**. *See Columbia Pictures, Inc. v. Bunnell, 245 F.R.D. 443, 446-447 (C.D. Cal. 2007)* (defendants were required to preserve on prospective basis a particularly defined subset of data in RAM under defendant's control).

(n11)Footnote 11. **Data stored in RAM is "electronically stored information."** *Columbia Pictures, Inc. v. Bunnell, 245 F.R.D. 443, 448 (C.D. Cal. 2007)* (court found that information held in RAM, though stored for less than six hours and as little as a billionth of a second, was sufficient to meet definition of "stored" for purposes of Rule 34).

(n12)Footnote 12. **Data held in RAM automatically purged by routine, good-faith operation of electronic information system not sanctionable.** *See Fed. R. Civ. P. 37(e)* (party not subject to sanctions for information lost due to routine computer operation); *compare Arista Records LLC v. Usenet.com, Inc., 608 F. Supp. 2d 409, 431-433 (S.D. N.Y. 2009)* (defendant had duty to preserve transitory usage logs and music files contained on servers, though ephemeral, because plaintiff specifically requested the information, information was relevant, and defendant failed to request protective order).

(n13)Footnote 13. **Court may require party to take steps to preserve information held in RAM.** *See Fed. R. Civ. P. 37(e)*, Committee Note of 2006 (*reproduced verbatim at § 37App.09[2]*) (court may make adjustments in managing discovery if party is unable to produce relevant responsive information when it is lost due to routine computer

operations).

9th Circuit See Columbia Pictures, Inc. v. Bunnell, 245 F.R.D. 443, 448 (C.D. Cal. 2007) ("following a careful evaluation of the burden to these defendants of preserving and producing the specific information requested in light of its relevance and the lack of other reliable available means to obtain it," court entered order requiring party to begin copying server log data--Internet protocol address of users of defendant's website and dates and times of requests--held in RAM).

*10th Circuit Compare Interscope Records v. DOES 1-14, 2007 U.S. Dist. LEXIS 73627, at *2-3 (D. Kan. Oct. 1, 2007)* (ex parte expedited discovery request for server log data retained by defendant who maintained software program that captured and downloaded data from information held in RAM).

*D.C. Circuit See Warner Bros. Records Inc. v. Does 1-6, 2007 U.S. Dist. LEXIS 86431, at *1-2 (D.D.C. Nov. 26, 2007)* (request for expedited discovery under Rule 45 for server log data retained by third party internet service provider).

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A. DESCRIPTION OF ELECTRONICALLY STORED INFORMATION

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Moore's Federal Practice: Discovery of Electronically Stored Information

Volume 7: Analysis: Civil Rules 30-37A
Chapter 37A Discovery of Electronically Stored Information
B. DISCOVERY OBLIGATIONS

7-37A Moore's Federal Practice: Electronic Discovery § 37A.10

AUTHOR: by John K. Rabiej

§ 37A.10 Duty to Preserve Relevant Electronically Stored Evidence

[1] Scope of Preservation Duty

A litigant has an affirmative duty to preserve potentially relevant evidence in its possession, custody, or control. n1 The definition of "control" has been construed broadly to include not only the "legal right" to obtain information, but also the practical ability to obtain documents from a nonparty. n1.1 The scope of the duty to preserve is a broad one, commensurate with the breadth of permissible discovery (*see § 37A.30*). n2 A litigant has a duty to preserve what it knows or reasonably should know is relevant in the action, is reasonably calculated to lead to the discovery of admissible evidence, is reasonably likely to be requested during discovery, and is the subject of a pending discovery request. n2.1 However, even though a party is responsible for preserving relevant evidence, the party is not required to retain every document in its possession after a lawsuit commences. n3 Nor is a party obligated to preserve every routine draft and edit of an unfinished document. n4 If the editing is performed in the ordinary course of business, a party need not take extraordinary steps to preserve each change. n5

The duty to preserve relevant evidence extends to electronically stored information, which may include databases, word-processing documents, spread-sheets, source codes, and email messages contained in various computer storage media, including backup tape systems that may be subject to a discovery request (*see § 37A.05*). n6 Although a party, under the 2006 electronic discovery amendments, is not required to search electronically stored information located on inaccessible sources, a party may be obligated to preserve the information if the party "believes that the information on such sources is likely to be discoverable and not available from reasonably accessible sources" (*see § 37A.35[1][a]*). n7

Converting data from an accessible to an inaccessible format does not necessarily constitute a violation of the duty to preserve electronically stored information, depending on the circumstances. n7.1 Conversion of data from an accessible to an inaccessible format occurs, for example, when emails on active accessible databases are purged routinely and copied onto inaccessible backup tapes. As long as the information is stored in a backup tape, even in an inaccessible format, the "conversion" will not result in spoliation because the responding party will be able to produce the electronic evidence by restoring it from the an inaccessible format, albeit at a higher cost (*see § 37A.36[3]*). n7.2

[2] Sources of Preservation Duty

The destruction of evidence relevant to litigation strikes at the core of the judicial process. In general, a court may impose sanctions only under its inherent authority for relevant evidence that is destroyed before litigation is commenced or a court order is issued (*see § 37A.50*). n8 If a party destroys relevant evidence after a court has issued a preservation order, however, it may be sanctioned under either Rule 37 or the court's inherent authority. n9 The range of penalties for violating the duty to preserve relevant evidence under Rule 37 is the same as under the court's inherent authority. n10 However, a court's inherent authority to regulate litigation and sanction is broader and more flexible than under the federal procedural rules. n11

[3] When Duty to Preserve Arises

[a] When Party Becomes Aware of Potential Litigation

The duty to preserve evidence can arise at different times depending on the case and the jurisdiction. n12 In general, the duty to preserve evidence arises when a party is aware or should be aware that evidence in its possession or control is relevant to litigation or potential litigation. n13 A party may learn that litigation is imminent in many ways. The plaintiff's attorney will sometimes send a notice before filing advising the opposing party of its plans to file a lawsuit, which may trigger the opposing party's duty to preserve relevant evidence. n14 The intent to file a lawsuit need not be explicitly stated in the correspondence to convey the possibility of litigation. n15 The potential litigation must be probable, however, and not merely possible. n16 A party has an independent duty to preserve relevant evidence whether or not the opposing party sent a notification. n17

The duty to preserve evidence can arise well before a lawsuit is filed, if a party becomes aware that a lawsuit is likely. n18 For example, if a party intends to prosecute a series of lawsuits involving the same subject matter against separate individual parties, it has a duty to preserve the documents retained during the earlier litigation. n19 A party may also learn of an imminent lawsuit from a third party who informs the party of legal actions taken against it that likely will lead to a future lawsuit against the party. n20 In a copyright infringement action, a cease and desist letter may trigger the duty to preserve evidence, even prior to the filing of litigation. n20.1

For further discussion of the duty to preserve evidence, see *§ 37.120* (sanctions for spoliation of evidence) and *§ 809.02[3]* (duty to preserve evidence under rules of ethics).

[b] When Complaint Is Filed or Court Order Is Issued

The duty to preserve evidence clearly arises when a complaint is formally filed and served on a party. n21 The preservation duty also clearly arises when a court issues an order requiring a party to preserve evidence. n22 The order provides proof of notice of the party's preservation duties that subjects the party to sanctions for destroying relevant evidence. n23 The order may explicitly delineate the party's preservation duty, and, more importantly, it may set out the scope of evidence that must be preserved, eliminating future disputes about the breadth of the party's preservation obligations. n24

At least one court has applied a balancing standard in determining whether to issue a preservation order. The factors considered by the court included: (1) the level of concern that the evidence will continue to exist in the absence of an order directing preservation; (2) any irreparable harm likely to result to the party seeking the order; and (3) the capability of an individual, entity, or party to maintain the evidence sought to be preserved, not only as to the evidence's original form, condition, or contents, but also the physical, spatial, and financial burdens created by ordering evidence preserved. (*see § 37A.25*). n24.1 Courts have declined to approve requests for orders, which have the effect of transferring the initial responsibility of determining a party's search and preservation obligations from the party to the court. n24.2

An order to preserve evidence is typically issued at a pretrial conference, including a Rule 16 conference, n25 or as part of a ruling on a motion to compel disclosure or discovery. n26 If time is of the essence and a sufficient showing is made that electronic records essential to a case might be destroyed, a court may decide to issue a temporary restraining order to ensure that the records will be preserved (*see § 37A.23*). n27

For further analysis of when the preservation duty arises in the electronic discovery context, see Scheindlin, *E-Discovery: The Newly Amended Federal Rules of Civil Procedure*, Part II., *Rule 16(b) Order and the Rule 26(f) Meet and Confer Requirements* (Matthew Bender 2006).

[4] Preservation Request Should Contain Reasonable Limits

A party may advise the opposing party of items that must be preserved to prevent their destruction. However, the scope of the preservation request must be reasonably specific and limited. n28 Parties that have not fully complied with broadly worded notices sent by opposing counsel to preserve relevant electronically stored evidence have avoided sanctions or have been sanctioned lightly in cases when the notice literally applied to all electronically stored information, and no attempt was made to narrow its scope to reasonable limits. n29 Despite failing to comply fully with the notice, parties have also avoided adverse consequences solely because the opposing party failed to pursue discovery (*see § 37A.55[2][c]*). A responding party may also avert sanctions if the requested matter is irrelevant or privileged, or the retrieval process is unduly burdensome or expensive (*see §§ 37A.31[1]*; *37A.34[1]*). n30 However, if a party does pursue a request for electronically stored evidence that was destroyed inadvertently or deleted as part of a record-retention policy, notwithstanding an earlier court order, the consequences can be outcome determinative (see *§ 37A.57* (destruction of evidence via routine retention-disposition policy and impact of 2006 amendment's "safe harbor" provision of Rule 37)). n31 Rather than assuming the risk of sanctions for destroying evidence, the better practice is to identify the scope of the electronically stored evidence that needs to be preserved early in the litigation so that each party understands its respective responsibilities. n32

For further analysis of the preservation duty in the electronic discovery context, *see* Scheindlin, *E-Discovery: The Newly Amended Federal Rules of Civil Procedure*, Part II., *Rule 16(b) Order and the Rule 26(f) Meet and Confer Requirements* (Matthew Bender 2006) (parties must focus on their preservation obligation as early as possible).

[5] Attorney's Responsibility to Advise Client of Duty to Preserve

An attorney is responsible to advise a client of pending litigation and its duty to preserve relevant evidence. n33 Electronically stored information is constantly deleted or modified as part of routine computer and business operations, which require an attorney's prompt attention to prevent inadvertent destruction of relevant evidence (*see § 37A.55*). Counsel should advise a client to take appropriate steps to preserve evidence, including adopting a litigation hold, once litigation becomes imminent. n34 A litigation hold is intended to prevent the destruction of relevant evidence by advising employees to take steps to preserve evidence and to suspend any operation that automatically deletes potential evidence, such as routine purging of emails. n34.1 The litigation hold need not necessarily be addressed to all employees, but only to those employees who might reasonably maintain relevant documents. n34.2 Nor must notice of a litigation hold be in writing. n34.3

In *Zubulake v. UBS Warburg*, n35 Judge Shira A. Scheindlin, in a Second Circuit district court case, summarized a party's duty to preserve electronically stored evidence as follows: Once a party reasonably anticipates litigation, it must suspend its routine document retention/destruction policy and put in place a "litigation hold" to ensure the preservation of relevant documents, but the litigation hold generally does not apply to inaccessible backup tapes. n35.1 The court defined "inaccessible backup tapes" as those typically maintained solely for the purpose of disaster recovery. Such tapes may continue to be recycled on the schedule set forth in the company's policy. However, there is one exception to this general rule. If a company can identify where particular employee documents are stored on backup tapes, then the tapes

storing the documents of "key players" to the existing or threatened litigation should be preserved if the information on those tapes is not otherwise available (*see § 37A.57[1]*). n36

A party's employees must be advised in sufficient detail of the litigation, the scope of evidence to be preserved, and the consequences of failing to preserve relevant evidence (*see § 37A.55*). n37 Counsel is responsible for taking reasonable steps to ensure that the party complies with the litigation hold and provides all information responsive to the discovery request. n37.1 Counsel may need to ensure that records of former "key player" employees are retained. n37.2 The party is subject to sanctions for knowingly and purposefully permitting its employees to destroy relevant evidence. n38 A counsel's failure to advise a client of its preservation duty, however, does not excuse a party who destroys evidence. n39

Parties should address what evidence must be preserved at the Rule 26(f) conference, at the Rule 16 pretrial conference, or at an earlier meeting (*see § 37A.20[1]*). n40 Before filing a motion for a Rule 26(c) protective order or a Rule 37(a) motion to compel production of evidence, the parties must discuss these issues as part of their duty to confer with each other to resolve the dispute without court action (*see § 26.103*). n41 If the dispute is not resolved by the parties, the court should make a ruling. n42 Of course, serious consequences follow destruction of relevant evidence specifically targeted in a court order. n43

For further discussion of sanctions, see *§ 37A.50* and *Ch. 37, Failure to Make Disclosures or to Cooperate in Discovery; Sanctions.*

Legal Topics:

For related research and practice materials, see the following legal topics:
Civil ProcedureDiscoveryDisclosuresMotions to CompelCivil ProcedureDiscoveryDisclosuresSanctionsCivil ProcedureDiscoveryElectronic DiscoveryGeneral OverviewComputer & Internet LawInternet BusinessInternet & Online ServicesService ProvidersComputer & Internet LawPrivacy & SecurityAttorney-Client Communications

FOOTNOTES:
(n1)Footnote 1. **Affirmative duty to preserve relevant evidence.**

1st Circuit See Vazques-Corales v. Sea-Land Serv., Inc., 172 F.R.D. 10, 11, 15 (D.P.R. 1997) (duty violated when plaintiff sold allegedly defective truck before defendant had reasonable opportunity to inspect it).

*2d Circuit See New York State NOW v. Cuomo, 1998 U.S. Dist. LEXIS 10520, at *5 (S.D.N.Y. July 13, 1998)* (party has duty to preserve evidence).

3d Circuit In re Prudential Ins. Co. of Am. Sales Practices Litig., 169 F.R.D. 598, 615 (D.N.J. 1997) (duty to preserve documents that are potentially discoverable materials is affirmative duty that rests squarely on shoulders of senior corporate officers).

*7th Circuit See Danis v. USN Communs., Inc., 2000 U.S. Dist. LEXIS 16900, at *4 (N.D. Ill. Oct. 20, 2000)* (fundamental to duty of production of information is threshold duty to preserve documents and other information); *see also Cohn v. Taco Bell Corp., 1995 U.S. Dist. LEXIS 12645, at *24 (N.D. Ill. Aug. 29, 1995)* (court did not countenance failure to warn employees to preserve documents known to be relevant to issues in instant litigation).

9th Circuit See National Ass'n of Radiation Survivors v. Turnage, 115 F.R.D. 543, 557-58 (N.D. Cal. 1987) ("The obligation to retain discoverable materials is an affirmative one; it requires that the agency or corporate officers having notice of discovery obligations communicate those obligations to employees

in possession of discoverable materials."); *see also William T. Thompson Co. v. General Nutrition Corp., 593 F. Supp. 1443, 1455 (C.D. Cal. 1984)* (party has duty to preserve what it knows or reasonably should know to be relevant evidence).

(n2)Footnote 1.1. **"Control" broadly construed.**

1st Circuit See Haseotes v. Abacab Int'l Computers, Inc., 120 F.R.D. 12, 15 (D. Mass. 1988) (party has "control" over document if that party has legal right to obtain that document).

*2d Circuit See Gordon Partners v. Blumenthal, 2007 U.S. Dist. LEXIS 6198, at *59-60 (S.D.N.Y. Jan. 30, 2007)* ("Under Rule 34, 'control' does not require that the party have legal ownership or actual possession of the documents at issue; rather, documents are considered to be under a party's control when that party has the right, authority, or practical ability to obtain the documents from a non-party to the action").

*6th Circuit See Flagg v. City of Detroit, 2008 U.S. Dist. LEXIS 64735, at *23-35 (E.D. Mich. Aug. 22, 2008)* ("party responding to a Rule 34 production request cannot furnish only that information within his immediate knowledge or possession; he is under an affirmative duty to seek that information reasonably available to him from his employees, agents, or others subject to his control," citing *Gray v. Faulkner, 148 F.R.D. 220, 223 (N.D. Ind. 1992))* .

*10th Circuit See Heartland Surgical Specialty Hosp., LLC v. Midwest Div., Inc., 2007 U.S. Dist. LEXIS 22090, *61-72 (D. Kan. Mar. 26, 2007)* (court considers multiple factors to determine whether one party has control over documents possessed by another party).

11th Circuit See Searock v. Stripling, 736 F.2d 650, 653 (11th Cir. 1984) (documents are deemed to be within possession or control of party for purposes of *Fed. R. Civ. P. 34* if party has actual possession, custody, or control of materials or has legal right to obtain documents on demand).

(n3)Footnote 2. **Duty to preserve is broad, commensurate with permissible discovery.** *Fed. R. Civ. P. 26*; *see Herbert v. Lando, 441 U.S. 153, 177, 99 S. Ct. 1635, 60 L. Ed. 2d 115 (1979)* (depositions and discovery rules are to be accorded broad and liberal treatment).

*7th Circuit See Danis v. USN Communs., Inc., 2000 U.S. Dist. LEXIS 16900, at *4 (N.D. Ill. Oct. 20, 2000)* (broad duty of disclosure extends to all documents that fit definition of relevance for discovery purposes); *see also China Ocean Shipping Co. v. Simone Metals Inc., 1999 U.S. Dist. LEXIS 16264, at *12 (N.D. Ill. Sept. 30, 1999)* (duty to preserve evidence includes any relevant evidence over which nonpreserving entity had control and reasonably knew or could reasonably foresee was material to potential legal action).

8th Circuit See, e.g., Weiss v. Amoco Oil Co., 142 F.R.D. 311, 315 (S.D. Iowa 1992) (request for discovery should be considered relevant if there is any possibility that information sought will be relevant to subject matter of litigation).

9th Circuit William T. Thompson Co. v. General Nutrition Corp., 593 F. Supp. 1443, 1455 (C.D. Cal. 1984) (litigant must preserve what it knows, or reasonably should know, is relevant in action, is reasonably calculated to lead to discovery of admissible evidence, is reasonably likely to be requested during discovery, and/or is subject of pending discovery request).

D.C. Circuit See, e.g., Food Lion, Inc. v. United Food & Commercial Workers Int'l Union, 103 F.3d 1007, 1012-1013 (D.C. Cir. 1997) (discovery is broadly construed).

(n4)Footnote 2.1. **What to preserve.** *See Arista Records LLC v. Usenet.com, Inc., 608 F. Supp. 2d 409, 433 (S.D.N.Y. 2009)* (party had obligation to preserve and produce usage data and digital music files, which were the subject of pending discovery requests, and which counsel had promised would be produced).

(n5)Footnote 3. **Party not required to retain every document.**

2d Circuit Zubulake v. UBS Warburg, LLC, 220 F.R.D. 212, 217 (S.D.N.Y. 2003) (corporation is not obligated to preserve "every shred of paper, every email or electronic document, and every back up tape").

*7th Circuit See Danis v. USN Communs., Inc., 2000 U.S. Dist. LEXIS 16900, at *99 (N.D. Ill. Oct. 20, 2000)* (citing **Moore's**; duty to preserve does not require litigant to keep every scrap of paper in files).

9th Circuit See William T. Thompson Co. v. General Nutrition Corp., 593 F. Supp. 1443, 1455 (C.D. Cal. 1984) (party has duty to preserve what it knows or reasonably should know to be relevant evidence).

(n6)Footnote 4. **Retaining drafts of documents excluded under preservation order.** *See Westcoat v. Bayer Cropscience LP, 2006 U.S. Dist. LEXIS 79756, at *15 (E.D. Mo. Nov. 1, 2006)* (court issued preservation order, which was agreed upon by both parties, that did not apply to "dictation, drafts, interim versions or other temporary compilations of information if such documents would not have been preserved in the ordinary course of business").

(n7)Footnote 5. **Every document edit need not be retained.** *See McGuire v. Acufex Microsurgical, Inc., 175 F.R.D. 149, 156 (D. Mass. 1997)* ("To hold otherwise would be to create a new set of affirmative obligations for employers, unheard of in the law--to preserve all drafts of internal memos, perhaps even to record everything no matter how central to the investigation, or gratuitous.").

(n8)Footnote 6. **Duty to preserve extends to all electronically stored information.** *See* American Bar Association Civil Discovery Standards 29(a)(i) (1999).

*2d Circuit See New York State NOW v. Cuomo, 1998 U.S. Dist. LEXIS 10520, at *3-4 (S.D.N.Y. July 13, 1998)* (computer database included letters and reports, outgoing letters, internal memoranda, monthly summary reports, and emails).

*7th Circuit See In re Brand Name Prescription Drugs Antitrust Litig., 1995 U.S. Dist. LEXIS 8281, at *1 (N.D. Ill. June 13, 1995)* (email is discoverable).

9th Circuit See William T. Thompson Co. v. General Nutrition Corp., 593 F. Supp. 1443, 1448-1449 (C.D. Cal. 1984) (computer backup tapes retained for 2 to 12 weeks were relevant evidence).

10th Circuit See Computer Assocs. Int'l, Inc. v. American Fundware, Inc., 133 F.R.D. 166, 169 (D. Colo. 1990) (relevant evidence included computer source codes); *see also Procter & Gamble Co. v. Haugen, 179 F.R.D. 622, 632 (D. Utah 1998)* (destruction of emails contained in computers of five employees, despite being identified by responding party as containing relevant evidence, was sanctioned).

(n9)Footnote 7. **Preservation duty may extend to inaccessible electronically stored information.** Former Fed. R. Civ. P. 37(f) (now see *Fed. R. Civ. P. 37(e)*, as restyled in 2007), Committee Note of 2006 (*reproduced verbatim at § 37App.09[2]*); *see* Scheindlin, *E-Discovery: The Newly Amended Federal Rules of Civil Procedure* (Matthew Bender 2006) (parties must focus on their preservation obligation as early as possible).

(n10)Footnote 7.1. **Duty to preserve does not prohibit conversion of data.** *Compare Quinby v. WestLB AG, 245 F.R.D. 94, 103-104 (S.D.N.Y. 2006)* (in complying with duty to preserve evidence, party is free to preserve electronic evidence in any format it chooses, including inaccessible formats); *with Treppel v. Biovail Corp., 233 F.R.D. 363, 372 n.4 (S.D.N.Y. 2006)* ("permitting the downgrading of data to a less accessible form-which systematically hinders future discovery by making the recovery of the information more costly and burdensome-is a violation of the preservation obligation").

(n11)Footnote 7.2. **No spoliation when data is converted to inaccessible format.** *Quinby v. WestLB AG, 245 F.R.D. 94, 104 (S.D.N.Y. 2006)* (converting electronic documents into inaccessible format is comparable to moving hard copies of documents to off-site storage facility in remote location; although retrieval will be more expensive and time consuming, documents still exist).

(n12)Footnote 8. **Court's inherent authority to sanction party before litigation.** *See* Gregory P. Joseph, *Sanctions: The Federal Law of Litigation Abuse § 28(A)* (3d ed. 2000).

> *2d Circuit See Turner v. Hudson Transit Lines, Inc., 142 F.R.D. 68, 72 (S.D.N.Y. 1991)* (*Fed. R. Civ. P. 37* does not deal with spoliation issues before discovery request; courts may sanction under inherent authority).
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> *10th Circuit See Computer Assocs. Int'l, Inc. v. American Fundware, Inc., 133 F.R.D. 166, 168 (D. Colo. 1990)* (entering default judgment for destroying essential computer source code before litigation instituted, relying on *Roadway Express, Inc. v. Piper, 447 U.S. 752, 765 (1980))* .
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> *11th Circuit See ABC Home Health Servs. Inc. v. IBM Corp., 158 F.R.D. 180, 183 (S.D. Ga. 1994)* (*Fed. R. Civ. P. 37* does not directly apply because alleged destruction of documents took place before action was filed and discovery began; court may sanction under inherent authority).

(n13)Footnote 9. **Sanction under Rule 37 or inherent authority for violation of preservation order.** *See Fed. R. Civ. P. 37(b)*.

> *9th Circuit See Unigard Sec. Ins. Co. v. Lakewood Eng'g & Mfg. Corp., 982 F.2d 363, 368 (9th Cir. 1992)* (although "order" as used in *Fed. R. Civ. P. 37* is read broadly to include, for example, oral requests from the court, *Fed. R. Civ. P. 37(b)(2)*'s requirement for some court order is still necessary).
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> *11th Circuit See ABC Home Health Servs. Inc. v. IBM Corp., 158 F.R.D. 180, 183 (S.D. Ga. 1994)* (*Fed. R. Civ. P. 37* does not directly apply because alleged destruction of documents took place before action was filed and discovery began; court may sanction under inherent authority).

(n14)Footnote 10. **Range of penalties under Rule 37 similar to penalties imposed under court's inherent powers.** *See McGuire v. Acufex Microsurgical, Inc., 175 F.R.D. 149, 153 (D. Mass. 1997)* (no need to determine whether Rule 37 governs sanctions for destruction of evidence because court has inherent authority to consider allegations of misconduct).

(n15)Footnote 11. **Inherent authority is broader and more flexible.**

2d Circuit Arista Records LLC v. Usenet.com, Inc., 608 F. Supp. 2d 409, 429-430 (S.D.N.Y. 2009) (due to "potency of court's inherent power, courts must exercise restraint and discretion" when using it, and Second Circuit requires finding of bad faith for imposition of sanctions under inherent powers).

9th Circuit See Van Bronkhorst v. Safeco Corp., 529 F.2d 943, 951 (9th Cir. 1976) .

11th Circuit Banco Latino, S.A.C.A. v. Gomez Lopez, 53 F. Supp. 2d 1273, 1277 (S.D. Fla. 1999) .

(n16)Footnote 12. **Duty to preserve arises at different times.**

6th Circuit See Welsh v. United States, 844 F.2d 1239, 1247-1248 (6th Cir. 1988) (disposal of critical evidence before litigation commenced sanctionable).

*7th Circuit See Danis v. USN Communs., Inc., 2000 U.S. Dist. LEXIS 16900, at *99 (N.D. Ill. Oct. 20, 2000)* (duty to preserve arises on receipt of discovery request or when complaint is filed).

9th Circuit See Unigard Sec. Ins. Co. v. Lakewood Eng'g & Mfg. Corp., 982 F.2d 363, 365 (9th Cir. 1992) (pre-filing destruction of evidence sanctioned).

10th Circuit See Computer Assocs. Int'l, Inc. v. American Fundware, Inc., 133 F.R.D. 166, 169 (D. Colo. 1990) (court set time of answer for 20 days after service of complaint as date duty commenced).

(n17)Footnote 13. **Duty arises when party is aware or should be aware of litigation.**

2d Circuit Zubulake v. UBS Warburg LLC, 220 F.R.D. 212, 216 (S.D.N.Y. 2003) (obligation to preserve arises when party has notice that evidence is relevant to litigation or when party should have known that evidence may be relevant to future litigation).

8th Circuit See Lewy v. Remington Arms Co., 836 F.2d 1104, 1112 (8th Cir. 1988) (corporation responsible for preserving documents it knew or should have known would be material at some point in future, and document retention policies would not shield intentional destruction of documents).

9th Circuit See William T. Thompson Co. v. General Nutrition Corp., 593 F. Supp. 1443, 1446 (C.D. Cal. 1984) (notice of litigation provided by pre-litigation correspondence, filing of complaint, and requests for discovery).

(n18)Footnote 14. **Communication from opposing counsel notifies party of preservation duty.**

*4th Circuit See MasterCard Int'l, Inc. v. Moulton, 2004 U.S. Dist. LEXIS 11376, at *4-5 (S.D.N.Y. June 22, 2004)* (counsel sent letter reminding opposing party of preservation duty and specifically identified certain electronically stored information that must be preserved).

9th Circuit See William T. Thompson Co. v. General Nutrition Corp., 593 F. Supp. 1443, 1446 (C.D. Cal. 1984) (notice provided by pre-litigation correspondence).

10th Circuit See Computer Assocs. Int'l, Inc. v. American Fundware, Inc., 133 F.R.D. 166, 168-169 (D.

Colo. 1990) (duty to preserve relevant evidence arose after pre-litigation discussions with counsel).

(n19)Footnote 15. **Letter need not expressly indicate intent to file lawsuit.** *See ABC Home Health Servs., Inc. v. IBM Corp., 158 F.R.D. 180, 181 (S.D. Ga. 1994)* ("tone" of letter that was sent terminating agreement to develop software was sufficient to alert defendant of possibility of lawsuit).

(n20)Footnote 16. **Litigation must be probable.** *See Iowa Ham Canning, Inc. v. Handtmann, Inc., 870 F. Supp. 238, 244 (N.D. Ill. 1994)* (under Illinois law, lawsuit must be contemplated rather than merely possible).

7th Circuit See Iowa Ham Canning, Inc. v. Handtmann, Inc., 870 F. Supp. 238, 244 (N.D. Ill. 1994) (under Illinois law, lawsuit must be contemplated rather than merely possible).

*10th Circuit Cache La Poudre Feeds, LLC v. Land O'Lakes, Inc., 2007 U.S. Dist. LEXIS 15277, at *30 (D. Colo. Mar. 2, 2007)* (preservation duty must be predicated on "something more than an equivocal statement of discontent" or proposal suggesting negotiated resolution).

(n21)Footnote 17. **Independent duty.** *See Thompson v. U.S. Dept. of Housing and Urban Dev., 219 F.R.D. 93, 100 (D. Md. 2003)* (separate notice is not required; responding party has obligation to preserve relevant evidence).

(n22)Footnote 18. **Duty arises when party should be reasonably aware of imminent filing of lawsuit.**

1st Circuit See McGuire v. Acufex Microsurgical, Inc., 175 F.R.D. 149, 154 (D. Mass. 1997) (defendant aware of duty to preserve relevant evidence from earlier administrative action filed by plaintiff alleging same discrimination claims that led to instant litigation).

8th Circuit See Dillon v. Nissan Motor Co., 986 F.2d 263, 268-269 (8th Cir. 1993) (plaintiff's destruction of relevant evidence before filing lawsuit justifies sanction because plaintiff was necessarily aware of imminent litigation).

(n23)Footnote 19. **Series of similar lawsuits provides sufficient notice.**

3d Circuit See Struthers Patent Corp. v. Nestle Co., 558 F. Supp. 747, 759 (D.N.J. 1981) (plaintiff completed patent litigation against General Foods, and knew or should have known that similar litigation was contemplated against Nestle).

*10th Circuit See Adams and Assoc., LLC v. Dell, Inc., 2009 U.S. Dist. LEXIS 26964, at *48-49 (D. Utah, Mar. 30, 2009)* (preservation duty arose after plaintiff won first of a series of patent infringement cases relating to floppy disk controller errors).

(n24)Footnote 20. **Third party may alert party to imminent lawsuit.** *See Arista Records, Inc. v. Sakfield Holding Co., 314 F.Supp 2d 27, 33 (D.D.C. 2004)* (third-party Internet service provider informed defendant that plaintiff made claims of copyright infringement against defendant's web site, which was sufficient notification to impose preservation obligation).

(n25)Footnote 20.1. **Cease and desist letter provides notice.** *See Arista Records LLC v. Usenet.com, Inc., 608 F. Supp. 2d 409, 430 (S.D.N.Y. 2009)* (in usual case, duty to preserve arises no later than date action is filed).

(n26)Footnote 21. **Duty arises when complaint is filed.**

2d Circuit *New York State NOW v. Cuomo, 1998 U.S. Dist. LEXIS 10520, at *4 (S.D.N.Y. July 13, 1998)* (service of complaint puts receiving party on notice of duty to preserve evidence); *see* *Turner v. Hudson Transit Lines, Inc., 142 F.R.D. 68, 72 (S.D.N.Y. 1991)* (complaint itself may also alert party that certain information is relevant and likely to be sought in discovery).

7th Circuit *See* *Danis v. USN Communs., Inc., 2000 U.S. Dist. LEXIS 16900, at *99 (N.D. Ill. Oct. 20, 2000)* (duty to preserve arises on receipt of discovery request or when complaint is filed).

10th Circuit *See* *Computer Assocs. Int'l, Inc. v. American Fundware, Inc., 133 F.R.D. 166, 169 (D. Colo. 1990)* (service of complaint puts party on notice of duty to preserve evidence).

(n27)Footnote 22. *See Fed. R. Civ. P. 37(b)*; *see also Fed. R. Civ. P. 26(f)*, Committee Note of 2006 (*reproduced verbatim at § 26App.11[2]*).

(n28)Footnote 23. **Court order notifies party of duty to preserve evidence.** *See* *Procter & Gamble Co. v. Haugen, 179 F.R.D. 622, 631 (D. Utah 1998)* (court order also delineates scope of discovery and provides standard to evaluate efforts to produce requested evidence).

(n29)Footnote 24. **Order establishes scope of evidence to be preserved.**

7th Circuit *See* *Illinois Tool Works, Inc. v. Metro Mark Prods., Ltd., 43 F. Supp. 2d 951, 954 (N.D. Ill. 1999)* (court ordered "all parties to preserve the integrity of all computers that are at issue here without any spoliation of any information contained therein").

8th Circuit *See* *Westcoat v. Bayer Cropscience, LP, 2006 U.S. Dist. LEXIS 79756, at *1-2 (E.D. Mo. Nov. 1, 2006)* (parties agreed upon contents of preservation order to delineate precise scope of preservation duties).

(n30)Footnote 24.1. **Balancing test for issuance of preservation order.** *Treppel v. Biovail Corp., 233 F.R.D. 363, 370 (S.D.N.Y. 2006)* (court rejected position that party seeking preservation order must meet standards for obtaining injunctive relief).

(n31)Footnote 24.2. **Initial responsibility to determine search and preservation obligations lies on parties.**

3d Circuit *See* *Yeisley v. PA State Police, 2008 U.S. Dist. LEXIS 25706, at *9 n.1 (M.D. Pa. Mar. 31, 2008)* (party cannot "insist upon some judicial 'imprimatur' on an e-mail search protocol before complying with their discovery obligations").

5th Circuit *See* *State of Texas v. City of Frisco, 2008 U.S. Dist. LEXIS 24353, at *8-9 (E.D. Tex. Mar. 27, 2008)* (court declines to approve party's request to rule on which evidence must be preserved before complaint filed, because ruling would amount to an advisory opinion).

(n32)Footnote 25. **Rule 16 pretrial conference order notifies party of preservation duty.** *See* *In re Prudential Ins. Co. of Am. Sales Practices Litig., 169 F.R.D. 598, 600 (D.N.J. 1997)* (*Fed. R. Civ. P. 16* pretrial order required party to "preserve all documents and other records containing information potentially relevant to the subject matter of this litigation").

(n33)Footnote 26. **Court ruling on motion to compel may notify party of preservation duty.** *See Illinois Tool Works v. Metro Mark Prods., Ltd., 43 F. Supp. 2d 951, 954 (N.D. Ill. 1999)* (court ordered parties to preserve electronically stored records in response to plaintiff's motion to compel discovery).

(n34)Footnote 27. **Temporary restraining order issued to preserve evidence.**

10th Circuit See Religious Tech. Ctr. v. F.A.C.T.NET, Inc., 901 F. Supp. 1519, 1522 (D. Colo. 1995) (ex parte restraining order issued to prevent copying or use or reproduction of copyrighted material).

D.C. Circuit See Armstrong v. Bush, 807 F. Supp. 816, 820 (D.D.C. 1992) (restraining order granted because of threat of imminent and irreparable injury shown from purging of National Security Council's records at end of President's administration alleged in Freedom of Information Act case).

(n35)Footnote 28. **Preservation request must be reasonable.**

*7th Circuit See Turner v. Resort Condominiums Int'l, LLC, 2006 U.S. Dist. LEXIS 48561, at *15-16 (S.D. Ind. July 13, 2006)* (request to suspend all "automatic" deletion programs on every personal, laptop, and mainframe computer and make mirror image copies of hard drives "did not accommodate the routine day-to-day needs of a business with a complex computer network" and "went well beyond its ... general duty to avoid destruction of evidence").

11th Circuit But see Optowave Co. Ltd. v. Nitikin, 2006 U.S. Dist. LEXIS 81345, at *30-31 (M.D. Fla. Nov. 7, 2006) (broad preservation notice recommending that "copy of the hard drives on all network servers, computers, and laptop computers, including any deleted files resident on the hard drives" adequately put opposing party on notice of its preservation duty).

(n36)Footnote 29. **Some specificity in notice to preserve evidence required.**

9th Circuit See Lawyers Title Ins. Corp. v. United States Fidelity & Guar. Co., 122 F.R.D. 567, 570 (N.D. Cal. 1988) (plaintiff's request for all computerized records of claims during five years was too broad and not warranted on mere asserted need "to facilitate the production of the relevant matter").

10th Circuit See Procter & Gamble Co. v. Haugen, 179 F.R.D. 622, 631 (D. Utah 1998) (court declined to sanction party who destroyed emails despite being notified by opposing party to preserve all corporate email communications).

D.C. Circuit See Alexander v. FBI, 188 F.R.D. 111, 115 (D.D.C. 1998) (party's alleged history of stonewalling production of documents and being less than candid were insufficient reasons to justify "discovery into the scope of a document search").

(n37)Footnote 30. **Destruction of evidence not always sanctioned.** *See Procter & Gamble Co. v. Haugen, 179 F.R.D. 622, 631 (D. Utah 1998)* (no sanction for destroying email communications after commencement of litigation absent showing of bad faith).

(n38)Footnote 31. **Consequences of destroyed evidence can be outcome determinative.** *See William T. Thompson Co. v. General Nutrition Corp., 593 F. Supp. 1443, 1455-1456 (C.D. Cal. 1984)* (default judgment and penalty of $453,312 for failure to retain backup tapes and halt routine destruction of records in accordance with record disposition policy despite court order).

(n39)Footnote 32. **Parties agree on scope of preservation duties.** *See Westcoat v. Bayer Cropscience, LP, 2006 U.S. Dist. LEXIS, at *1-2 (E.D. Mo. Nov. 1, 2006)* (court delineates preservation duties as guidance to parties, recognizing that "law with respect to preservation efforts is not fully developed").

(n40)Footnote 33. **Attorney's responsibility to notify client.** American Bar Association Civil Discovery Standards 10 (1999) (imposing responsibility on counsel to inform client of its duty to preserve relevant evidence).

*2d Circuit See Phoenix Four, Inc. v. Strategic Resources Corp., 2006 U.S. Dist. LEXIS 32211, at *17 (S.D.N.Y. May 23, 2006)* (attorney has duty "to search for sources of information," including inaccessible electronically stored information); *see also Metropolitan Opera Assoc., Inc. v. Local 100, 212 F.R.D. 178, 181 (S.D.N.Y. 2003)* (attorney aware that client had no document retention policy was sanctioned for failing "to cause a retention policy to be adopted to prevent destruction of responsive documents, both paper and electronic").

*10th Circuit See Cardenas v. Dorel Juvenile Group, Inc., 2006 U.S. Dist. LEXIS 37465, at *23 (D. Kan. June 1, 2006)* (trial counsel has duty to identify "all employees likely to have been authors, recipients or custodians of documents falling within request").

(n41)Footnote 34. **Appropriate steps needed to notify employees of preservation duty.**

2d Circuit See Metropolitan Opera Assoc., Inc. v. Local 100, 212 F.R.D. 178, 181 (S.D.N.Y. 2003) (attorney aware that client had no document retention policy was sanctioned for failing "to cause a retention policy to be adopted to prevent destruction of responsive documents, both paper and electronic").

3d Circuit See In re Prudential Ins. Co. of Am. Sales Practices Litig., 169 F.R.D. 598, 615 (D.N.J. 1997) (unless email notification of preservation duty effectively reaches all employees, other methods of communication must be used).

7th Circuit See Danis v. USN Communs., Inc., 2000 U.S. Dist. LEXIS 16900 (N.D. Ill. Oct. 20, 2000) (no written instructions furnished to employees advising them of litigation and duty to preserve relevant evidence and documents); *see also Cohn v. Taco Bell Corp., 1995 U.S. Dist. LEXIS 12645, at *24 (N.D. Ill. 1995)* (court did not countenance failure to warn employees to preserve documents known to be relevant to issues in instant litigation).

*8th Circuit See Board of Regents Univ. of Neb. v. BASF Corp., 2007 U.S. Dist. LEXIS 82492, at *15-18* (D. Neb. Nov. 5, 2007 ("At a minimum, that means counsel must direct the client to ensure that documents are preserved, not deleted from an electronically stored information system or otherwise destroyed or made unavailable.").

9th Circuit See National Ass'n of Radiation Survivors v. Turnage, 115 F.R.D. 543, 557-558 (N.D. Cal. 1987) (duty to retain discoverable materials is affirmative; duty requires that agency or corporate officers having notice of discovery obligations communicate those obligations to employees in possession of discoverable materials).

(n42)Footnote 34.1. **Example of litigation-hold notice**. *See In re NTL Sec. Litig.; Gordon Partners, 2007 U.S. Dist. LEXIS 6198, at *12-15 (S.D.N.Y. Jan. 30, 2007)* (notice informs employees to preserve documents relevant to lawsuit).

(n43)Footnote 34.2. **Litigation hold may be limited.**

*2d Circuit See Toussie v. County of Suffolk, 2007 U.S. Dist. LEXIS 93988, at *22 (E.D.N.Y. Dec. 21, 2007)* (county subject to sanctions for failing to put in place litigation hold that would have prevented relevant County employees, identified as "key players," from destroying electronically stored information).

4th Circuit See Goodman v. Praxair Servs., 632 F. Supp. 2d 494, 512 (D. Md. 2009) (litigation hold placed on key players who are defined to include individuals "likely to have information relevant to the events that underlie the litigation").

*D.C. Circuit See Miller v. Holzmann, 2007 U.S. Dist. LEXIS 2987, at *18-20 (D.D.C. Jan. 17, 2007)* (court refers approvingly to comment in The Sedona Conference, Best Practices, Recommendations, & Principles for Addressing Electronic Documents Production (2004), which limited litigation hold to employees likely to maintain documents).

(n44)Footnote 34.3. **Litigation hold may be given orally.** *See Kinnally v. Rogers Corp., 2008 U.S. Dist. LEXIS 93659, at *17-18 (D. Ariz. Nov. 7, 2008)* ("no requirement that [litigation hold] must be written").

(n45)Footnote 35. ***Zubulake* case.** *Zubulake v. UBS Warburg LLC, 220 F.R.D. 212 (S.D.N.Y. 2003)* .

(n46)Footnote 35.1. **Litigation hold generally not applicable to inaccessible information**. *See Columbia Pictures Indus. v. Bunnell, 2007 U.S. Dist. LEXIS 46364, at *55 (C.D. Cal. June 19, 2007)* (court did not sanction party for failing to impose litigation hold on inaccessible backup tapes because party did not act in bad faith).

(n47)Footnote 36. **"Litigation hold" to preserve documents.**

2d Circuit See Zubulake v. UBS Warburg LLC, 220 F.R.D. 212, 218 (S.D.N.Y. 2003) (if backup tapes are accessible, that is, actively used for information retrieval, then such tapes would likely be subject to the litigation hold).

*5th Circuit See Consolidated Aluminum Corp. v. Alcoa, Inc., 2006 U.S. Dist. LEXIS 66642, at *17 (M.D. La. July 19, 2006)* (party negligently failed to override its document destruction policy concerning "key player" whose active database emails had not been preserved).

7th Circuit See In re Old Banc One Shareholders Litig., 2005 U.S. Dist. LEXIS 32154, at *10-12 (N.D. Ill. Dec. 8, 2005) ("In order to meet its obligations Bank One needed to create a comprehensive document retention policy to ensure that relevant documents were retained and needed to disseminate that policy to its employees.").

11th Circuit See Southeastern Mech. Servs. v. Brody, 2009 U.S. Dist. LEXIS 69830, at *10 (M.D. Fla. July 24, 2009) ("Given the importance of electronic information in this litigation it is baffling why [defendant's] litigation hold did not suspend the routine overwriting of backup tapes" of a key player whose emails were known to have been deleted from active database.).

(n48)Footnote 37. **Employees must be notified of consequences of destroying relevant evidence.**

*2d Circuit See Green v. McClendon, 2009 U.S. Dist. LEXIS 71860, at *16 (S.D.N.Y. Aug. 13, 2009)* (attorney sanctioned for failing to advise defendant client to preserve ESI, which was deleted after a

friend reinstalled "operating system" on client's computer).

3d Circuit See In re Prudential Ins. Co. of Am. Sales Practices Litig., 169 F.R.D. 598, 604 (D.N.J. 1997) (employees were not notified of pending putative class action and entry of court's preservation order, its import, or consequences of violating order).

*7th Circuit See Danis v. USN Communs., Inc., 2000 U.S. Dist. LEXIS 16900, at *42 (N.D. Ill. Oct. 20, 2000)* (no written instructions furnished to employees advising them of litigation and duty to preserve relevant evidence and documents); *see also Cohn v. Taco Bell Corp., 1995 U.S. Dist. LEXIS 12645, at *24 (N.D. Ill. 1995)* (court did not countenance failure to warn employees to preserve documents known to be relevant to issues in instant litigation).

9th Circuit William T. Thompson Co. v. General Nutrition Corp., 593 F. Supp. 1443, 1447-1448 (C.D. Cal. 1984) (party sanctioned for advising employees not to change their standard record disposition practices despite commencement of lawsuit).

(n49)Footnote 37.1. **Counsel's ongoing responsibility.**

2d Circuit See Zubulake v. UBS Warburg, LLC, 229 F.R.D. 422, 431-433 (S.D.N.Y. 2004) ("counsel must take reasonable steps to monitor compliance with the 'litigation hold' so that all sources of discoverable information are identified and searched").

9th Circuit See Qualcomm Inc. v. Broadcom Corp., 2008 U.S. Dist. LEXIS 911, at *64 (S.D. Cal. Jan. 7, 2008), *vacated in part on other grounds*, 2008 U.S. Dist. LEXIS 16897 (S.D. Cal. Mar. 5, 2008) (attorney fees and costs of $8.5 million awarded, and attorneys sanctioned for assisting party "in committing this incredible discovery violation by intentionally hiding or recklessly ignoring relevant documents, ignoring or rejecting numerous warning signs that Qualcomm's document search was inadequate, and blindly accepting Qualcomm's unsupported assurances that its document search was adequate").

*10th Circuit See Cache La Poudre Feeds, LLC v. Land O'Lakes, Inc., 2007 U.S. Dist. LEXIS 15277, at *56-57 (D. Colo. Mar. 2, 2007)* (attorney has affirmative ongoing duty under Rule 26(g) to ensure that information responsive to discovery request is provided).

*Fed. Circuit See United Medical Supply Co. v. United States, 2007 U.S. Claims LEXIS 207, at *49-50 (Ct. Fed. Claims, June 27, 2007)* (counsel failed to monitor distribution of litigation-hold notice, which did not reach several employees because of faulty email address list).

(n50)Footnote 37.2. **Records of former employees subject to preservation duty.**

*2d Circuit See Scalera v. Electrograph Systems, Inc., 2009 U.S. Dist. LEXIS 91572, at *36-37 (E.D.N.Y. Sept. 29, 2009)* (defendant violated preservation duty by failing to suspend routine deletion of ESI contained in computer of defendant's former employee upon separation from employment).

10th Circuit See Cache La Poudre Feeds, LLC v. Land O'Lakes, Inc., 244 F.R.D. 614, 628-629 (D. Colo. 2007) (party's preservation duty violated when hard drives of computers of former employees who played significant role in subject of litigation were not maintained).

(n51)Footnote 38. **Employer responsible for employees destroying relevant evidence.**

*6th Circuit See Easton Sports, Inc. v. Warrior Lacrosse, Inc., 2006 U.S. Dist. LEXIS 70214, at *10-11 (E.D. Mich. Sept. 28, 2006)* (adverse inference sanction imposed on employer for failing to take adequate steps to prevent employee from destroying relevant emails evidence).

*7th Circuit See Cohn v. Taco Bell Corp., 1995 U.S. Dist. LEXIS 12645, at *24 (N.D. Ill. 1995)* (court did not countenance failure to warn its employees to preserve documents known to be relevant to issues in instant litigation).

9th Circuit See William T. Thompson Co. v. General Nutrition Corp., 593 F. Supp. 1443, 1446 (C.D. Cal. 1984) (employer failed to provide reasonable notification to its employees of obligation to preserve relevant evidence and is responsible for their actions).

*Fed. Circuit United Medical Supply Co. v. United States, 2007 U.S. Claims LEXIS 207, at *5 (Ct. Fed. Claims June 27, 2007)* (party sanctioned for destruction of electronic information by employees who never received email notification of litigation hold because of errors in email address listing).

(n52)Footnote 39. **Failure to advise client does not excuse destruction of relevant evidence.** *See New York NOW v. Cuomo, 1998 U.S. Dist. LEXIS 10520, at *7-9 (S.D.N.Y. July 13, 1998)* (Governor Cuomo ultimately accountable for action of subordinates though he was unaware of pending litigation).

(n53)Footnote 40. *Fed. R. Civ. P. 16(a)*; *Fed. R. Civ. P. 26(f)*; *see also* Scheindlin, *E-Discovery: The Newly Amended Federal Rules of Civil Procedure*, Part II., *Rule 16(b) Order and the Rule 26(f) Meet and Confer Requirements* (Matthew Bender 2006) (parties must focus on their preservation obligation as early as possible).

(n54)Footnote 41. *Fed. R. Civ. P. 26(c)* (motion must "include a certification that the movant has in good faith conferred or attempted to confer with other affected parties in an effort to resolve the dispute without court action"); *Fed. R. Civ. P. 37(a)(1)* ("motion must include a certification that the movant has in good faith conferred or attempted to confer with the person or party failing to make disclosure or discovery in an effort to obtain it without court action").

(n55)Footnote 42. **Court should make ruling absent parties' agreement.** *See P&G v. Haugen, 179 F.R.D. 622, 631-632 (D. Utah 1998)* (absent court order, which sets out scope of preservation duty, it is difficult to assess bad faith of responding party sufficient to merit sanctions).

1st Circuit See, e.g., Williams v. Massachusetts Mut. Life Ins. Co., 226 F.R.D. 144, 146 (D. Mass. 2005) (magistrate judge ordered defendants to preserve all documents, hard drives, and email boxes that were searched in response to motion to compel production of particular email "to preserve the plaintiff's appellate rights").

10th Circuit See P&G Co. v. Haugen, 179 F.R.D. 622, 631-632 (D. Utah 1998) (absent court order, which sets out scope of preservation duty, it is difficult to assess bad faith of responding party sufficient to merit sanctions).

(n56)Footnote 43. **Severe sanctions for destroying evidence despite court order.** *See Illinois Tool Works v. Metro Mark Prods., Ltd, 43 F. Supp. 2d 951, 961 (N.D. Ill. 1999)* (obligation to comply with court's order to preserve evidence contained in computer was a strict one, and "mere inadvertence or negligence" does not excuse a party from sanctions under Rule 37).

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Moore's Federal Practice: Discovery of Electronically Stored Information

Volume 7: Analysis: Civil Rules 30-37A
Chapter 37A Discovery of Electronically Stored Information
B. DISCOVERY OBLIGATIONS

7-37A Moore's Federal Practice: Electronic Discovery § 37A.11

AUTHOR: by John K. Rabiej

§ 37A.11 Rules Governing Discovery of Electronically Stored Information

[1] Discovery Rules Apply to Electronically Stored Information

The general rules of discovery were amended in 2006 to apply explicitly to electronically stored information, including Rules 16, 26, 33, 34, 37, and 45. Most disputes dealing with discovery of electronically stored information involve Rules 26, 34, and 37, as well as Rule 16. n1 Rule 16 authorizes a court to control discovery during a pretrial conference by issuing scheduling orders affecting disclosures and discovery pursuant to Rule 26 and Rules 29 through 37. n2 The scheduling order issued at the conference may include provisions on the discovery of electronically stored information.

Rule 26(a)(1)(A)(ii) requires a party to disclose without awaiting a discovery request "a copy--or a description by category and location--of all documents, electronically stored information, and tangible things that the disclosing party has in its possession, custody or control... ". n3 As amended in 2006, this mandatory disclosure provision expressly applies to electronically stored information. n4 The scope of matters requiring disclosure was narrowed in 2000 to matter that the disclosing party "may use to support its claims or defenses, unless the use would be solely for impeachment" (*see* [3][b], *below*). n5 The phrase "electronically stored information" replaced "data compilations" in 2006 to make clear the provision's application to electronic information. n6

Rule 26(a)(2)(B) requires disclosure of the "facts or data" in forming an opinion by an expert retained or specially employed to provide expert testimony at trial. n7 The data can include electronically stored information. Rule 26(b)(4)(D) authorizes, on a showing of exceptional circumstances, the discovery of "facts known or opinions held by an expert who has been retained or specially employed" in anticipation of litigation but who will not testify at trial. n8 The party seeking this information normally pays the other party "a fair portion of the fees and expenses" incurred by the other party in obtaining the expert's opinions. n9

Rule 26(b)(1) sets out the general scope of discovery. The scope of discovery was narrowed in 2000, restyled in 2007, and authorizes discovery of non-privileged matter "that is relevant to any party's claim or defense" (*see § 37A.30*; *see also § 26.41*). n10 However, a court may nonetheless order discovery of matter relevant to the "subject matter" of the

case on good cause. The provision was also amended to highlight discovery limits imposed by Rule 26(b)(2)(C)(i), (ii), and (iii). n11

As amended in 2006, Rule 26(b)(2)(B) imposes specific limits on discovery of electronically stored information that is not reasonably accessible (*see § 37A.35*). Rule 26(b)(5) sets out a procedure to retrieve inadvertently disclosed privileged or protected information produced in discovery (*see § 37A.32[5]*). n11.1

On motion of a responding party under Rule 26(c), a court may prevent, limit, or modify the conditions of a discovery request if necessary to protect a party from "annoyance, embarrassment, oppression, or undue burden or expense" (*see §§ 26.60*; *26.101*). n12 Before seeking a protective order, a party must certify that the party has in "good faith conferred or attempted to confer with other affected parties in an effort to resolve the dispute without court action" (*see § 26.103*). n13

Rule 26(f) requires the parties to confer to develop a discovery plan. n14 Under the 2006 amendments, the plan should to the extent practicable address any electronic discovery issues, including the identification of media to be searched and the form or forms electronically stored information is to be produced (*see § 37A.24*).

Rule 34(a) authorizes a party to request production and inspection of matter relevant to the claim or defense of any party, subject to the limitations contained in Rule 26(b). The rule was amended in 2006 to apply explicitly to electronically stored information. n15

Rule 37 sets out procedures to compel production of requested matter and sanctions for failing to respond adequately to a reasonable and proper discovery request. n16 A motion to compel inspection in accordance with a request under Rule 34 may be filed under Rule 37(a)(3)(B)(iv). n17 Failure to make an appropriate disclosure under Rule 26(a) is governed by Rule 37(a)(3)(A), while failure to produce requested matter in accordance with Rule 34 is governed by Rule 37(d). n18 In each instance the movant must--before filing a motion to compel or a motion for sanctions--certify that a good faith effort was made to confer or attempt to confer with the other party in an effort to resolve the dispute without court action (*see § 37A.50*). n19

As amended in 2006 and 2007, Rule 37(e) sets out a limited "safe harbor" for electronically stored information destroyed consistent with the good faith operation of an electronic information system (*see § 37A.57*).

For a complete discussion of the discovery rules, see Ch. 26, *Duty to Disclose; General Provisions Governing Discovery* ; Ch. 34, *Producing Documents, Electronically Stored Information, and Tangible Things, or Entering onto Land, for Inspection and Other Purposes* ; and Ch. 37, *Failure to Make Disclosures or to Cooperate in Discovery; Sanctions* . See also Ch. 16, *Pretrial Conferences; Scheduling; Management* .

For further analysis of the applicability of the discovery rules to electronically stored information in light of the 2006 amendments, see Scheindlin, *E-Discovery: The Newly Amended Federal Rules of Civil Procedure*, Part V., *ESI Is a New Category of Information That Must Be Produced--Rules 26(a), 33, 34 and 35* (Matthew Bender 2006).

[2] Rule 34 Applies to Production of Electronically Stored Information

In 1970, Rule 34 was amended to apply specifically to "data compilations," which was broadly interpreted by the courts to include electronically stored information (*see § 34.12[3]*). n20 It became increasingly difficult to stretch the meaning of "data compilations" to include all forms of electronically stored information. In 2006, the rule was amended to apply explicitly to electronically stored information. n21 Under the rule, a party must produce "documents or electronically stored information--including writings, drawings, graphs, charts, photographs, sound recordings, images, and other data or data compilations--stored in any medium." n22 The language of the amended rule and case law are unequivocal that electronically stored information is, if otherwise discoverable, subject to production. n23 The rule was also amended in

2006 to clarify the procedures governing the form in which electronically stored information must be produced. n24

Electronically stored information is distinct from "documents" and may encompass things not ordinarily considered to fall within the meaning of "documents." For example, electronically stored information may exist in dynamic databases that constantly change. Although the distinction between "documents" and "electronically stored information" is very real, it is generally assumed that a request for documents includes a request for electronically stored information. In recognition of this reality, a request for documents must be considered to include a request for electronically stored information, unless the discovery request clearly distinguishes between the two. n25 Thus, the responding party must produce electronically stored information, if otherwise discoverable, even though the discovery request asks only for "documents." n26

The general rule that a party is not required to "create" or generate responsive materials under Rule 34, but is only required to produce items in the responding party's possession or control, applies to electronically stored information as well as traditional paper documents. n26.1

The 2006 amendment to Rule 34(a) adding the phrase "electronically stored information" was intended to address cases where the court ruled that a request for "files" did not include electronically stored information. n27 If a discovery request specifically refers only to documents, it must be read reasonably and cannot be narrowly construed to exclude electronically stored data (*see § 37A.41*). n28 An attorney's signature accompanying a discovery response certifies that the response is consistent with the Federal Rules of Civil Procedure to the best of the counsel's knowledge, information, and belief, formed after reasonable inquiry. n29

Legal Topics:

For related research and practice materials, see the following legal topics:
Civil ProcedureDiscoveryGeneral OverviewCivil ProcedureDiscoveryDisclosuresGeneral OverviewCivil ProcedureDiscoveryPrivileged MattersGeneral OverviewComputer & Internet LawPrivacy & SecurityAttorney-Client CommunicationsLegal EthicsSanctionsGeneral Overview

FOOTNOTES:
(n1)Footnote 1. *See Fed. R. Civ. P. 16, 26, 34, 37.*

(n2)Footnote 2. *Fed. R. Civ. P. 16(c)(2)(F).*

(n3)Footnote 3. *Fed. R. Civ. P. 26(a)(1)(A)(ii).*

(n4)Footnote 4. **Mandatory disclosure applies to electronically stored information.** *See Fed. R. Civ. P. 26(a)(1)(A)(ii). In re Bristol-Myers Squibb Sec. Litig., 205 F.R.D. 437, 440-441 (D.N.J. 2002)* (because defendants failed to disclose electronic information under Rule 26(a)(1), court did not require plaintiffs to pay for paper copies); *see also* advisory committee's note to former Fed. R. Civ. P. 26(a)(1)(B) (1993) (initial disclosure includes "computerized data and other electronically-recorded information") (*reproduced verbatim at § 26App.09(2)*).

(n5)Footnote 5. *Fed. R. Civ. P. 26(a)(1)(A)(ii)* (as restyled in 2007).

(n6)Footnote 6. *Fed. R. Civ. P. 26(a),* Committee Note of 2006 (*reproduced verbatim at § 26App.11[2]*); *see* Scheindlin, *E-Discovery: The Newly Amended Federal Rules of Civil Procedure*, Part I., *Background--The Need for the New Rules* (Matthew Bender 2006).

(n7)Footnote 7. *Fed. R. Civ. P. 26(a)(2)(B)(ii).*

(n8)Footnote 8. *Fed. R. Civ. P. 26(b)(4)(D).*

(n9)Footnote 9. *Fed. R. Civ. P. 26(b)(4)(E)(ii)*.

(n10)Footnote 10. *Fed. R. Civ. P. 26(b)(1)*.

(n11)Footnote 11. *Fed. R. Civ. P. 26(b)(1), (2)*.

(n12)Footnote 11.1. *Fed. R. Civ. P. 26(b)(5)(B)*.

(n13)Footnote 12. *Fed. R. Civ. P. 26(c)(1)*.

(n14)Footnote 13. **Certification generally required for protective order.** *Fed. R. Civ. P. 26(c)(1)*; *see Frazier v. Southeastern Pa. Transp. Auth., 161 F.R.D. 309, 313 n.5 (E.D. Pa. 1995)* (court acknowledged that it could have denied plaintiff's motion for lack of certification, but instead addressed merits).

(n15)Footnote 14. *Fed. R. Civ. P. 26(f)*.

(n16)Footnote 15. *See Fed. R. Civ. P. 34(a)(1)(A)*.

(n17)Footnote 16. *Fed. R. Civ. P. 37*.

(n18)Footnote 17. *Fed. R. Civ. P. 37(a)(3)(B)(iv)*.

(n19)Footnote 18. *See Fed. R. Civ. P. 37(a)(3)(A), (d)(1)(A)(ii)*.

(n20)Footnote 19. **Good faith effort required.** *See Powers v. Thomas M. Cooley Law School, 2006 U.S. Dist. LEXIS 67706, at *8-9 (W.D. Mich. Sept. 21, 2006)* (filing sanctions motion only one day after leaving voice-mail with opposing counsel about failure to produce electronically stored information demonstrated lack of good faith and was grounds for denial of motion).

(n21)Footnote 20. **Rule 34 applies to electronically stored information.**

2d Circuit See Santiago v. Miles, 121 F.R.D. 636, 640 (W.D.N.Y. 1988) (raw data on assignment decisions in prisons contained in computer tapes subject to discovery in class action discrimination suit); *see also Sanders v. Levy, 558 F.2d 636, 648 (2d Cir. 1977) , rev'd on other grounds sub nom. Oppenheimer Fund, Inc. v. Sanders, 437 U.S. 340 (1978)* (1970 amendments rendered *Fed. R. Civ. P. 34* specifically applicable to computerized information).

7th Circuit See Crown Life Ins. Co. v. Craig, 995 F.2d 1376, 1383 (7th Cir. 1993) (amendments to Rule 34 clearly apply to raw computer data); *In re Brand Name Prescription Drugs Antitrust Litig., 1995 U.S. Dist. LEXIS 8281, at *1-2 (N.D. Ill. June 13, 1995)* (*Fed. R. Civ. P. 34* instructs that computer-stored information is discoverable under same rules that pertain to tangible, written materials).

10th Circuit Bills v. Kennecott Corp., 108 F.R.D. 459, 461 (D. Utah 1985) ("It is now axiomatic that electronically stored information is discoverable under *Rule 34 of the Federal Rules of Civil Procedure* if it otherwise meets the relevancy standard prescribed by the rules... .").

Fed. Circuit See Daewoo Elecs. Co. v. United States, 650 F. Supp. 1003, 1006 (Ct. Int'l Trade 1986) (*Fed. R. Civ. P. 34* is intended to keep pace with changing technology).

(n22)Footnote 21. *Fed. R. Civ. P. 34(a)*, Committee Note of 2006 (*reproduced verbatim at § 34App.08[2]*); *see* Scheindlin, *E-Discovery: The Newly Amended Federal Rules of Civil Procedure*, Part I., *Background--The Need for the*

New Rules (Matthew Bender 2006).

(n23)Footnote 22. **"Other data compilations."** *Fed. R. Civ. P. 34(a)(1)(A)*; *see Santiago v. Miles, 121 F.R.D. 636, 640 (W.D.N.Y. 1988)* (raw computer data subject to discovery).

(n24)Footnote 23. **Relevant computerized data is discoverable.** *See Fed. R. Evid. 1001(1)* (defining *writing* as used in Rules to include "letters, words, or numbers, or their equivalent, set down by ... magnetic impulse, mechanical or electrical recording, or other form of data compilation").

*2d Circuit Anti-Monopoly, Inc. v. Hasbro, Inc., 1995 U.S. Dist. LEXIS 16355, at *2-4 (S.D.N.Y. Nov. 3, 1995)* ("Thus, today it is black letter law that computerized data is discoverable if relevant.").

7th Circuit See Crown Life Ins. Co. v. Craig, 995 F.2d 1376, 1383 (7th Cir. 1993) (amendments to Rule 34 clearly apply to raw computer data).

10th Circuit Bills v. Kennecott Corp., 108 F.R.D. 459, 461 (D. Utah 1985) ("It is now axiomatic that electronically stored information is discoverable under *Rule 34 of the Federal Rules of Civil Procedure* if it otherwise meets the relevancy standard prescribed by the rules ... .").

Fed. Circuit See Daewoo Elecs. Co. v. United States, 650 F. Supp. 1003, 1006 (Ct. Int'l Trade 1986) (guiding principle is that information stored, used, or transmitted in new forms are subject to discovery under Rule 34 with same openness as traditional forms).

(n25)Footnote 24. *See Fed. R. Civ. P. 34(b).*

(n26)Footnote 25. *Fed. R. Civ. P. 34(b)*, Committee Note of 2006 (*reproduced verbatim at § 34App.08[2]*).

(n27)Footnote 26. *Fed. R. Civ. P. 34(a)*, Committee Note of 2006 (*reproduced verbatim at § 34App.08[2]*); *see Mosaid Tech. Inc. v. Samsung Elec. Co., 348 F. Supp. 2d 332, (D.N.J. 2004)* (court ruled that request for "document" included request for "email").

(n28)Footnote 26.1. **Not required to create documents.** *Mon River Towing, Inc. v. Industry Terminal, 2008 U.S. Dist. LEXIS 45369 at *3 (W.D. Pa. June 10, 2008)* (although party may be required to produce print-out of information stored on computer, responding party was not required to produce "report" of computer data requested by opposing party because this would entail creation of new document rather than "a print out of computer data").

(n29)Footnote 27. **Case's narrow interpretation of request for "files" is not good law.** *See, e.g., Marcin Eng. v. Founders at Grizzly Ranch, 219 F.R.D. 516, 523 (D. Colo. 2003)* .

(n30)Footnote 28. **Discovery request may not be construed narrowly to exclude electronically stored evidence.**

5th Circuit See Emerick v. Fenick Indus., Inc., 539 F.2d 1379, 1380-1381 (5th Cir. 1976) (request for "ledgers and journals" extends to sole source contained in electronic records).

8th Circuit See Ryan v. Board of Police Comm'rs, 96 F.3d 1076, 1081-1082 (8th Cir. 1996) (narrow interpretation of request for information on accessing computer database was hypertechnical and did not justify failure to respond).

Fed. Circuit See Daewoo Elecs. Co. v. United States, 650 F. Supp. 1003, 1006 (Ct. Int'l Trade 1986)

(court order to produce "computer tapes" cannot be construed narrowly to exclude electronic information retained in data sets in sequential files).

(n31)Footnote 29. **Attorney's signature signifies reasonable inquiry.** *See Fed. R. Civ. P. 26(g).*

*4th Circuit See Mancia v. Mayflower Textile Servs. Co., 2008 U.S. Dist. LEXIS 83740, at *9-13 (D. Md. Oct. 15, 2008)* (failure to specify objections to plaintiff's discovery request indicated probable violation of Rule 26(g)'s requirement to conduct reasonable inquiry).

9th Circuit See National Ass'n of Radiation Survivors v. Turnage, 115 F.R.D. 543, 555 (N.D. Cal. 1987) (failure to produce requested documents in response to discovery request sanctionable under *Fed. R. Civ. P. 26(g)*).

D.C. Circuit See Jankins v. TDC Mgmt. Corp., 131 F.R.D. 629, 633-634 (D.D.C. 1989) (provisions governing sanctions imposed under *Fed. R. Civ. P. 26(g)* parallel those in *Fed. R. Civ. P. 11*).

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AUTHOR: by John K. Rabiej

[Reserved]

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C. PROCEDURES GOVERNING DISCOVERY OF ELECTRONIC RECORDS

7-37A Moore's Federal Practice: Electronic Discovery § 37A.20

AUTHOR: by John K. Rabiej

§ 37A.20 Early Recognition of Issues Involving Electronically Stored Information

[1] Early Identification of Potential Issues

Many practitioners have failed to take advantage of the vast resources that electronically stored information offers in litigation (*see § 37A.01[1]*). Some of their reluctance is attributable to their unfamiliarity with electronically stored information concepts and systems. Although the discovery of electronically stored information raises many of the same problems experienced in traditional discovery of hard-copy documents, it also raises problems peculiar to electronic information. Not only can the volume of information far exceed the information contained in traditional hard-copy files, but electronically stored information is more likely to be duplicated, more easily manipulated, contains metadata, and may be restored if deleted. These qualitative differences between computer and traditional hard-copy records require early attention in litigation (*see* [2], *below*). n1

The information in a computer system is constantly changing, with data added and erased daily. Early recognition that electronically stored information will likely be at issue in litigation is key to an effective discovery-management strategy. The Manual for Complex Litigation encourages parties to address the discovery of electronically stored information early in the case. "Any discovery plan must address issues relating to such information, including the search for it and its location, retrieval, form of production, inspection, preservation, and use at trial." n2 The 2006 amendments to the electronic discovery rules also emphasize early attention to electronic discovery issues. n3

Parties may address electronically stored information issues at several stages. However, the sooner information about the parties' respective computer systems is exchanged in the litigation the better. For example, the name and version of software applications, including custom applications, should be identified at the outset of litigation. Other items that should be identified include any record-disposition policy, the frequency and nature of backup systems and the media used to store it, and the names and email addresses of key individuals familiar with pertinent computer systems. These items may be disclosed during the Rule 26(a)(1) initial disclosure litigation stage (*see § 37A.20[3]*). n4 Early identification of electronically stored information is necessary to ensure that a party is aware of relevant evidence and its duty to preserve it (*see § 37A.10*). Recognition that electronically stored information will be at issue is also necessary

to fashion an effective litigation-hold strategy, including adjusting or suspending a party's records-disposition practices (*see § 37A.56[4]*).

Parties are directed to address a wide range of issues arising from discovery of electronically stored information at Rule 26(f) discovery-planning conferences and at Rule 16 pretrial conferences. In preparation for the Rule 26(f) conference, counsel are expected to become knowledgeable about their clients' information management system and their operation, including how the information is stored and retrieved. n4.1 The parties' agreements on handling discovery issues are to be memorialized in a court case-management order to facilitate the discovery process. n5 Discovery requests often can be addressed in stages. After the initial exchange of information has been completed, more focused requests for relevant information can be obtained through interrogatories (*see § 37A.22*). At this stage, for example, the key persons who have knowledge of the facts at issue and the relevant computer system should be identified. n6 If a party has a reasonable concern that electronically stored information may be imminently destroyed, the party may seek expedited discovery (*see § 37A.23*). As the parties obtain more information that may be relevant in the case, they should take steps to narrow the search of electronically stored records by limiting, for example, the search to a specific time period, computers of selected persons, and specific backup tape systems. The narrowing of issues may take place at a Rule 26(f) conference or at a Rule 16 pretrial conference, if not sooner (*see §§ 37A.24*; *37A.25*). n7

Attorneys are expected to resolve discovery disputes between themselves. Parties must first confer to resolve a discovery dispute before seeking court intervention. n8 The conference must represent a good faith effort to resolve outstanding discovery issues. Mere repetition of demands for documents, without any meaningful attempt to reach a satisfactory resolution, does not comply with the rules' requirements. n8.1 When judicial involvement is necessary to resolve an issue, courts will examine the expense, burden, and likelihood of success when ruling on a protective order limiting a request for electronically stored information or a motion to compel production (*see § 37A.33[2]*). Narrowing a search request to a limited number of computers that require intensive examination is more likely to be reasonable and approved than a "shotgun" request for all information contained in all computers. If discovery problems with electronically stored information are particularly difficult, a court may appoint a special master to assist in resolving them. n9 For discussion of the appointment of special masters, see Ch. 53, *Masters* .

If electronic simulations or electronic records are expected to be presented or introduced as evidence in a trial, advance notice eliminates delays otherwise inevitable in ascertaining and assuring its authenticity (*see § 37A.34[1][e][ii]*). Notifying the parties during early scheduling conferences can prevent later disputes.

[2] Initial Disclosure Obligations

As part of its initial disclosure duties, a party must provide to other parties, without request, a copy of, or a description by category and location of, all documents, electronically stored information, and tangible things that are in the possession, custody, or control of that party and that the disclosing party may use to support its claims or defenses, unless solely for impeachment (*see § 26.22[4][b]*). n10 This requirement applies in all cases, except enumerated categories of cases that usually involve no discovery, and cases excepted by a court order or by party stipulation. n11 If a party fails to disclose the information supporting its claims or defenses, that information may not be used as evidence at a trial or a hearing. n12

The initial disclosure obligation is intended to narrow discovery to relevant issues in the case. The Committee Note to the 1993 amendments to Rule 26(a)(1) explicitly recognized the value in identifying relevant electronically stored information early in the litigation: "the disclosure should describe and categorize, to the extent identified during the initial investigation, the nature and location of potentially relevant documents and records, including computerized data and other electronically recorded information, sufficiently to enable opposing parties (1) to make an informed decision concerning which documents might need to be examined, at least initially, and (2) to frame their document requests in a manner likely to avoid squabbles resulting from the wording of the requests." n13 The full impact of this obligation is limited by the 2000 amendments to Rule 26(a)(1), which eliminate the requirement to disclose information "relevant to

disputed facts alleged with particularity in the pleadings." n14 The amended rule requires disclosure only of matter that is favorable to the party and that might be used to support its claims or defenses. The requirement to disclose pertinent information operates in all courts. Courts may no longer opt out by local rule. n15

The initial disclosure obligation only requires disclosure of information that the disclosing party has decided to use to support its claims or defenses. The limited extent of the disclosure obligation does not require disclosure of other relevant evidence, which may support, for example, the opposing party's position. The disclosing party has the duty to supplement the information initially disclosed, however, when other pertinent information is later found. If electronically stored information is involved, the disclosing party should identify the nature of its computer system--including backup system, network system, and email system--as well as any software applications used to operate those systems as part of its initial disclosure obligation. However, the disclosing party is not required to attempt to search electronic information stored on inaccessible sources, like backup systems, or to retrieve deleted files in an exhaustive effort to locate all potentially relevant evidence as part of this initial disclosure obligation (*see § 37A.35[1][a]*). Further, a party is not subject to sanctions or other penalties for failing to disclose this evidence as part of its initial disclosure obligation, even when that evidence is subsequently used in the litigation. The difficulty in retrieving this information provides "substantial justification" to excuse such an exhaustive search effort (*see §§ 37A.03[3]*; *37A.35[2]*). n16

If a party fails to disclose relevant matter under the initial disclosure requirement, the opposing party may file a motion to compel disclosure under Rule 37(a)(3). n17 Because only favorable evidence must be disclosed under Rule 26(a), the likelihood that a party will intentionally conceal that evidence is much less likely than under the prior standard, which required broader disclosure, including unfavorable evidence. Before filing a motion to compel disclosure, a party must attempt to resolve the dispute with the opposing party. n18 This is another good opportunity to identify relevant electronically stored information and the nature of the medium where it is stored. A proffer showing the relevance and need of the requested material should accompany the motion (*see § 37A.31*]).

For complete discussion of initial disclosure, see *§ 26.22*.

Legal Topics:

For related research and practice materials, see the following legal topics:
Civil ProcedureDiscoveryDisclosuresMotions to CompelCivil ProcedureDiscoveryElectronic DiscoveryGeneral OverviewCivil ProcedureDiscoveryMethodsRequests for Production & InspectionCivil ProcedureDiscoveryMisconductComputer & Internet LawCivil ActionsGeneral Overview

FOOTNOTES:
(n1)Footnote 1. *See* Scheindlin, *E-Discovery: The Newly Amended Federal Rules of Civil Procedure*, Part I., *Background--The Need for the New Rules* (Matthew Bender 2006).

(n2)Footnote 2. *Manual for Complex Litigation § 11.446 (4th ed. 2004)*.

(n3)Footnote 3. *See Fed. R. Civ. P. 16*, Committee Note of 2006 (*reproduced verbatim at § 16App.06[2]*); *Fed. R. Civ. P. 26 (f)*, Committee Note of 2006 (*reproduced verbatim at § 26App.11[2]*)).

(n4)Footnote 4. *See Fed. R. Civ. P. 26(a)*.

(n5)Footnote 4.1. **Counsel responsible for learning about clients' information system.** *See* White v. Graceland College Ctr. for Prof'l Dev. & Lifelong Learning, Inc., 2009 U.S. Dist. LEXIS 22068, at *15-16 (D. Kan. Mar. 18, 2009) (court's local Guidelines for Discovery of Electronically Stored Information "require that counsel, prior to the *Fed. R. Civ. P. 26(f)* conference, ... become knowledgeable about their client's information management system"); *see also* D.N.J. LR 26.1(d)(1) ("Prior to a *Fed. R. Civ. P. 26(f)* conference, counsel shall review with the client the client's

information management systems including computer-based and other digital systems, in order to understand how information is stored and how it can be retrieved.").

(n6)Footnote 5. *Fed. R. Civ. P. 16(b)*; *Fed. R. Civ. P. 26(f)*.

(n7)Footnote 6. **Key personnel with knowledge of computer systems should be identified.** *See Marker v. Union Fidelity Life Ins. Co., 125 F.R.D. 121, 125-126 (M.D.N.C. 1989)* (defendant had duty to produce person knowledgeable about company's claims processing, claims records, storage and retrieval of computer records after initial deposition of its claims director was inadequate to answer relevant questions).

(n8)Footnote 7. **Parties should resolve discovery disputes.** *See Jones v. Goord, 2002 U.S. Dist. LEXIS 8707, at *44-45 (S.D.N.Y. May 15, 2002)* (court encourages parties to work out electronically stored discovery problems, noting that "realities of big-case discovery, which, perhaps unfortunately, often proceeds by the exchange of overbroad discovery demands and blanket objections, followed by concrete negotiations over what records are really necessary and what production the opposing party is really prepared to make without compulsion").

(n9)Footnote 8. *Fed. R. Civ. P. 26(c)(1)*; *Fed. R. Civ. P. 37(a)(1)*; *see Sequoia Prop. & Equip. Ltd. P'ship v. United States, 203 F.R.D. 447, 451 (E.D. Cal. 2001)* (court denied motion to compel production of computer floppy diskette because plaintiff failed to confer with defendant and attempt to resolve dispute before filing motion).

(n10)Footnote 8.1. **Attorneys must meet and confer in good faith attempt at resolution.** *See Koninklijke Philips Electronics N.V. v. KXD Tech., Inc., 2007 U.S. Dist. LEXIS 17540, at *8-10 (D. Nev. Mar.12, 2007)* (in considering what sanction to impose for failing to produce relevant electronically stored information, court weighed counsels' failure to engage in meaningful conference to resolve discovery dispute as required by rules).

(n11)Footnote 9. **Special master appointed to handle computer discovery issues.** *See United States v. IBM, 76 F.R.D. 97, 98 (S.D.N.Y. 1977)* (court found "exceptional conditions" warranted appointment of special master under *Fed. R. Civ. P. 53* to supervise discovery of electronically stored documents).

(n12)Footnote 10. **Initial disclosure duties**. *Fed. R. Civ. P. 26(a)(1)(A)(ii)*.

*2d Circuit See CP Solutions PTE, LTD. v. General Elec. Co., 2006 U.S. Dist. LEXIS 27053, at *5-6 (D. Conn. Feb. 6, 2006)* (citing **Moore's**, court noted that disclosing party is only required to disclose matter that is favorable to it).

6th Circuit See Ruddell v. Weakley County Sheriff's Dep't, 2009 U.S. Dist. LEXIS 115321, at *3 (W.D. Tenn. May 22, 2009) (defendant was not obligated to initially disclose tape-recorded conversation because it was intended to be used solely for impeachment purposes).

(n13)Footnote 11. *Fed. R. Civ. P. 26(a)(1)(A)*. (Rule amended in 2000 to eliminate local option to opt out of disclosure procedures).

(n14)Footnote 12. *Fed. R. Civ. P. 37(c)(1)*.

(n15)Footnote 13. *Fed. R. Civ. P. 26(a)(1)*, Committee Note of 1993 (*reproduced verbatim at § 26App.09[2]*).

3d Circuit See In re Bristol-Myers Squibb Sec. Litig., 205 F.R.D. 437, 441 (D.N.J. 2002) (because defendant failed, as part of initial disclosure requirements, to inform plaintiff that relevant evidence was electronically stored, court shifted costs incurred in producing paper copies from plaintiff to defendant).

9th Circuit See Koninklijke Philips Electronics N.V. v. KXD Tech., Inc., 2007 U.S. Dist. LEXIS 17540,

*at *16 (D. Nev. Mar. 12, 2007)* (defendant must identify documents in possession of plaintiff that would be used to support its defenses under Rule 26(a) and cannot require plaintiff to guess which documents in its possession defendant will use).

(n16)Footnote 14. *See Fed. R. Civ. P. 26(a)(1)(A)(ii)*.

(n17)Footnote 15. *See Fed. R. Civ. P. 26(a)(1)*.

(n18)Footnote 16. *Fed. R. Civ. P. 37(c)(1)*.

(n19)Footnote 17. *Fed. R. Civ. P. 37(a)(3)*; *see* Ch. 37, *Failure to Make Disclosures or to Cooperate in Discovery; Sanctions* ; *see also* Credit Suisse Securities (USA) LLC v. Hillard, 2007 U.S. Dist. LEXIS 30597, at *9-16 (D. Neb. April 25, 2007) (court grants party's motion to compel disclosure of evidence supporting its claims under Rule 26(a), including electronically stored information).

(n20)Footnote 18. **Parties must confer in good faith to resolve issue before raising it with the court.** *See U.S.A. ex rel. Repko v. Guthrie Clinic, P.C., 2008 U.S. Dist. LEXIS 47795, at *8 (M.D. Pa. June 18, 2008)* (motion for sanctions for failing to provide Rule 26 mandatory disclosures denied because counsel did not confer first with other party in good faith effort to resolve issue).

Moore's Federal Practice: Discovery of Electronically Stored Information

Volume 7: Analysis: Civil Rules 30-37A
Chapter 37A Discovery of Electronically Stored Information
C. PROCEDURES GOVERNING DISCOVERY OF ELECTRONIC RECORDS

7-37A Moore's Federal Practice: Electronic Discovery § 37A.21

AUTHOR: by John K. Rabiej

§ 37A.21 Disclosure of Expert Testimony

A party must disclose in a written statement the "basis and reasons" and "the facts or data" considered by a witness retained or specially employed to provide expert testimony at trial. n1 The disclosures must be made at least 90 days before trial or earlier if otherwise ordered by the court. n2 If the expert considered electronically stored information in forming an opinion--including information contained in a computerized attorney litigation support system--the case law is unsettled regarding whether communications to the expert from the attorney involving "opinion" work product are subject to disclosure or protected under the work-product doctrine (*see §§ 26.70[6][d]*; *26.80[1][a]*). n3 However, this area of law may be settled by the 2010 amendments to Rule 26, which provide trial preparation protection for most communications between a party's attorney and expert witnesses. Under the latest version of the rule, communications between an attorney and an expert witness are protected as work product, except to the extent that the communications: (1) relate to the expert's compensation; (2) identify facts or data the expert considered in forming the opinions to be expressed; or (3) identify assumptions the party's attorney provided and that the expert relied on in forming the opinions to be expressed. n3.1

Information used by consulting, non-testifying experts is usually not discoverable, unless "exceptional circumstances" are shown under Rule 26(b)(4). n4 However, information furnished by a non-testifying, consulting expert that had been "considered" by a testifying expert in forming opinions must be disclosed in the expert's written report and is discoverable. n5 The case law is unsettled as to the precise meaning of "considered" under Rule 26(a)(2)(B)(ii). n6 In all events, the party resisting discovery has the burden to show that its expert had not "considered" information furnished to the expert in forming his or her opinions as testifying expert to avoid disclosure. n7

For further discussion of expert testimony disclosure, *see § 26.23*.

Legal Topics:

For related research and practice materials, see the following legal topics:
Civil ProcedureDiscoveryElectronic DiscoveryGeneral OverviewCivil ProcedureDiscoveryMethodsExpert Witness

DiscoveryCivil ProcedureDiscoveryRelevanceComputer & Internet LawCivil ActionsGeneral OverviewEvidenceRelevanceSpoliation

FOOTNOTES:

(n1)Footnote 1. **Written statement of rationale and data relied on required.** *Fed. R. Civ. P. 26(a)(2)(B)(i), (ii)*; *see Hoffman v. United Telecomms., Inc., 117 F.R.D. 436, 439 (D. Kan. 1987)* (court rejected request to produce computer files based on work product privilege, but noted that if computer files were to be used at trial by expert then plaintiff was to receive all information).

(n2)Footnote 2. *Fed. R. Civ. P. 26(a)(2)(C)(i).*

(n3)Footnote 3. **Disclosure of attorney opinion-work product relied on by expert as discoverable.** *See* comment to American Bar Association Civil Discovery Standards 21 (1999) (citing *Musselman v. Phillips*).

1st Circuit *Musselman v. Phillips, 176 F.R.D. 194, 199 (D. Md. 1997)* (when attorney communicates otherwise protected work product to expert witness, information is discoverable if considered by expert).

2d Circuit *B.C.F. Oil Ref. v. Consolidated Edison Co., 171 F.R.D. 57, 66-67 (S.D.N.Y. 1997)* (work product is discoverable under *Fed. R. Civ. P. 26(a)(2)(B)*); *see* *Magee v. Paul Revere Life Ins. Co., 172 F.R.D. 627, 642 (E.D.N.Y. 1997)* (data or information considered by expert and required to be disclosed in expert's report under Rule 26(a)(2)(B) does not extend to core attorney work product considered by expert).

6th Circuit *Haworth, Inc. v. Herman Miller, Inc., 162 F.R.D. 289 (W.D. Mich. 1995)* (work product is not discoverable under *Fed. R. Civ. P. 26(a)(2)(B)* even if provided to expert).

(n4)Footnote 3.1. *Fed. R. Civ. P. 26(b)(4)(C).*

(n5)Footnote 4. *Fed. R. Civ. P. 26(b)(4)(D)(ii).*

(n6)Footnote 5. **Information provided by consulting expert to testifying expert is discoverable.** *See* *Tri-gon Ins. Co. v. United States, 204 F.R.D. 277, 282-283 (E.D. Va. 2001)* (court ordered government to engage outside technology expert to retrieve electronic data provided by consulting expert to testifying expert that had been deleted); *see also* Gregory P. Joseph, *Expert Spoliation*, Nat'l L.J., Feb. 3, 2003, at B7.

(n7)Footnote 6. **Case law unsettled regarding meaning of "considered" under Rule 26(a)(2)(B).** *See* *United States Fidelity & Guar. Co. v. Braspetro Oil Servs. Co., 2002 U.S. Dist. LEXIS 111, at *24-25 (S.D.N.Y., Jan. 4, 2002)* (comparing *In re Pioneer Hi-Bred, 238 F.3d 1370, 1375 (Fed. Cir. 2001)* , holding that fundamental fairness requires disclosure of all information furnished to testifying expert, with *Amway Corp. v. Procter & Gamble Co., 2001 U.S. Dist. LEXIS 5317, at *3-4 (W.D. Mich. Apr. 17, 2001)* , holding that documents furnished but not read by testifying expert are not discoverable); *see also* Gregory P. Joseph, *Expert Spoliation*, Nat'l L.J., Feb. 3, 2003, at B7.

(n8)Footnote 7. **Burden on party resisting discovery that expert did not "consider" information in forming opinion.** *See* *United States Fidelity & Guar. Co. v. Braspetro Oil Servs. Co., 2002 U.S. Dist. LEXIS 111, at *29 (S.D.N.Y., Jan. 4, 2002)* (defendants have not "clearly established that their experts did not consider everything supplied to them (60 CD-ROMs containing scanned images of 1.1 million documents) in forming their opinions as testifying experts").

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7-37A Moore's Federal Practice: Electronic Discovery § 37A.22

AUTHOR: by John K. Rabiej

§ 37A.22 Interrogatories

Interrogatories can be useful in determining the extent of discoverable information that is contained in computers at the outset of litigation. n1 For example, an interrogatory can be used to identify a responding party's computer network specialist and any records-retention policy. n2

A responding party must specify the location of the records sought sufficiently to permit the requesting party to locate and identify the sought-after records. n3 Once identified, depositions of the responsible persons can lead to information that ascertains the potential pool of computers and computer systems that may eventually be examined, as well as the likelihood that time-consuming and expensive recovery of inaccessible electronically stored information--like deleted files or retrieval of documents from a backup system--may be pursued.

The responding party may provide an opposing party access to its computer hard drive to inspect or copy electronically stored information instead of submitting a written answer to a specific interrogatory, if the burden of ascertaining the answer to the interrogatory is substantially the same for both parties. In such a case, the responding party may be required to provide appropriate software or technical assistance to the opposing party. n4 An interrogatory may also be used to request an analysis of computer records or for production of records when a party needs to undertake its own analysis of computer data. n5

For further discussion of the use and scope of interrogatories, see Ch. 33, *Interrogatories to Parties* .

Legal Topics:

For related research and practice materials, see the following legal topics:
Civil ProcedureDiscoveryElectronic DiscoveryGeneral OverviewCivil ProcedureDiscoveryMethodsInterrogatoriesGeneral OverviewCivil ProcedureDiscoveryMethodsInterrogatoriesFormCivil ProcedureDiscoveryMethodsInterrogatoriesUse

FOOTNOTES:

(n1)Footnote 1. **Interrogatory helpful in obtaining information at outset of litigation.** *See United States v. Personal Computer Ctr., Inc., 1991 U.S. Dist. LEXIS 16131, at *2-3 (D. Kan. Oct. 29, 1991)* (defendant's response to interrogatory was not sufficiently detailed to allow plaintiff to readily identify relevant documents).

(n2)Footnote 2. **Interrogatory identifies relevant computer equipment and key personnel.** *See Laufman v. Oakley Bldg. & Loan Co., 72 F.R.D. 116, 123 (S.D. Ohio 1976)* (interrogatories contain inquiries on database, types of equipment, storage and retention procedures).

(n3)Footnote 3. **Duty to specify location of requested records**. *See Fed. R. Civ. P. 33(d).*

8th Circuit See Graske v. Auto-Owners Ins. Co., 647 F. Supp. 2d 1105, 1108 (D. Neb. 2009) (defendant's production of 7000 pages of documents, divided into seven files and scanned onto CD-ROM, did not provide plaintiffs sufficient guidance as to how to locate responsive documents).

10th Circuit See Bayview Loan Servicing, LLC v. Boland, 259 F.R.D. 516, 519 (D. Colo. 2009) (responses to interrogatories by use of CD must be in sufficient detail to permit interrogating party to locate and identify responsive documents).

(n4)Footnote 4. *Fed. R. Civ. P. 33(d)*, Committee Note of 2006 (*reproduced verbatim at § 33App.06[2]*).

(n5)Footnote 5. **Preliminary information obtained from interrogatories basis for more in-depth discovery.** *See International Ass'n of Machinists v. United Aircraft Corp., 220 F. Supp. 19, 20-21 (D. Conn. 1963) , aff'd on other grounds, 337 F.2d 5 (2d Cir. 1964)* (responding party required to provide analysis of computer records in lieu of dumping 120,000 pages of personnel records weighing 450 pounds).

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7-37A Moore's Federal Practice: Electronic Discovery § 37A.23

AUTHOR: by John K. Rabiej

§ 37A.23 Expedited Discovery

Under ordinary circumstances, discovery is deferred until the Rule 26(f) conference (*see § 37A.24*). n1 However, relevant electronic evidence may be lost because a computer may be deleting relevant evidence as part of routine operations during this time. For example, merely turning on a computer may permanently erase information on its hard drive. Adding a file or operating a software application will cause a computer to allocate "space" on the hard drive that might be presently occupied by a "deleted" file. Once the new data is assigned to the hard drive space, it overwrites and permanently erases the original "deleted" file (*see § 37A.03[3]*). To prevent inadvertent destruction of relevant evidence, a court may, on a party's motion under Rule 26(d), order expedited discovery before the completion of Rule 26(a)(1) initial disclosure or a Rule 26(f) attorney conference. n2 Expedited discovery is routinely sought in copyright infringement cases to preserve evidence that can easily be deleted in actions involving illegal trade of music and video files posted on the internet. n2.1

A party may request expedited discovery when the party has reasonable grounds to suspect that the opposing party is destroying relevant electronic evidence that will cause substantial prejudice. If there is a real likelihood that electronically stored information will be destroyed, an on-site inspection of computers and mirror imaging of electronic records can be particularly helpful to ensure preservation of relevant evidence (*see § 37A.44[3][a]*). n3 Expedited discovery can also be helpful to accelerate the disposition of a case involving computer equipment that was seized in accordance with a temporary restraining order but that is essential to ongoing business operations. n4

The standards governing issuance of preliminary injunctive relief under Rule 65 apply to a request for expedited discovery grounded on a need to speed relief. n5

Legal Topics:

For related research and practice materials, see the following legal topics:
Civil ProcedureDiscoveryDisclosuresGeneral OverviewCivil ProcedureDiscoveryElectronic DiscoveryGeneral OverviewCivil ProcedurePretrial MattersConferencesPretrial ConferencesEvidenceDemonstrative

EvidenceComputer-Generated EvidenceEvidenceRelevanceSpoliation

FOOTNOTES:

(n1)Footnote 1. *Fed. R. Civ. P. 26(d)(1), (f).*

(n2)Footnote 2. **Court may order expedited discovery.** *Fed. R. Civ. P. 26(a)(1), (d), (f).*

*2d Circuit Compare In re Merrill Lynch & Co., Inc. Research Reports Sec. Litig., 2004 U.S. Dist. LEXIS 2215, at *1-4 (S.D.N.Y. Feb. 18, 2004)* (absent showing of "imminent risk" that electronic information will be destroyed, court would not lift discovery stay imposed under Private Securities Litigation Reform Act pending disposition of motion to dismiss).

8th Circuit See Antioch Co. v. Scrapbook Borders, Inc., 210 F.R.D. 645, 651 (D. Minn. 2002) (motion to expedite discovery granted to ensure that computer records are preserved, especially deleted data that may be inadvertently overwritten and destroyed by later computer use).

(n3)Footnote 2.1. **Expedited discovery routinely sought in internet copyright infringement cases.**

*9th Circuit See UMG Recordings, Inc. v. John Doe, 2008 U.S. Dist. LEXIS 92788, at *11-14 (N.D. Cal. July 30, 2008)* (information identifying person illegally trading copyright works on the internet is susceptible to easy deletion).

*10th Circuit See Interscope Records v. Does 1-14, 2007 U.S. Dist. LEXIS 73627, at *3-5 (D. Kan. Oct. 1, 2007)* (good cause shown sufficient to order expedited discovery of records of internet service provider for names of individuals who allegedly committed copyright infringement).

*D.C. Circuit See Warner Bros. Records Inc. v. Does 1-6, 2007 U.S. Dist. LEXIS 86431, at *3-5 (D.D.C. Nov. 26, 2007)* (Rule 45 subpoena served under expedited discovery before Rule 26(f) conference on third-party internet service provider for names of individuals allegedly downloading copyrighted works).

(n4)Footnote 3. **Inspection of computers on-site ordered on showing that evidence may otherwise be destroyed.**

1st Circuit See, e.g., Century-ML Cable Corp. v. Carrillo, 43 F. Supp. 2d 176, 178 (D.P.R. 1998) (expedited discovery ordered by court in light of likely destruction of computer evidence).

4th Circuit Physicians Interactive v. Lathian Sys., Inc., 2003 U.S. Dist. LEXIS 22868, at *12, *29-30 (E.D. Va. Dec. 5, 2003) (expedited mirror imaging of defendant's computer ordered after court found likelihood that plaintiff will suffer irreparable harm greater than likelihood that defendant would suffer harm).

8th Circuit See Antioch Co. v. Scrapbook Borders, Inc., 210 F.R.D. 645, 652-653 (D. Minn. 2002) (mirror imaging of defendant's computer hard drives to preserve deleted data that would otherwise be overwritten and destroyed by later computer use).

10th Circuit See Gates Rubber Co. v. Bando Chem. Indus., 167 F.R.D. 90, 99-100 (D. Colo. 1996) (computer technicians copied electronic records in accordance with court order).

(n5)Footnote 4. **Expedited discovery can quickly return equipment back for use in regular business operations.**

8th Circuit See LEXIS-NEXIS v. Beer, 41 F. Supp. 2d 950, 953 (D. Minn. 1999) (expedited discovery ordered to make mirror image copy of computer hard drive in trade secrets case).

10th Circuit See Religious Tech. Ctr. v. F.A.C.T.NET, Inc., 901 F. Supp. 1519, 1522-1523 (D. Colo. 1995) (expedited discovery ordered to quickly resolve copyright infringement case in which extensive computer equipment, computer software, and voluminous documents were seized).

(n6)Footnote 5. **Rule 65 standards apply to request for expedited discovery.** *Fed. R. Civ. P. 65(b).*

2d Circuit Notaro v. Koch, 95 F.R.D. 403, 405 (S.D.N.Y. 1982) (plaintiff required to show irreparable injury, probability of success, value of expedited discovery, and likelihood of injury absent expedited discovery).

*10th Circuit Klein-Becker USA, LLC v. Englert, 2007 U.S. Dist. LEXIS 45197, at *3-4 (D. Utah June 20, 2007)* (court ordered expedited discovery of electronically stored information to aid enforcement of injunction).

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AUTHOR: by John K. Rabiej

§ 37A.24 Rule 26(f) Conference

Under Rule 26(f), parties must confer to develop a discovery plan 21 days before a scheduling conference is held or a scheduling order is due. n1 Face-to-face meetings, though not required, are strongly encouraged. The parties are directed to address any issues relating to the disclosure, discovery, or preservation of electronically stored information and develop a comprehensive discovery plan that anticipates potential discovery problems. n2 In fashioning the discovery plan, the parties ideally should consider the competing interests and demands faced by their opponent in preserving electronically stored information while at the same time ensuring that ongoing operations and activities are not seriously disrupted. Among the topics to be considered, the parties should: (1) discuss the time period in which discoverable information must be produced; (2) identify the sources of electronically stored information; and (3) indicate which sources of electronically stored information are reasonably accessible, and for sources of information that are not reasonably accessible provide details on the cost and burden in retrieving and reviewing the information. n3 If electronically stored records are at issue, certain subjects should be considered at the pretrial conference, including the following matters:

- Whether the authenticity of computer records will be disputed (*see § 37A.34[1][d]*);
- The types of electronically stored information that may be required in discovery, including email messages, word-processing files, and databases (*see §§ 37A.04*; *37A.05*);
- Whether metadata must be produced, and if so, whether procedures should be adopted to ensure that privileged information is excluded (*see § 37A.03[1]*;
- Whether the court should be requested to enter an order under Evidence Rule 502 to limit waivers of the attorney-client privilege and work-product protection when documents are disclosed during discovery (*see § 37A.32[5][e]*);
- Whether backup tape systems or archived data may be requested (*see § 37A.05[2], [3]*);

- Whether expert testimony may be based on electronically stored data (*see §§ 37A.21*; *37A.34[1][e]*);

- Whether the substantive allegations in the complaint directly involve electronically stored records (*see §§ 37A.20*; *37A.34[1][c]*); and

- Whether the discovery process may involve a large mass of documents (*see § 37A.34[2]*).

In addition, pursuant to the 2006 amendment to Rule 26(f), the parties must discuss the form or forms in which the electronically stored information will be produced. n3.1 If the parties do not agree on the form of production, Rule 34(b) sets out default procedures for resolving the dispute (*see § 37A.40*). n4 However, these "default procedures," which provide that if the request does not specify, the information should be produced in a form in which it is ordinarily maintained or in a reasonably usable form, have been the source of a significant number of disputes. Courts continue to wrestle with how electronically stored information is "ordinarily maintained," n4.1 or what is a "reasonably usable form." n4.2 These disputes are likely to be avoided if the parties specify the form of production before production begins. n4.3

Parties are also directed to discuss at the conference any issue relating to preserving discoverable information, including electronically stored information. n5 A party should disclose any relevant records-retention policy to facilitate the discovery-planning discussion and to assess whether a preservation order may be appropriate. Preservation orders have the advantage of clearly delineating a party's obligation to take measures to ensure that targeted information is not destroyed. n6 Preservation orders, however, should not be entered routinely, and they should be narrowly tailored if entered over a party's objection. n7 In particular, blanket preservation orders should be avoided; these orders can seriously disrupt daily business activities by requiring the cessation of routine computer operations, which automatically purge information that would otherwise overwhelm the system (*see § 37A.57[1]*).

An enormous volume of electronically stored information can be produced in discovery, including "unseen" embedded data and metadata, which increases the likelihood that privileged or protected matter will be inadvertently disclosed. At the discovery-planning conference, parties are directed to address any issue relating to the assertion of a privilege or protection claim. The amendment to Rule 26(b)(5)(B) in 2006 and new *Rule 502 of the Federal Rules of Evidence* enacted on September 19, 2008 govern the waiver of the attorney-client privilege and work-product protections dealing with information that has been intentionally or inadvertently disclosed (*see § 37A.32[5][e]*). Under Evidence Rule 502, the inadvertent disclosure of privileged or protected information does not waive the attorney-client privilege or work-product protection if reasonable steps were taken to prevent disclosure, and, after learning of the disclosure, prompt steps were taken to cure the error. In addition, waiver of the privilege or protection regarding the subject matter of the information is limited only to situations in which a party intentionally discloses protected or privileged information in a selective, misleading, or unfair manner. n8

Under Rule 502(d), a federal court may order that disclosure of privileged or protected information in connection with a federal proceeding does not waive the privilege or protection in any ongoing or subsequent litigation, including state court litigation. n9 The rule is intended to reduce the costs incurred from an exhaustive privilege review of all matter considered in discovery. Though parties may continue to review documents before producing them in discovery, mistakes in disclosing privileged or protected information will not be penalized by waiving the privilege or protection in such cases. The parties should discuss whether they can reach an agreement on whether to request a Rule 502 order. If no agreement can be reached, a single party may make the request or the court itself may enter the order to facilitate the discovery process.

Rule 502 also recognizes the well-established practice of parties entering into agreements between themselves to limit the effect of waiver by disclosure during discovery. But the agreement can only bind the consenting parties. n9.1 Such agreements can include "clawback" provisions designed to permit a producing party to retrieve inadvertently disclosed

confidential information, or "quick peek" provisions designed to permit the requesting party an opportunity to examine all information on condition that neither agreement prevents the producing party from asserting a privilege or protection claim. n10 The parties may request the court to incorporate the agreement into a court order, which will bind all other parties in subsequent litigation. Illustrative Civil Form 35 includes a provision for the parties to describe their agreement or an order regarding claims of privilege or protection as trial preparation materials asserted after production.

In the absence of a Rule 502 court order, Civil Rule 26(b)(5)(B) sets up procedures to assert privilege and work-product protection claims after production, freezing the status quo and deferring the decision to determine whether a privilege or protection has been waived until a court rules on the privilege or protection claim. Under the rule, the receiving party must return, sequester, or destroy information if the responding party produced the information and then notified the party of the claim. n11

For further discussion of the discovery conference requirement, see *§§ 26.141 -26.146*. For further analysis of the impact of the 2006 electronic discovery amendments on inadvertent disclosure, see Scheindlin, *E-Discovery: The Newly Amended Federal Rules of Civil Procedure*, Part II., *Rule 16(b) Order and the Rule 26(f) Meet and Confer Requirements* (Matthew Bender 2006).

Legal Topics:

For related research and practice materials, see the following legal topics:
Civil ProcedureDiscoveryElectronic DiscoveryGeneral OverviewCivil ProcedureDiscoveryPrivileged MattersGeneral OverviewCivil ProcedureDiscoveryRelevanceCivil ProcedurePretrial MattersConferencesCase ManagementCivil ProcedurePretrial MattersConferencesPretrial Conferences

FOOTNOTES:
(n1)Footnote 1. *Fed. R. Civ. P. 26(f)(1)*.

(n2)Footnote 2. **Electronically stored discovery issues to be discussed at Rule 26(f) conference.** *See Fed. R. Civ. P. 26(f)*, Committee Note of 2000 (*reproduced verbatim at § 26App.10[2]*).

> *3d Circuit See In re Bristol-Myers Squibb Sec. Litig., 205 F.R.D. 437, 444 (D.N.J. 2002)* ("In the electronic age, this meet and confer should include a discussion on whether each side possesses information in electronic form, whether they intend to produce such material, whether each other's software is compatible, whether there exists any privilege issue requiring redaction, and how to allocate costs involved with each of the foregoing.").
>
> *7th Circuit See* Mirbeau of Geneva Lake LLC v. City of Lake Geneva, 2009 U.S. Dist. LEXIS 101104, at *9-10 (E.D. Wis. Oct. 15, 2009) (after both parties failed to reach a consensus on scope and methods of ESI discovery, court ordered parties to develop "meaningful" ESI discovery plan).

(n3)Footnote 3. *Fed. R. Civ. P. 26(f)*, Committee Note of 2006 (*reproduced verbatim at § 26App.11[2]*).

(n4)Footnote 3.1. *Fed. R. Civ. P. 26(f)(3)(C)*.

(n5)Footnote 4. *Fed. R. Civ. P. 34(b)(2)*.

(n6)Footnote 4.1. **Form ordinarily maintained.** *See, e.g., Covad Communications Co. v. Revonet, Inc., 254 F.R.D. 147, 150 (D.D.C. 2008)* (for hard copy to be an acceptable format, one would have to believe that company, in its day to day operations, keeps all its electronic communications on paper).

(n7)Footnote 4.2. **Reasonably usable form.** *See, e.g., White v. Graceland College Ctr. for Professional Dev. & Lifelong Learning, Inc., 586 F. Supp. 2d 1250, 1264 (D. Kan. 2008)* (party did not fulfill its duty to produce documents in "reasonably usable form" when it converted emails to PDF files and produced PDF documents in paper format).

(n8)Footnote 4.3. **Failure to discuss form of production wastes judicial resources.** *See Covad Communications Co. v. Revonet, Inc., 254 F.R.D. 147, 150 (D.D.C. 2008)* ("it is a waste of judicial resources to continue to split hairs on an issue that should disappear when lawyers start abiding by their obligations under the amended Federal Rules and talk to each other about the form of production").

(n9)Footnote 5. *Fed. R. Civ. P. 26(f)(2).*

(n10)Footnote 6. **Preservation order defines extent of producing party's duty.**

2d Circuit See Treppel v. Biovail Corp., 233 F.R.D. 363, 369 (S.D.N.Y. 2006) (party risks sanctions for miscalculating consequences of losing relevant evidence in absence of preservation order).

*8th Circuit See Westcoat v. Bayer Cropscience, LP, 2006 U.S. Dist. LEXIS 79756, at *1-2 (E.D. Mo. Nov. 1, 2006)* (court recognizes that "law with respect to preservation efforts is not fully developed" and agrees to issue preservation order to clarify parties' respective obligations).

(n11)Footnote 7. *Fed. R. Civ. P. 26(f)*, Committee Note of 2006 (*reproduced verbatim at § 26App.11[2]*).

(n12)Footnote 8. **Subject-matter waiver limited to intentional disclosures.** *See Fed. R. Evid. 502*, Committee Note 2008.

(n13)Footnote 9. *See Fed. R. Evid. 502(d).*

(n14)Footnote 9.1. *See Fed. R. Evid. 502(e).*

(n15)Footnote 10. *Fed. R. Civ. P. 26(f)*, Committee Note of 2006 (*reproduced verbatim at § 26App.11[2]*); *see American Econ. Ins. Co. v. Schoolcraft, 2006 U.S. Dist. LEXIS 42519, at *8 (D. Colo. June 23, 2006)* (example of stipulated protective order allowing party to demand return of inadvertently disclosed privileged matter without waiving privilege).

(n16)Footnote 11. *Fed. R. Civ. P. 26(b)(5)(B).*

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C. PROCEDURES GOVERNING DISCOVERY OF ELECTRONIC RECORDS

7-37A Moore's Federal Practice: Electronic Discovery § 37A.25

AUTHOR: by John K. Rabiej

§ 37A.25 Rule 16 Pretrial Conference

Under Rule 16, a court may issue an order controlling and scheduling discovery, including an order that facilitates the "just, speedy, and inexpensive disposition of the action." n1 After reviewing the parties' report following their Rule 26 conference, the court may issue an order governing the scope of discovery, which specifically addresses electronically stored information. The order may address any agreement between the parties regarding the assertion of privilege claims, including "quick peek" and "claw back" agreements (*see § 37A.24*). n2

A party at the Rule 16 conference may request a preservation order ensuring that electronic documents will not be destroyed or lost. However, the court should not routinely issue such an order (*see § 37A.24*). Absent the parties' consent, the order should be issued only on an appropriate showing of need, taking into account the party's burdens in complying with it. n3 Scheduling orders, which set out discovery deadlines, may not be modified absent a showing of good cause. n4

Legal Topics:

For related research and practice materials, see the following legal topics:
Civil ProcedureDiscoveryElectronic DiscoveryGeneral OverviewCivil ProcedureDiscoveryProtective OrdersCivil ProcedurePretrial MattersConferencesCase ManagementCivil ProcedurePretrial MattersConferencesPretrial ConferencesCivil ProcedurePretrial MattersConferencesScheduling Conferences

FOOTNOTES:
(n1)Footnote 1. *Fed. R. Civ. P. 16(c)(2)(F), (P).*

(n2)Footnote 2. *Fed. R. Civ. P. 16(b),* Committee Note of 2006 (*reproduced verbatim at § 16App.06[2]*).

(n3)Footnote 3. **Issuing protective order subject to balancing test.**

2d Circuit See Treppel v. Biovail Corp., 233 F.R.D. 363, 370 (S.D.N.Y. 2006) (preservation order

pertaining to electronically stored information issued only on showing that it is necessary and not unduly burdensome).

3d Circuit See Capricorn Power Co. v. Siemens Westinghouse Power Corp., 220 F.R.D. 429, 433 (W.D. Pa. 2004) (analysis similar to balancing test used when determining injunctive relief).

*8th Circuit But see Westcoat v. Bayer Cropscience, LP, 2006 U.S. Dist. LEXIS 79756, at *1-2 (E.D. Mo. Nov. 1, 2006)* (court issued preservation order to clarify preservation responsibilities in complex case).

*10th Circuit See Smith v. The Boeing Co., 2005 U.S. Dist. LEXIS 36890, at *5-6 (D. Kan. Aug. 31, 2005)* (court denied request for preservation order because no showing that information would be destroyed).

(n4)Footnote 4. **Rule 16 pretrial scheduling orders play crucial role in efficient case management**. *See Fed. R. Civ. P. 16(b)*; *see also Hnot v. Willis Group Holdings Ltd., 2006 U.S. Dist. LEXIS 57612, at *9-10 (S.D.N.Y. Aug. 17, 2006)* (court rejected discovery request for access to computer database because moving party failed to comply diligently with court-ordered deadlines and failed to timely notify court of need for such information).

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7-37A Moore's Federal Practice: Electronic Discovery § 37A.26

AUTHOR: by John K. Rabiej

§ 37A.26 Ex Parte Seizure

Electronically stored records may be deleted quickly and easily, although remnants may remain or evidence of the deletion may be retrieved from the affected computer (*see § 37A.03[3]*). This characteristic of electronic evidence offers opportunities for surreptitious concealment or destruction and often serves as the basis for requesting an ex parte order seizing electronically stored records. However, an ex parte temporary restraining order seizing a computer can impose severe hardship, and the order may be issued only in exceptional circumstances. n1

A party must show compelling reasons that the extraordinary remedy of an ex parte seizure is essential to prevent imminent destruction of records, that the jeopardized information is essential to the case, and that no other less intrusive means are available to secure the information. n2 It is insufficient to allege that electronically stored evidence can be easily destroyed or that the responding party may be involved in a criminal activity and thus more likely to destroy evidence. n3 As a threshold matter, evidence that a party is "likely to take the opportunity" to conceal or destroy evidence must be shown. For example, a showing that a party has a history of concealing evidence may provide persuasive grounds for issuing an ex parte seizure order. n4

Often, means less drastic than an ex parte seizure order can effectively ensure that electronically stored evidence is preserved if illegitimate destruction is suspected. n5 Simply requesting that a party preserve specific evidence is usually sufficient to prevent spoliation (*see § 37A.55[2]*). In most cases, notifying a party of the duty to preserve evidence prevents spoliation, particularly if the party is cautioned that if software files are erased, the affected computer will contain tell-tale evidence of the erased files, which will reveal tampering. However, if an ex parte seizure order is issued, the court should impose adequate safeguards and limitations on its execution to prevent overbroad and intrusive searches. n6

Legal Topics:

For related research and practice materials, see the following legal topics:
Civil ProcedureDiscoveryElectronic DiscoveryGeneral OverviewCivil ProcedurePretrial MattersConferencesCase

ManagementCivil ProcedurePretrial MattersConferencesPretrial ConferencesCivil ProcedureRemediesInjunctionsTemporary Restraining OrdersEvidenceRelevanceSpoliation

FOOTNOTES:

(n1)Footnote 1. **Ex parte TRO under exceptional circumstances.** *See Fed. R. Civ. P. 65(b)(1).*

6th Circuit See First Tech. Safety Sys., Inc. v. Depinet, 11 F.3d 641, 644-645, 652 (6th Cir. 1993) (ex parte order seizing software program to ensure that electronic evidence would not be immediately destroyed was abuse of discretion).

10th Circuit See Religious Tech. Ctr. v. F.A.C.T.NET, Inc., 901 F. Supp. 1519, 1522 (D. Colo. 1995) (ex parte order seizing extensive computer equipment and software in copyright infringement case).

(n2)Footnote 2. **Elements for ex parte seizure court order.** *See Fed. R. Civ. P. 65*; *Sega Enters. v. MAPHIA, 948 F. Supp. 923, 927 (N.D. Cal. 1996)* (ex parte seizure of defendant's computer and memory devices to permit plaintiff to copy hard drive in copyright infringement and direct trademark infringement case); *Religious Tech. Ctr. v. Netcom On-Line Communications Servs., 923 F. Supp. 1231, 1259-1264 (N.D. Cal. 1995)* (U.S. marshal accompanied by plaintiff's computer expert during seizure of computer to identify relevant copyrighted materials; court later vacated seizure writ because it was overbroad).

(n3)Footnote 3. **General allegations of possible destruction of relevant evidence insufficient.** *See Adobe Sys. v. South Sun Prods. Inc., 187 F.R.D. 636, 641 (S.D. Cal. 1999)* (possibility that defendant, once notified, could easily erase "pirated" software from computer is insufficient grounds for issuing ex parte TRO, which requires, at minimum, showing that defendant will likely destroy evidence).

(n4)Footnote 4. **Indications of potential destruction of relevant evidence.**

6th Circuit See First Tech. Safety Sys., Inc. v. Depinet, 11 F.3d 641, 651 (6th Cir. 1993) (motion to vacate seizure order approved when no showing of likely destruction of evidence was made).

8th Circuit See, e.g., LEXIS-NEXIS v. Beer, 41 F. Supp. 2d 950, 953 (D. Minn. 1999) (court issued TRO to deliver electronic database and prohibit any copying of database).

(n5)Footnote 5. **Less drastic means need to be considered.**

6th Circuit See First Tech. Safety Sys., Inc. v. Depinet, 11 F.3d 641, 650 (6th Cir. 1993) (less drastic means must be considered before issuing ex parte seizure order; for instance, defendant can be ordered to preserve evidence until adversarial hearing determined whether immediate production of electronic evidence is necessary).

9th Circuit See Adobe Sys. v. South Sun Prods. Inc., 187 F.R.D. 636, 642-643 (S.D. Cal. 1999) (erasure of software programs can require destruction of hundreds of megabytes of data that can be destroyed without leaving any traces only with sophisticated equipment).

(n6)Footnote 6. **Adequate safeguards should be imposed on execution of ex parte seizure.**

2d Circuit See Interlink Int'l Fin. Servs., Inc. v. Block, 145 F. Supp. 2d 312, 314-315 (S.D.N.Y. 2001) (court required plaintiff to post $200,000 security under Rule 65(c) to protect defendant from potential

misappropriation of software program, including source codes, which had been seized under earlier ex parte order).

6th Circuit See First Tech. Safety Sys., Inc. v. Depinet, 11 F.3d 641, 652 (6th Cir. 1993) (ex parte order seizing computer records vacated because computer diskettes copied included business records irrelevant to copyright claim).

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7-37A Moore's Federal Practice: Electronic Discovery § 37A.27

AUTHOR: by John K. Rabiej

§ 37A.27 Discovery of Electronically Stored Information from Nonparty

A party may serve a subpoena on a nonparty witness to produce electronically stored information in that person's possession, custody, or control. n0.1 The subpoena must be issued from the court for the district where the production is to be made. n0.2 The party or attorney serving the subpoena must take reasonable steps to "avoid imposing undue burden or expense" on the nonparty witness. n1 The court must ensure that the subpoena is reasonable, taking into account the relevance of the subpoenaed matter and the particularity and scope of its description. n2 If the subpoena is unreasonable, the subpoenaed nonparty typically requests the court to quash it. But a party may also request the court to quash the subpoena if the subpoenaed matter may involve the party's claim of privilege, proprietary interest, or personal interest. n2.1 If the nonparty has no interest in the underlying litigation, a court may allocate part or all of the costs incurred in producing the subpoenaed electronically stored information. In such a case, the nonparty should make a proffer showing the actual expenses incurred in conducting the search. n3 In considering whether to allocate costs incurred in producing information subject to a subpoena, a court considers: "whether the nonparty actually has an interest in the outcome of the case, whether the nonparty can more readily bear the costs than the requesting party and whether the litigation is of public importance." n4 A court may apportion the discovery costs between the requesting party and nonparty. n4.1

The discovery limits on electronically stored information apply equally to parties and nonparty witnesses. Accordingly, a nonparty responding to a subpoena must only identify the sources of electronically stored information that it identifies as not reasonably accessible. n5 It need not search them. To facilitate discovery, a subpoena may request a "sampling" of the electronically stored information, subject to appropriate confidentiality restrictions. Inspections and limited sampling should be carefully reviewed and should not be unduly intrusive. n6 For full discussion of the subpoena topic, *see* Ch. 45, *Subpoena* .

Legal Topics:

For related research and practice materials, see the following legal topics:
Civil ProcedureDiscoveryGeneral OverviewCivil ProcedureDiscoveryElectronic DiscoveryGeneral OverviewCivil

ProcedureDiscoveryMotions to CompelCivil ProcedurePretrial MattersSubpoenasComputer & Internet LawGeneral Overview

FOOTNOTES:

(n1)Footnote 0.1. **Rule 45 applies to subpoenas served on nonparties.** *See Fed R. Civ. P. 45(a)(1)(A)(iii)* (provision explicitly applies to subpoena of electronically stored information); *see Hardin v. Belmont Textile Mach. Co., 2007 U.S. Dist. LEXIS 57937, at *8 (W.D.N.C. Aug. 7, 2007)* ("control" broadly construed, and court finds spouse's personal computer found in home to be in nonparty's "control"); *see also Thomas v. IEM. Inc., 2008 U.S. Dist. LEXIS 19186, at *4 (M.D. Lo. Mar. 12, 2008)* (though not technically precluded from being served on parties, Rule 45 subpoenas generally used to obtain document from nonparties).

(n2)Footnote 0.2. **Subpoena issued from court in district where production made.** *See Anderson v. Thomson, 2009 U.S. Dist. LEXIS 41916, at *2-3 (W.D. Wis. May 15, 2009)* (court advised pro se plaintiff first to determine location of relevant electronically stored information controlled by PayPal and then to request clerk of court in that district for blank subpoena form).

(n3)Footnote 1. *Fed. R. Civ. P. 45(c)(1)*; *see Hoover v. Florida Hydro, Inc., 2008 U.S. Dist. LEXIS 87839, at *7 (E.D. La. Oct. 1, 2008)* ("Rule 45 governs the issuance of subpoenas, and provides that on timely motion, the issuing court must quash or modify a subpoena if it requires disclosure of privileged or other protected matter, or otherwise subjects the subpoenaed person to undue burden").

(n4)Footnote 2. **Request must be reasonable.**

3d Circuit See In re Auto. Refinishing Paint Antitrust Litig., 229 F.R.D. 482, 496 (E.D. Pa. 2005) (subpoena of all electronic files, including emails, was too broad).

*6th Circuit See Simon Prop. Group, Inc. v. Taubman Centers, Inc., 2008 U.S. Dist. LEXIS 5065, at *15-16 (E.D. Mich. Jan. 24, 2008)* (court ruled that review of 250,000 ESI files located as result of keyword search was too burdensome and ordered parties to work together to develop new search protocol to narrow scope of search).

11th Circuit See Southeastern Mech. Serv., Inc. v. Brody, 2009 U.S. Dist. LEXIS 93903, at *8 (N.D. Ga. June 22, 2009) ("Among the factors courts have considered in determining whether a subpoena should be modified or quashed because it presents an undue burden are the relevance of the information requested, the requesting party's need for the documents, the breadth of the document request, the time period covered by the request and the burden imposed, including the expense and inconvenience to a nonparty to whom a request is made.").

(n5)Footnote 2.1. **Party may have standing to object to nonparty subpoena.** *See Hoover v. Florida Hydro, Inc., 2008 U.S. Dist. LEXIS 87839, at *8-9 (E.D. La. Oct. 1, 2008)* (court granted party's motion to quash nonparty subpoena because information on their computers sought in subpoena may have been sent by or for party).

(n6)Footnote 3. **Nonparty should show actual expenses incurred in search.**

*4th Circuit See In re Subpoena Duces Tecum to AOL, LLC, 2008 U.S. Dist. LEXIS 39349, at *15-17 (E.D. Va. Apr. 18, 2008)* (nonparty made showing that subpoena for all emails during six-week period without limiting subpoena to relevant subject matter was overbroad and burdensome).

*5th Circuit See Auto Club Ins. Co. v. Ahner, 2007 U.S. Dist. LEXIS 63809, at *8-9 (E.D. Lo. Aug. 29, 2007)* (nonparty must make evidentiary showing demonstrating costs and burden in producing requested

ESI); *Butler v. Bancorpsouth Bank, 2006 U.S. Dist. LEXIS 80341, at *3-4 (S.D. Miss. Oct. 31, 2006)* (court required "affidavit evidence as to the expenses that will likely be actually incurred" by nonparty in search of subpoenaed electronically stored information before allocating costs).

*6th Circuit See Parikh v. Premera Blue Cross, 2007 U.S. Dist. LEXIS 23213, at *4 (S.D. Ohio Mar. 16, 2007)* (nonparty failed to make showing of undue costs in retrieving archived emails, and court declined to shift costs to requesting party).

(n7)Footnote 4. **Allocating costs incurred by nonparty witness**

*2d Circuit See JP Morgan Chase Bank v. Winnick, 2006 U.S. Dist. LEXIS 80202, at *6-8 (S.D.N.Y. Nov. 2, 2006)* (third party had business dealings with plaintiff and an interest in the litigation, undermining claim for reimbursing expenses incurred in producing subpoenaed materials); *In re Honeywell Int'l, Inc. Sec. Litig., 2003 U.S. Dist. LEXIS 20602, at *26-27 (S.D.N.Y. Nov. 18, 2003)* (nonparty witness, accounting firm, required to pay entire cost of producing subpoenaed electronic information because nonparty failed to substantiate costs and nonparty was closely associated with party).

3d Circuit See In re Auto. Refinishing Paint Antitrust Litig., 229 F.R.D. 482, 496 (E.D. Pa. 2005) (plaintiffs were required to pay costs of production of electronic files subpoenaed from third party).

*7th Circuit See Guy Chemical Co., Inc. v. Romaco AG, 2007 U.S. Dist. LEXIS 37636, at *4-8 (N.D. Ind. May 22, 2007)* (court applied proportionality test and determined that defendant should pay discovery production costs incurred by nonparty).

(n8)Footnote 4.1. **Discovery costs can be split between party and nonparty.** *See The Dow Chemical Co. v. Reinhard, 2008 U.S. Dist. LEXIS 35398, at *4 (S.D.N.Y. Apr. 29, 2008)* (" 'Despite the mandatory language of FRCP, courts in this Circuit have found that a court does have the discretion to split the costs between the nonparties and the requesting party when the equities of the particular case demand it."); *see also Bridgeport Music Inc. v. UMG Recordings, Inc., 2007 U.S. Dist. LEXIS 91957, at *11-13 (S.D.N.Y. Dec. 17, 2007)* (court advises nonparty that if production costs of ESI become burdensome, nonparty can apply to court to have some portion of the costs borne by plaintiff).

(n9)Footnote 5. *Fed. R. Civ. P. 45*, Committee Note of 2006 (*reproduced verbatim at § 45App.10[2]*).

(n10)Footnote 6. Former Fed. R. Civ. P. 37(f) (now see *Fed. R. Civ. P. 37(e)*, as restyled in 2007), Committee Note of 2006 (*reproduced verbatim at § 37App.09[2]*); *see Tessera Tech. Inc. v. Micron Tech., Inc., 2006 U.S. Dist. LEXIS 25114, at *19-26 (N.D. Cal. Mar. 22, 2006)* (subpoenaed nonparty was required to produce hard drive containing electronic database, subject to confidentiality restrictions).

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AUTHOR: by John K. Rabiej

[Reserved]

§§ 37A.28[Reserved]

Moore's Federal Practice: Discovery of Electronically Stored Information

Volume 7: Analysis: Civil Rules 30-37A
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D. SCOPE OF DISCOVERY OF ELECTRONICALLY STORED INFORMATION

7-37A Moore's Federal Practice: Electronic Discovery § 37A.30

AUTHOR: by John K. Rabiej

§ 37A.30 Discoverable if Relevant and Non-Privileged and if Attainable Without Undue Burden or Expense

[1] Discovery of Electronically Stored Information Calls for Practical and Reasonable Limits

Electronically stored records can contain vast amounts of information, but identifying and retrieving all potentially relevant evidence in any given case may not be worth the attendant costs and burdens. Courts have long recognized the special circumstances that distinguish discovery of electronically stored information from other types of information. n0.1 The reported case law reveals significant judicial involvement in electronic discovery disputes.

The underlying policy of the Federal Rules of Civil Procedure emphasizes active judicial involvement when the parties fail to reach agreement on discovery disputes to ensure that discovery is reasonable under all the circumstances (*see* Ch. 26, *Duty to Disclose; General Provisions Governing Discovery*). n1 The 2000 amendments to Rule 26(b) were intended to strengthen and reinvigorate earlier amendments aimed at curbing unlimited and unrestricted discovery. Rule 26(b) encourages courts to assess the reasonableness of a discovery request under all the circumstances in a particular case. n2 The 2000 amendments are particularly pertinent to the discovery of electronically stored information, which can raise issues quite different from those raised by discovery of hard-copy documents.

The 2000 amendments also reemphasized the policy, first announced in 1983 with the adoption of Rule 26(b)(2)'s proportionality provisions, that full disclosure has limitations. n3 The notion of having all information on a subject is almost unattainable in the electronic-information age. The amount of information contained in desktop computers in a large corporation, for example, represents manifest evidence that total disclosure in discovery is no longer feasible. Consequently, although disclosure must be fair and full, the obligation does not "necessarily require that every copy of every document that relates to a particular proposition be produced." n4

Parties are increasingly relying on automated keyword searches to facilitate examination of electronically stored information. n4.1 Though efficient, keyword searches are inherently limited and can produce incomplete results. Selecting the proper keywords can be complicated and involve the sciences of computer technology, statistics, and linguistics. n4.2 A court can require a party to use specific keywords to search electronically stored information. n4.2.1

Unless well designed, keyword searches will omit relevant information, including misspelled words, singular or plural forms of words, words containing an extra space, or acronyms. n4.3 Inadequate keyword searches restricted to certain electronic files will also fail to retrieve data located in mislabeled file types. For example, a word document can be stored inadvertently or deliberately in a file typically used to store an image, *i.e.*,.jpg. n4.4 Failure to test the results of a keyword search for quality assurance is a factor in determining the reasonableness and completeness of the discovery search. n4.5

[2] General Analytical Framework

Rule 26(b) n5 sets out the scope of and limits on discovery that are designed to further the primary objectives of the Federal Rules of Civil Procedure: to ensure the just, speedy, and inexpensive administration of justice. n6 The rule provides a multi-stage analytical framework to evaluate the reasonableness of a discovery request in a given case. Applying this analysis to electronically stored records is peculiarly fact driven and entails an assessment of all the circumstances in the case. n7

As a threshold issue, the requested matter must, in accordance with Rule 26(b)(1), be relevant to a pleaded claim or defense of any party (*see § 37A.31*). n8

Second, requested matter that is subject to a privilege or protection, particularly the attorney-client privilege or work-product protection, may be protected from discovery (*see § 37A.32*). n9

Third, Rule 26(b) sets out general limitations on discovery of all information and specific limitations on the discovery of electronically stored information (*see § 37A.33*). The requested production of electronically stored information and other matter may not be "unreasonably cumulative or duplicative," or obtainable "from some other source that is more convenient, less burdensome, or less expensive." n10 Further, discovery may be limited if the party had ample opportunity by discovery to obtain the information. n11 In addition, a court may limit the frequency and extent of discovery if the burden or expense of the discovery outweighs its likely benefit (*see § 37A.33[2]*). n12 A specific limitation is imposed on discovery of electronically stored information. A responding party may designate sources of electronically stored information that are not reasonably accessible because of undue cost or burden. n13 The party need not search sources of electronically stored information designated as inaccessible, although it must notify the opposing party of the sources. A court may order discovery of this inaccessible information on a showing of good cause, taking into consideration the limitations in Rule 26(b)(2)(C) (*see § 37A.35[2]*).

Legal Topics:

For related research and practice materials, see the following legal topics:
Civil ProcedureDiscoveryElectronic DiscoveryGeneral OverviewCivil ProcedureDiscoveryMotions to CompelCivil ProcedureDiscoveryProtective OrdersCivil ProcedureDiscoveryUndue BurdensComputer & Internet LawGeneral Overview

FOOTNOTES:
(n1)Footnote 0.1. **Tension between broad discovery and imposing reasonable limits.** *See Cache La Poudre Feeds, LLC v. Land O'Lakes, Inc., 2007 U.S. Dist. LEXIS 15277, at *18 (D. Colo. Mar. 2, 2007)* ("Courts now face the challenge of overseeing discovery at a time when potential access to electronically stored information is virtually limitless, and when the costs and burdens associated with full discovery could be more outcome-determinative, as a practical matter, than the facts and substantive law").

(n2)Footnote 1. *Fed. R. Civ. P. 26*, Committee Note of 2000 (*reproduced verbatim at § 26App.10[2]*).

(n3)Footnote 2. *See Fed. R. Civ. P. 26(b)*.

(n4)Footnote 3. *See Fed. R. Civ. P. 26(b)(2)*.

(n5)Footnote 4. Report of Honorable Paul V. Niemeyer, Chair, Advisory Committee on Civil Rules, to Committee on Rules of Practice and Procedure, 181 F.R.D. 24, 27 (1998); *see Treppel v. Biovail Corp., 233 F.R.D. 363, 374 (S.D.N.Y. 2006)* (no obligation to "examine every scrap of paper," but party must conduct "diligent search, which involves developing a reasonably comprehensive search strategy").

(n6)Footnote 4.1. **Keyword searches acknowledged as useful tools.**

2d Circuit See Capitol Records, Inc. v. MP3tunes, LLC, 261 F.R.D. 44, 47-48 (S.D.N.Y. 2009) (court urged parties to agree on suitable search terms and threatened to require all future Rule 26(f) meet-and-confer sessions be videotaped to enable it to determine whether counsel were working cooperatively).

*4th Circuit See Stanley, Inc. v. Creative Pipe, Inc., 2008 U.S. Dist. LEXIS 42025, at *15 (D. Md. May 29, 2008)* ("it is universally acknowledged that keyword searches are useful tools for search and retrieval of ESI").

*6th Circuit See Curtis v. Alcoa, Inc., 2008 U.S. Dist. LEXIS 26617, at *3 (E.D. Tenn. Mar. 28, 2008)* (parties agreed on search terms to be used during discovery).

10th Circuit See Clearone Communs., Inc. v. Chiang, (D. Utah Apr. 1, 2008) (keyword-search protocol developed by experts, but court asked to rule on use of specific search terms).

(n7)Footnote 4.2. **Selection of appropriate keywords complicated.**

*4th Circuit See Stanley, Inc. v. Creative Pipe, Inc., 2008 U.S. Dist. LEXIS 42025, at *15-16, 26-33 (D. Md. May 29, 2008)* (extensive discussion of literature explaining keyword search techniques, their deficiencies and limitations).

7th Circuit See Autotech Tech. v. Automationdirect.com, Inc. 2008 U.S. Dist. LEXIS 23498, at *11-12 (N.D. Ill. Mar. 25, 2008) (party did not fashion adequate search protocol and was responsible for additional costs incurred to retrieve information).

*D.C. Circuit See U.S v. O'Keefe, Sr., 2008 U.S. Dist. LEXIS 12220, at *23-24 (D.D.C. Feb. 18, 2008)* (lawyers and judges typically not competent to develop and apply appropriate keyword searches and should rely on experts).

(n8)Footnote 4.2.1. **Court may order party to search using specific keywords**.

*5th Circuit See In re: Direct Southwest, Inc. Fair Labor Standards Act (FLSA) Litigation, 2009 U.S. Dist. LEXIS 69142, at *5-6 (E.D. La. Aug. 7, 2009)* (court ordered defendant to search ESI using keywords supplied by plaintiffs).

D.C. Circuit See In re Fannie Mae Secs. Litig., 552 F.3d 814, 823-824 (D.C. Cir. Jan. 6, 2009) (circuit court affirmed lower court's finding defendant in contempt for failing to strictly adhere to ESI search based on stipulated keywords).

(n9)Footnote 4.3. **Unless extensive, keyword searches will likely omit relevant evidence.** *See In re Seroquel Prods. Liab. Litig., 244 F.R.D. 650, 661 n.7 (M.D. Fla. 2007)* (relevant emails and documents not retrieved because keyword search was inadequate).

(n10)Footnote 4.4. **Data may be located in mislabeled file types.** *See Equity Analytics, LLC v. Lundin, 248 F.R.D. 331, 332-333 (D.D.C. Mar. 7, 2008)* (file types are indicated by three letters preceded by period, *e.g.*,.doc,.txt,.pdf).

(n11)Footnote 4.5. **Keyword searches should be tested for accuracy.** *See In re Seroquel Prods. Liab. Litig., 244 F.R.D. 650, 662 (M.D. Fla. 2007)* ("Common sense dictates that sampling and other quality assurance techniques must be employed to meet requirements of completeness."); *see also Gross Constr. Assoc., Inc. v. American Mfr. Mut. Ins. Co., 2009 U.S. Dist. LEXIS 22903, at *14 (S.D.N.Y. Mar. 19, 2009)* ("where counsel are using keyword searches for retrieval of ESI, they at a minimum must carefully craft the appropriate keywords, with input from the ESI's custodians as to the words and abbreviations they use, and the proposed methodology must be quality control tested to assure accuracy in retrieval and elimination of 'false positives.' ").

(n12)Footnote 5. *Fed. R. Civ. P. 26(b).*

(n13)Footnote 6. *Fed. R. Civ. P. 1.*

(n14)Footnote 7. **Cost-shifting analysis is fact-intensive.** *See Zubulake v. UBS Warburg LLC, 217 F.R.D. 309, 324 (S.D.N.Y. 2003)* ("because the cost-shifting analysis is so fact-intensive, it is necessary to determine what data may be found").

(n15)Footnote 8. **Relevancy to pleaded claim or defense required.** *Fed. R. Civ. P. 26(b)(1).*

9th Circuit See Lawyers Title Ins. Corp. v. United States Fidelity & Guar. Co., 122 F.R.D. 567, 570 (N.D. Cal. 1988) (mere possibility that party will discover some relevant documents from search of entire computerized system of information management is insufficient to warrant production).

10th Circuit See Procter & Gamble Co. v. Haugen, 179 F.R.D. 622, 632-633 (D. Utah 1998) (court rejected 25 words selected for word search of computer system because search would capture too much irrelevant evidence and lead to unwieldy results).

(n16)Footnote 9. *Fed. R. Civ. P. 26(b)(1)*; *see Jones v. Goord, 2002 U.S. Dist. LEXIS 8707, at *17 (S.D.N.Y. May 15, 2002)* ("first step in the process is deciding whether requested material is discoverable, that is, whether it is relevant and not privileged").

(n17)Footnote 10. *Fed. R. Civ. P. 26(b)(2)(C)(i)*; *see Baker v. Gerould, 2008 U.S. Dist. LEXIS 28628, at *6-7 (W.D.N.Y. Mar. 27, 2008)* (party must first search accessible ESI sources before court requires search of ESI located on inaccessible sources).

(n18)Footnote 11. *Fed. R. Civ. P. 26(b)(2)(C)(ii).*

(n19)Footnote 12. *Fed. R. Civ. P. 26(b)(2)(C)(iii).*

(n20)Footnote 13. *Fed. R. Civ. P. 26(b)(2)(B)*; *see § 37A.35[1].*

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Moore's Federal Practice: Discovery of Electronically Stored Information

Volume 7: Analysis: Civil Rules 30-37A
Chapter 37A Discovery of Electronically Stored Information
D. SCOPE OF DISCOVERY OF ELECTRONICALLY STORED INFORMATION

7-37A Moore's Federal Practice: Electronic Discovery § 37A.31

AUTHOR: by John K. Rabiej

§ 37A.31 Requested Electronically Stored Information Must Be Relevant

[1] Relevant to Claim or Defense of Any Party

A party may obtain discovery of matter that is relevant to a "claim or defense of any party" contained in the filed pleadings without court intervention (*see § 26.41*). n1 The 2000 amendments to Rule 26(b)(1) changed the general scope of "attorney-controlled" discovery under Rule 26(b). n2 Before the 2000 amendments, all material that was relevant to the "subject matter" of the claims was discoverable. The scope of discoverable matter under the "subject matter" criterion had been broadly construed in the case law. n3 Under the amended rule, discovery of material relevant to the "subject matter" of the action may be required only if ordered by a judge on a good cause showing by the requesting party. n4 In other words, discovery will continue in most cases without court involvement unless a party moves the court to insert itself and review the reasonableness of a discovery request for matter relevant to subject matter.

In many cases, there may be little, if any, difference between matter relevant to a "claim or defense" of any party and the "subject matter" of the action under the facts of a given case. However, "[t]he rule change signals to the court that it has the authority to confine discovery to the claims and defenses asserted in the pleadings, and signals to the parties that they have no entitlement to discovery to develop new claims or defenses that are not already identified in the pleadings." n5

The revised relevancy standard may play a heightened role in evaluating the reasonableness of a discovery request involving electronically stored information. (*see § 37A.30[1]*). n6 The likely benefit from retrieving electronically stored information is directly tied into its relevance. n7 Evidence that was shown to be only marginally relevant under the former relevancy standard may have been adequate to offset significant costs incurred in retrieving requested documents. n8 However, evidence that is marginally relevant under the former broader "subject matter" standard may no longer be adequate to meet the arguably narrower relevancy standard in Rule 26(b)(1). n9

The revised relevancy standard was intended to alter discovery practices (*see § 37A.30*). Relevance for discovery

purposes had been broadly defined and liberally construed. n10 Accordingly, consideration of the precedential effect of case law rendered under the former, arguably broader, relevancy standard--evidence relevant to the "subject matter" of the case--must be tempered with an awareness of the revised standard. n11 It is possible that the outcome of some cases that had been decided under the former "subject matter" standard might be decided differently under the existing standard.

Although determining relevancy may have required little or passing attention under a liberally construed "subject matter" standard, determining relevancy under the revised standard may require greater attention. Amended Rule 26(b)(1) is clearly intended to invoke judicial involvement to scrutinize relevancy and set out the parameters of discovery if the parties are unable to agree on them themselves: "When judicial intervention is invoked, the actual scope of discovery should be determined according to the reasonable needs of the action." n12

For further discussion of the "claim or defense" discovery limitation, *see § 26.41*.

[2] Information Need Not Be Admissible at Trial

The 2000 amendments clarified that the Rule 26(b)(1) provision authorizing discovery of matter that "appears reasonably calculated to lead to the discovery of admissible evidence" applies only to information that is "relevant" in the first place. n13 Although the information sought must be relevant, it need not be admissible at trial (*see § 26.42*). n14 It is unlikely that information not relevant to the parties' claims or defenses might be reasonably calculated to lead to the discovery of admissible evidence, but the amended rule will prevent one possible argument for excessive inquiry. n15

[3] Burden to Show Lack of Relevancy on Party Resisting Discovery Request

The party resisting a discovery request ordinarily has the initial burden to show lack of relevance if the discovery appears relevant. n16 It is not sufficient to merely recite standard objections that the request is "overly broad, burdensome, oppressive and irrelevant." n17 On the other hand, if the relevancy of the discovery is not apparent, the burden to show its relevancy may be shifted to the party seeking discovery. In these cases, the requesting party should be prepared to make a preliminary showing beyond mere conclusory allegations that the requested information is relevant. n18 For example, although electronically stored information may contain drafts and many iterations of a particular document, ordinarily only the latest version is relevant and subject to production. A party requesting an earlier iteration that was deleted bears the burden to show its relevancy, such as to show fabrication of that document. n19 The relevancy of requested matter may not be as certain under the 2000 amendments to *Fed. R. Civ. P. 26(b)(1)*, which narrowed the scope of relevant evidence, as under the former, arguably broader, "subject matter" standard. Accordingly, both parties should be prepared to address whether the requested matter is relevant to a pleaded "claim or defense" of any party.

Legal Topics:

For related research and practice materials, see the following legal topics:
Civil ProcedureDiscoveryElectronic DiscoveryGeneral OverviewCivil ProcedureDiscoveryProtective OrdersCivil ProcedureDiscoveryRelevanceCivil ProcedureDiscoveryUndue BurdensComputer & Internet LawGeneral Overview

FOOTNOTES:
(n1)Footnote 1. **Requested matter must be relevant to party's claim or defense.** *Fed. R. Civ. P. 26(b)(1)*.

> *7th Circuit See* Haroco, Inc. v. American Nat'l Bank & Trust Co., 1987 U.S. Dist. LEXIS 9549, at *7 (N.D. Ill. Sept. 18, 1987) (court ordered defendant to produce computer data under appropriate confidentiality restrictions to allow plaintiff to determine whether data was relevant).

*10th Circuit See Johnson v. Kraft Foods North America, 2006 U.S. Dist. LEXIS 82990, at *9 (D. Kan. Nov. 14, 2006)* ("Relevancy is broadly construed, and a request for discovery should be considered relevant if there is 'any possibility' that the information sought may be relevant to the claim or defense of any party.").

D.C. Circuit See McPeek v. Ashcroft, 212 F.R.D. 33, 34 (D.D.C. 2003) (whether search of backup tapes is appropriate involves assessment of likelihood that they will contain data relevant to central accusations of lawsuit).

(n2)Footnote 2. *Fed. R. Civ. P. 26*, Committee Note of 2000 (*reproduced verbatim at § 26App.10[2]*).

(n3)Footnote 3. **Subject matter discovery standard was broadly construed.** *See Fed. R. Civ. P. 26(b)(1)*.

3d Circuit See Momah v. Albert Einstein Med. Ctr., 164 F.R.D. 412, 417 (E.D. Pa. 1996) (production of computer file screen listing documents approved under liberal interpretation of discovery standard "to encompass any matter that bears on, or that reasonably could lead to other matter that could bear on, any issue that is or may be in the case," quoting *Oppenheimer Fund, Inc. v. Sanders, 437 U.S. 340, 351 (1978))* .

10th Circuit See Smith v. MCI Telecomms. Corp., 137 F.R.D. 25, 27 (D. Kan. 1991) (court ordered production of complete unredacted computer systems manuals, noting that "[r]elevancy is broadly construed at the discovery stage of the litigation and a request for discovery should be considered relevant if there is any possibility the information sought may be relevant to the subject matter of the action").

(n4)Footnote 4. *Fed. R. Civ. P. 26(b)(1)*.

(n5)Footnote 5. *Fed. R. Civ. P. 26*, Committee Note of 2000 (*reproduced verbatim at § 26App.10[2]*); *see Koninklijke Philips Electronics N.V. v. KXD Tech., Inc., 2007 U.S. Dist. LEXIS 17540, at *10-11 (D. Nev. Mar. 12, 2007)* (2000 amendments to Rule 26 "do not dramatically alter the scope of discovery," but were intended to narrow scope of discovery and address rising discovery costs and delay).

(n6)Footnote 6. *See Fed. R. Civ. P. 26(b)(2)(C)(iii)*.

(n7)Footnote 7. **Likely benefits based on relevancy of evidence.** *See Marker v. Union Fidelity Life Ins. Co., 125 F.R.D. 121, 124 (M.D.N.C. 1989)* ("The more critical factor is whether the need for the information [computerized data], considering its relevancy and the nature of the case, outweighs the burdensomeness of the request.").

(n8)Footnote 8. **"Subject matter" relevancy standard liberally construed.**

2d Circuit See Rowe Entm't, Inc. v. William Morris Agency, Inc., 205 F.R.D. 421, 423 (S.D.N.Y. 2002) ("[t]oo often, discovery is not just about uncovering the truth, but also about how much of the truth the parties can afford to disinter").

10th Circuit See Smith v. MCI Telecomms. Corp., 137 F.R.D. 25, 27 (D. Kan. 1991) ("Relevancy is broadly construed at the discovery stage of the litigation and a request for discovery should be considered relevant if there is any possibility the information sought may be relevant to the subject matter of the action.").

(n9)Footnote 9. **"Subject matter" relevancy standard broader than "claims or defenses" relevancy standard.** *Fed. R. Civ. P. 26(b)(1)*; *see Procter & Gamble Co. v. Haugen, 179 F.R.D. 622, 632 (D. Utah 1998)* ("The test is the relevancy to the subject matter which is broader than the relevancy to the issues presented by the pleadings.").

(n10)Footnote 10. **Relevance broadly defined.** *See Herbert v. Lando, 441 U.S. 153, 177, 99 S. Ct. 1635, 60 L. Ed. 2d 115 (1979)* (depositions and discovery rules are to be accorded a broad and liberal treatment).

8th Circuit See, e.g., Weiss v. Amoco Oil Co., 142 F.R.D. 311, 315 (S.D. Iowa 1992) (request for discovery should be considered relevant if there is any possibility that information sought will be relevant to subject matter of litigation).

D.C. Circuit See, e.g., Food Lion, Inc. v. United Food & Commercial Workers Int'l Union, 103 F.3d 1007, 1012 (D.C. Cir. 1997) (discovery is broadly construed).

(n11)Footnote 11. **Scope of discovery dealing with relevant subject matter broader than matter relevant to pleaded claims or defenses.**

5th Circuit See BG Real Estate Serv., Inc. v. Amer. Equity Ins. Co., 2005 U.S. Dist. LEXIS 10330, at *4 (E.D. La. May 18, 2005) (new standard governing scope of discovery "is narrower than the old, pre-2000 broader standard").

*10th Circuit See Apsley v. The Boeing Co., 2007 U.S. Dist. LEXIS 5144, at *13 (D. Kan. Jan. 17, 2007)* ("Cases predating these amendments [2000 amendments to Rule 26] must be carefully scrutinized given the current version of Rule 26(b)(1) and the increased emphasis on judicial management of the discovery process").

(n12)Footnote 12. *Fed. R. Civ. P. 26(b)*, Committee Note of 2000 (*reproduced verbatim at § 26App.10[2]*); *see* Heartland Surgical Specialty Hosp., LLC v. Mid-West Div., Inc., 2007 U.S. Dist. LEXIS 22090, at *14 n.5 (D. Kan. Mar. 26, 2007) (after noting that dividing line between information relevant to claims and defenses and information relevant to subject matter is not precise, court determined that new standard required it "to determine the actual scope of discovery based on the reasonable needs of the particular action based on the facts and circumstances of each individual case").

(n13)Footnote 13. *Fed. R. Civ. P. 26(b)(1)*.

(n14)Footnote 14. **Relevance, not admissibility, is required for discovery.**

1st Circuit See, e.g., Multi-Core, Inc. v. Southern Water Treatment Co., 139 F.R.D. 262, 264 n.2 (D. Mass. 1991) ("relevance encompasses more than admissibility at trial").

2d Circuit See, e.g., Cox v. McClellan, 174 F.R.D. 32, 34 (W.D.N.Y. 1997) (admissibility at trial is not standard for discovery).

6th Circuit See, e.g., Mellon v. Cooper-Jarrett, Inc., 424 F.2d 499, 500-501 (6th Cir. 1970) (citing **Moore's**; test is whether line of interrogation is reasonably calculated to lead to discovery of admissible evidence).

7th Circuit See, e.g., Lohr v. Stanley-Bostitch, Inc., 135 F.R.D. 162, 164 (W.D. Mich. 1991) (in products liability action, discovery of similar accidents was permissible even though more foundation would be

required at trial).

8th Circuit See, e.g., In re Potash Antitrust Litig., 161 F.R.D. 405, 409 (D. Minn. 1995) (court's analysis at discovery stage is driven by issues of relevancy rather than admissibility); *Weiss v. Amoco Oil Co., 142 F.R.D. 311, 315 (S.D. Iowa 1992)* (discovery request is not barred even though it yields inadmissible evidence).

9th Circuit See, e.g., United States v. City of Torrance, 163 F.R.D. 590, 592 (C.D. Cal. 1995) (discoverable information need not be admissible at trial).

(n15)Footnote 15. Report of Honorable Paul V. Niemeyer, Chair, Advisory Committee on Civil Rules, to Committee on Rules of Practice and Procedure, 181 F.R.D. 24, 33 (1998).

(n16)Footnote 16. **Initial burden on party resisting discovery request.**

*2d Circuit See Quinby v. WestLB AG, 2006 U.S. Dist. LEXIS 1178, at *4 (S.D.N.Y. Jan. 11, 2006)* (defendant's discovery request for "all e-mails" ignored requirement that discovery request must be limited to relevant material).

10th Circuit See Mackey v. IBP, Inc., 167 F.R.D. 186, 193 (D. Kan. 1996) (responding party must demonstrate that requested matter is not relevant or of marginal importance compared with costs and burden in producing it).

(n17)Footnote 17. **Mere conclusions of burden insufficient.**

3d Circuit See Momah v. Albert Einstein Med. Ctr., 164 F.R.D. 412, 417 (E.D. Pa. 1996) (if objection is properly stated, burden shifts to requesting party to show that discovery is appropriately within scope of Rule 26).

4th Circuit See Thompson v. United States Dep't of Hous. & Urban Dev., 219 F.R.D. 93, 98 (D. Md. 2003) ("[c]onclusory or factually unsupported assertions by counsel that the discovery of electronic materials should be denied because of burden or expense can be expected to fail").

*10th Circuit See Johnson v. Kraft Foods North America, 2006 U.S. Dist. LEXIS 82990, at *29 (D. Kan. Nov. 14, 2006)* ("Unless the request is overly broad on its face or relevancy is not readily apparent, Defendants--as the party resisting discovery--bear the burden to establish lack of relevance.").

(n18)Footnote 18. **If relevancy is not apparent, requesting party should make showing of relevancy.**

3d Circuit See Andritz Sprout-Bauer, Inc. v. Beazer East, Inc., 174 F.R.D. 609, 631 (M.D. Pa. 1997) (once relevancy objection is raised, party seeking discovery must show that request is within scope of discovery); *Momah v. Albert Einstein Med. Ctr., 164 F.R.D. 412, 417 (E.D. Pa. 1996)* (if objection is properly stated, burden shifts to requesting party to show that discovery is appropriately within scope of Rule 26).

4th Circuit See Marker v. Union Fidelity Life Ins. Co., 125 F.R.D. 121, 124-125 (M.D.N.C. 1989) (conclusory allegations that requested information may be relevant may amount to fishing expedition and is not warranted when value of marginal discovery offset by significant burdens and costs incurred in

producing records).

6th Circuit See Moore v. Abbott Labs., 2008 U.S. Dist. LEXIS 94330, at *15-16 (S.D. Ohio Nov. 19, 2008) (court denied plaintiff's request for "a very large amount of information that is either totally irrelevant or so marginally relevant that the resources needed to retrieve that information ought not to be expended").

10th Circuit See Mackey v. IBP, Inc., 167 F.R.D. 186, 193 (D. Kan. 1996) ("it is the burden of the party seeking discovery to show the relevancy of the discovery request," if relevancy is not apparent).

D.C. Circuit Alexander v. FBI, 194 F.R.D. 316, 325 (D.D.C. 2000) ("Once a relevancy objection has been raised, the party seeking discovery must demonstrate that the request is within the scope of discovery.").

(n19)Footnote 19. **Relevancy not apparent for early drafts; requesting party must show specific need.** *See Anti-Monopoly, Inc. v. Hasbro, Inc., 1995 U.S. Dist. LEXIS 16355, at *6-8 (S.D.N.Y. Nov. 3, 1995)* (court delayed requiring responding party to create software program to extract information from its computers until requesting party made showing as to necessity of information).

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Moore's Federal Practice: Discovery of Electronically Stored Information

Volume 7: Analysis: Civil Rules 30-37A
Chapter 37A Discovery of Electronically Stored Information
D. SCOPE OF DISCOVERY OF ELECTRONICALLY STORED INFORMATION

7-37A Moore's Federal Practice: Electronic Discovery § 37A.32

AUTHOR: by John K. Rabiej

§ 37A.32 Requested Electronically Stored Information Must Be Nonprivileged and Nonprotected

[1] Scope of Work Product Protection and Attorney-Client Privileges

A party need not produce otherwise discoverable matter if it is subject to a privilege or protected as work product. n1 Assuming that a party can identify all its privileged and protected documents, the sheer magnitude of information stored on computers raises practical problems in ensuring that no privileged or protected document is inadvertently disclosed during discovery, which may waive the privilege (*see* [5], *below*). The work-product protections and attorney-client privileges are the two most common "confidential" claims that are asserted during discovery. Although the purposes, justification, and protection of the privilege and the protection are different, they share significant common procedural features.

[2] Burden on Party Asserting Privilege or Protection

The party raising the work product protection or attorney-client privilege has the burden to demonstrate that the privilege or protection applies to documents withheld from discovery. n2 As a threshold matter, documents that are asserted as privileged or protected must be specifically designated, ordinarily in a privilege log. A privilege log describes the documents being withheld without revealing the privileged or protected information itself. The log must contain sufficient information to permit the court and the opposing party to determine whether the asserted privilege or protection for the log entry is warranted. n3 Under certain circumstances, a court may allow a party to designate privileged or protected documents by category, instead of by itemized descriptions. n3.1

It is usually insufficient to list an "email strand" in a privilege log as a single privileged document; instead, counsel must break down and list each email within a strand as a separate entry in the privilege log. An "email strand" or "string" occurs when the email actually consists of more than one message, usually formatted with the most recent message first. Email strands may run for several days. The individuals receiving or being copied on the emails within a strand usually vary. In some instances, certain individuals may receive only a portion of the strand while others receive the entire strand. In other instances, an email may be sent or copied to individuals who are not part of the attorney-client relationship. One email in a strand may contain purely factual non-privileged information, while another email within

the same strand may seek or render legal advice. n4 Thus, a party should separate each email in a strand and evaluate whether that particular email is subject to the attorney-client privilege. n5

[3] Attorney-Client Privilege

Under *Federal Rule of Evidence 501*, the attorney-client privilege is governed by principles of common law developed by federal courts. n6 Similar to other privileges, the attorney-client privilege may be waived intentionally or inadvertently (*see* [5], *below*). n7 Whether an inadvertent disclosure of a document waives the attorney-client privilege depends on the Circuit and the circumstances. Case law ranges from decisions automatically waiving the claim for each inadvertent disclosure to decisions upholding the privilege in all cases of inadvertent disclosure. n8 However, the better-reasoned and by far the majority of cases rely on a case-by-case analysis of the particular facts based on the degree of attention and care spent by the attorney and client in safeguarding the confidence of the pertinent communication (*see § 26.49*). If privileged documents are disclosed during discovery, a party may request their return. Once notified, the opposing party must return the documents and may not use them unless a court rules that the disclosure has waived the privilege (*see § 37A.32[5]*).

The reliability and security of email communications between a client and attorney raise issues about the privilege that are discussed in *§ 37A.32[6]*.

The Ninth Circuit ruled that the attorney-client privilege applied to a questionnaire posted on the Internet by a law firm seeking information about potential class members for a contemplated class action lawsuit against a drug manufacturer. Although the plaintiffs were not clients at the time they filled out the questionnaire, the court nevertheless found that the questionnaires were submitted "in the course of" an attorney-client relationship. In reaching its decision, the circuit court applied the general rule that prospective clients' communications with a view to obtaining legal services are covered by the attorney-client privilege, even when actual employment does not result. n9

[4] Work-Product Protection

[a] Fact and Opinion Work Product

Under Rule 26(b)(3), an attorney's tangible work product materials prepared for litigation may be protected from discovery as trial preparation work (*see § 26.70*). n10 In general, the protection may be waived intentionally or inadvertently (*see* [5], *below*). n11 The protection extends not only to trial-preparation materials, but also to the computer software programs used by attorneys to manage case-related information and records. Discovery requests for this information and counter assertions that the information is subject to work-product protection are raised routinely in litigation.

The extent of protection provided to the specific work product depends on the attorney's involvement in creating it. If the work does not reflect the attorney's mental impressions, conclusions, opinions, or legal theories concerning the litigation, it is classified as "ordinary work product" and is subject to a lower level of protection from discovery. In these cases, a party may request discovery of ordinary work product on a showing "that it has substantial need for the materials to prepare its case and cannot, without undue hardship, obtain their substantial equivalent by other means." n12 For example, if the material merely includes copies of a witness's statements, the extent of protection from disclosure is limited. In contrast, if the work product is "opinion" work product and reflects the attorney's "mental impressions, conclusions, opinions, or legal theories of a party's attorney ... concerning the litigation," the level of protection is nearly absolute, and a court must protect against its disclosures. n13

[b] Protection Applies to Material Prepared in Anticipation of Litigation

The work-product protection of Rule 26(b)(3) only applies to materials that were prepared for or in anticipation of litigation (*see § 26.70[3]*). Although the courts have developed different interpretations of what constitutes "anticipation

of litigation," the more prevalent view is that a document is entitled to work product protection if it is prepared "because of" existing or expected litigation. Under the "because of" approach, a document does not lose its work-product protection merely because it was created primarily to assist in making a business decision. n14 Nevertheless, the work product must be prepared for litigation purposes and not in the ordinary course of business. n15

Work-product protection may extend to email correspondence between a party's attorney and potential witnesses, despite the fact that the witness necessarily obtains a copy of the email and plays a role in its production, because witness statements prepared in anticipation of litigation or for trial are work product by nature. n15.1

If documents protected under the work-product doctrine are disclosed during discovery, a party may request their return. Once notified, the opposing party must return the documents and may not use them unless a court rules that the disclosure waives the protection (*see § 37A.32[5]*).

For further discussion of the work-product protection and its applicability to documents prepared in anticipation of litigation, see *§ 26.70[3]*.

[c] Attorney-Computerized Litigation Support System

[i] Systems Organize Case Materials

Complex cases and many "average" cases can generate a mass of documents, depositions, and exhibits. n16 An attorney or firm that has represented a single client for a long time can also amass substantial records concerning that client. These records must be sifted through and organized to prepare for litigation and trial. Practitioners are addressing these challenges by using technological innovations to manage what could otherwise become an overwhelming mass of documents. n17 Off-the-shelf computer software programs are available to help organize information to support the management of a lawsuit. n18 The software programs record and manage dates of relevant events, relevant places, names of prospective witnesses, and summaries of statements and issues. As the popularity of these automated litigation support programs grows, so does the likelihood that information contained in them will be targeted in discovery.

[ii] Attorney Involvement in Litigation Support System

Privileged and protected material contained in an attorney-computerized litigation support system may include documents and summaries of documents that are relevant to the case, which may be subject to discovery, together with the attorney's strategy notes. The precise scope of the protection and the extent of immunity from disclosure have not been consistently defined or applied by the courts to attorney-computerized litigation support systems. The key issue is whether the litigation support system represents "ordinary" work product, or "opinion" work product that warrants nearly absolute protection from discovery (*see* [4][a], *above*). The material in a litigation support system by definition is at a minimum protected by the ordinary work product doctrine. However, the extent of protection provided to ordinary work is not absolute and is subject to disclosure on a showing of substantial need. n19 On the other hand, opinion work product is subject to virtually absolute immunity from discovery (*see* [4][a], *above*).

In general, the more an attorney is directly involved in creating a support system's database, the more likely a claim of opinion work product protection will be honored. n20 However, the protection may be waived and the information subject to production if a testifying expert's opinion is based on the information contained in the system. n21

[iii] Selection of Documents May Represent Attorney's Mental Impressions

An automated litigation support system presents an attractive target for discovery. The discovery battle over a computerized litigation support system is often about classifying it as "ordinary" or "opinion" work product (*see* [ii], *above*). As a threshold issue, the overall selection and ordering of documents in a computerized litigation support system may reflect an attorney's legal theories and thought processes concerning litigation, which suggests that it may

be "opinion" work product. Thus, for example, merely obtaining the list of documents in a litigation support system may reveal important insights into a party's litigation strategy. n22 Similarly, indices of a computerized litigation system can be asserted to be "opinion" work product because they were created at an attorney's direction in anticipation of litigation. n23 The "opinion" work-product protection may also be invoked if printouts of the litigation support program themselves might reflect the attorney's impressions and strategy, even though the raw data contained in them might be subject to discovery. In these cases, the selection and compilation of documents may be protected as "opinion" work product. n24

If the number of documents contained in the litigation support system is large, some courts have rejected extending the application of the "opinion" work-product protection to them. Courts have concluded that a database containing an enormous number of documents is inherently incapable of revealing an attorney's strategy and thus is not subject to immunity afforded as "opinion" work product. n25 In these cases, however, the information may still be protected as ordinary "fact" work product. n25.1

[iv] Litigation Support Computer Software

Two primary types of litigation support software programs exist in the marketplace: (1) a full-text retrieval program, which permits a search of specific words contained anywhere within a particular document; and (2) an index program, which permits a search of words input by a litigation team to identify a particular document.

A full text retrieval program can handle both electronic documents and hard-copy documents scanned into a database. It uses Optical Character Recognition (OCR) to convert the scanned documents into word-processing documents (*see § 37A.02[4]*). An OCR program provides a comprehensive search capability, which can facilitate searching for a word within many lengthy documents. However, the word search is limited to a single word, which can result in identifying a large number of documents that require review. n26

On the other hand, an index program is based on key terms, such as the date, author, document title, and summaries manually input for each document. The document itself is not subject to a word search. The reliability of a word search is directly affected by the competency of those who manually input the index or summary. Each electronic document must be labeled with a brief description for indexing purposes; this description can reflect the attorney's litigation strategy or theory, which distinguishes it from an OCR program. Thus, the characteristics of the index system generally lend themselves to "opinion" work-product protection, n27 though protection for full-text retrieval systems may also be appropriate, depending on the nature of the documents, how they were input, and attorney involvement in structuring the system.

[5] Inadvertent Disclosure of Privileged or Protected Electronically Stored Information

[a] Precautions Needed to Prevent Inadvertent Disclosure

The vast amount of information in a computer increases the potential for inadvertent disclosure of privileged or protected matter during discovery. n28 The Manual for Complex Litigation recognizes the potential disclosure risks during discovery: n29

> Broad database searches may be necessary, requiring safeguards against exposing confidential or irrelevant data to the opponent's scrutiny. A responding party's screening of vast quantities of unorganized data for privilege prior to production can be particularly onerous in those jurisdictions in which inadvertent production of privileged data may constitute a waiver of privilege as to a particular item of information, items related to the relevant issue, or the entire data collection.

A computer's advantage in storing mountains of data magnifies a party's burden in retrieving and reviewing electronically stored information to determine whether it should not be produced because it is privileged or protected (

see § 37A.03). It is especially critical to screen carefully information that may involve privileged matter because its disclosure may waive the privilege as to all other information dealing with the same subject matter. n30 In particular, information provided to a testifying expert must be carefully screened, because the information is subject to disclosure under Rule 26(a)(2) and may result in a dispute that the privilege has been waived. n31

The attorney-client privilege or work-product protection may be waived intentionally (*see § 26.47[5]*). n32 In most jurisdictions, the privilege may also be waived by inadvertent disclosure, which includes sending or storing a communication in ways that are likely to be intercepted by a third party. n33 The inadvertent disclosure of privileged or protected documents is a particularly serious problem in discovery of electronically stored records because the number of documents produced in response to a discovery request can be enormous, increasing the likelihood that a privileged or protected document will be mistakenly produced (*see* [c], *below*).

A party who fails to take reasonable precautions to protect a communication from disclosure suggests that the communication was never intended to be confidential or protected under general waiver-of-privilege or protection principles. The extent of precautions that a party takes to protect against an inadvertent disclosure of a privileged or protected document often determines whether the privilege or protection has been waived (*see* [c], [e], *below*). n33.1

[b] Retrieving Inadvertent Disclosures

The 2006 amendment to Rule 26 provides a mechanism for retrieving privileged or protected information that has been disclosed. n34 If a party learns that it inadvertently produced and disclosed a privileged or protected matter, it may notify the opposing party of the claim and request return of the disclosed matter. n34.1 The notification should be made as soon as possible after learning that privileged or protected material was inadvertently disclosed. The notification should usually be in writing, unless made orally at a deposition or similar proceeding. n35

The notification that a privileged or protected matter has been inadvertently produced should provide the court and the opposing party with sufficient information to evaluate the basis of the claim to determine whether waiver has occurred. The opposing party may not use the privileged or protected matter and must promptly return, sequester, or destroy it. It is obligated to take reasonable steps to retrieve any privileged or protected information that it earlier disclosed to others before being notified. If the opposing party disputes the privilege or protection, it may submit the materials under seal to the court and request a ruling on whether the privilege or protection has been waived. n36

Federal Rule of Evidence Rule 502, enacted on September 19, 2008, provides that inadvertent disclosure of privileged or protected matter does not operate as a waiver of the attorney-client privilege in a federal or state proceeding if the holder of the privilege took reasonable steps to prevent disclosure, and, after learning of the inadvertent disclosure, promptly took reasonable steps to rectify the error (*see* [e], *below*). n37 "Reasonable steps to rectify the error" may include following the steps established in *Federal Rule of Civil Procedure 26(b)(5)(B)* for claiming privilege or protection as to information already produced. n37.1 This provision of Rule 502 is intended to resolve a conflict in the federal courts over whether an inadvertent disclosure of a privileged communication constitutes a waiver. Rule 502 codifies the majority approach: Inadvertent disclosure of protected communications or information does not constitute a waiver if the holder took reasonable steps to prevent disclosure and also promptly took reasonable steps to rectify the error. n37.2 For a particularized discussion of the waiver of attorney-client privilege, see [c], *below*, and § 26.49[5]. The scope and waiver of the work-product protection are discussed in [c], *below.* For further discussion of limitations on waiver under Evidence Rule 502, see [e], *below*, and *§ 26.49[5][h]*.

[c] Analysis Applies to Electronically Stored Evidence Same as Other Evidence

The party asserting the attorney-client privilege or work-product protection has the burden to demonstrate that the privilege or protection has not been waived. n38 The waiver-of-privilege principles are applied to electronically stored documents in the same way that they are applied to paper documents. Three distinct lines of authority had emerged in

the federal courts to determine whether an inadvertent disclosure waives the privilege protection (*see § 26.47[5]*). n39 Some courts held that the attorney-client privilege or work-product protection may never be waived inadvertently, although waiver may be appropriate under certain conditions. n40 In other courts, the privilege or protection was waived nearly always for documents that are inadvertently disclosed. n41 Other courts considered the totality of circumstances, including the following factors: n42

- The reasonableness of the precautions taken to avoid disclosure; n43
- The extent of the disclosure;
- The scope and burden of discovery; n44
- The number of documents inadvertently disclosed;
- The time constraints related to the production of information;
- The delay in correcting the error; and
- The overall consideration of fairness.

This waiver analysis applied to documents that are claimed to be privileged as attorney-client matter or protected as work product. n45

Federal Evidence Rule 502, enacted on September 19, 2008, is intended to resolve this conflict in the federal courts over whether an inadvertent disclosure of a privileged or protected communication constitutes a waiver. Rule 502 codifies the third approach described above: Inadvertent disclosure of protected communications or information does not constitute a waiver if the holder took reasonable steps to prevent disclosure and also promptly took reasonable steps to rectify the error. n45.1 For further discussion of limitations on waiver under Evidence Rule 502, see *§ 26.49[5][h]*, and *[e]*, below.

For a general discussion of waiver of privilege, *see § 26.47[5]* and *Weinstein's Federal Evidence*, Ch. 511, *Waiver of Privilege by Voluntary Disclosure* (Sup. Ct. Standard 511) (Matthew Bender 2d ed.).

[d] Effect of Parties' Agreement on Privileged or Protected Status of Documents Despite Disclosure

[i] Agreement Can Facilitate Discovery Process

Parties may agree that an inadvertent disclosure of a privileged or protected document produced in discovery will not waive the privilege or protection. n46 A stipulated confidentiality agreement makes particularly good sense if a large number of electronically stored documents are involved in a case. An agreement protecting inadvertent disclosure of privileged or protected matter can expedite the discovery process, which might otherwise be delayed by time-consuming reviews of each document. Although a party will frequently continue to examine most documents for privilege despite such an agreement, the review likely may not be as exhaustive or as time consuming. These agreements will also reduce the number of satellite litigations challenging claimed privileged or protected documents. n47 For further discussion of agreements such as "clawback" and "quick peek" agreements, see *§ 37A.24*.

A court order recognizing the agreement may be needed in jurisdictions that do not recognize the effect of stipulations entered into between the parties. n48 In addition, *Federal Rule of Evidence 502*, enacted on September 19, 2008, provides that an agreement on the effect of disclosure in a federal proceeding is binding only on the parties to the agreement, unless it is incorporated into a court order (*see* [e][iv], *below*). n48.1

Parties entering into these agreements should be aware of the agreement's impact on third-party access to documents the parties are seeking to protect, and whether disclosure under such an agreement or protective order waives privilege or protection as to third parties who later seek access to the information in subsequent litigation in other federal or state courts. Many courts will allow third parties in collateral litigation to modify the original protective order and gain access to disclosed documents because it avoids duplicative discovery. n49 Other courts have honored agreements between parties that preserve the privilege or protection of documents produced in discovery if the agreement was incorporated in a court order. n50

For further discussion of third-party modification of protective orders, see *§§ 26.104[2]*; *26.106[3][b]*; see also 11 *Bender's Forms of Discovery, Treatise* Volume 11, Chapter 1, § 1.75[3][a]. For further discussion of waivers, see Ch. 26, *Duty to Disclose; General Provisions Governing Discovery* , and Ch. 34, *Producing Documents, Electronically Stored Information, and Tangible Things, or Entering onto Land, for Inspection and Other Purposes* .

[ii] Agreement Extended to Third Parties

A confidentiality agreement preventing disclosure of electronically stored information can be extended to third parties involved in the litigation. For example, a party may designate a computer technician to be present while documents are being downloaded from a computer. Under a confidentiality agreement, the computer technician would be forbidden to reveal any of the privileged or protected documents retained by the responding party. n51 Although a court may not ordinarily prevent persons outside the litigation from disclosing privileged or protected information absent a confidentiality agreement, the court may designate a computer technician selected by the parties as an officer of the court. In this situation, any disclosures of privileged or protected information would not constitute a waiver. n52

A confidentiality agreement in one litigation might not prevent parties in parallel litigation from gaining access to the privileged or protected information. n53 It also might not prevent third parties from accessing the documents protected under the confidentiality agreement (*see* [i], *above*).

[iii] Confidentiality Agreement Essential When Mirror Image of Hard Drive Made

A confidentiality agreement is essential to safeguard privileged or protected documents if a mirror image of a computer's hard drive is undertaken (*see § 37A.44[3][d]*). A mirror-image copy contains all information on a computer's hard drive, including embedded data and deleted files (*see §§ 37A.03[1] -[3], 37A.44[3][d]*). Although disclosure of any electronically stored information may inadvertently contain privileged or protected material, the production of a mirror-image copy of a computer's hard drive exposes potentially more matter that may be subject to an attorney-client, work product, trademark, or other commercial privilege. A party that provides a mirror-image copy of a computer's hard drive and fails to take steps to identify and retract privileged and protected documents risks waiving a privilege or protection claim. However, if the court designates the technician as an officer of the court, the inadvertent disclosure of privileged materials does not constitute waiver of the privilege or protection under an appropriate agreement (*see* [iv], *below*). n54

[iv] Protective Order Ensuring Confidentiality of Disclosed Documents

An attorney may require the assistance of an expert to understand fully electronically stored information maintained by the parties. In some cases, the expert must physically access the electronically stored information to conduct a review of the information. If the parties are unable to agree on a confidentiality agreement, a court may, on a party's motion, issue a protective order on an appropriate showing that provides safeguards limiting the disclosure of protected and privileged material by the technician or expert to selected counsel and persons to prevent waiver of privilege (*see § 26.70[6][d]* (disclosure to expert can result in waiver)). n55 If computer technicians or experts are appointed to assist a party in understanding electronically stored information, the protective order should explicitly refer to them. n56 Before an

outside expert is appointed by the court to assist a party, the party should ensure that the expert is not employed by a business competitor. n57

For example, in *Simon Prop. Group, L.P. v. mySimon, Inc.,* n58 the court developed a protocol to secure the confidentiality of privileged or protected materials in the context of preparing a mirror image of the defendant's hard drives. The protocol operated as follows: The plaintiff selected the expert to inspect and create a mirror image or snapshot of the hard drives; the defendant had an opportunity to object to the selection; the court appointed the expert as an officer of the court, and required the expert to sign a protective order requiring the expert to file a report with the court and barring disclosure to the plaintiff; copying would be limited to files reasonably likely to contain materials potentially relevant to the case; the expert would provide all available word processing documents, emails, powerpoint or similar presentations, spread-sheets, and similar files to the defendant's counsel; the defendant's counsel reviews the material for privilege and responsiveness to the discovery request, and supplements as needed. n59

Other courts have employed similar protocols to protect confidentiality. n60

[e] Evidence Rule 502 Protects Against Waiver Through Inadvertent Disclosure

[i] Purpose and Application of Rule 502

In an attempt to reduce the cost of litigation and expedite discovery, particularly discovery of electronically stored information, *Federal Rule of Evidence 502* was enacted on September 19, 2008, to protect against inadvertent waiver of attorney-client privilege and work product protection (*see* [iii], *below*). n60.1 In addition to protection against inadvertent waiver, the new rule limits the scope of a subject matter waiver so as to include other related information only if the disclosed and undisclosed information "ought in fairness" to be considered together. These features of the rule facilitate cooperation with government agencies by allowing persons to turn over privileged and protected information (i) without waiving any privilege and protection if the disclosure is inadvertent and they take reasonable steps to remedy the error, and (ii) in all events without effecting a subject matter waiver for other related information unless the disclosure was intentional (*see* [ii], *below*). n60.2

Rule 502 became effective on the date of its enactment, September 19, 2008. The rule applies to all proceedings commenced after that date and, "insofar as is just and practicable," in all proceedings pending on that date. n60.3

[ii] Scope of Waiver for Disclosure Made in Federal Proceeding or to Federal Agency

Rule 502 provides that when disclosure is made in a federal proceeding or to a federal office or agency and waives the attorney-client privilege or work product protection, the waiver extends to an undisclosed communication or information in a federal or state proceeding only if: n60.4

(1) the waiver is intentional;

(2) the disclosed and undisclosed communications or information concern the same subject matter; and

(3) they ought in fairness to be considered together.

This means that if a party intentionally produces a privileged document, any resulting waiver of the privilege extends to other related information only if the disclosed and undisclosed information "ought in fairness" to be considered together. The "fairness" determination required for a broader subject matter waiver is limited to situations in which a party intentionally puts information into litigation in a selective, misleading, and unfair manner. n60.5 Consequently, an inadvertent disclosure of protected information can never result in a subject matter waiver. n60.6 Rule 502(a) was specifically intended to reject cases holding that inadvertent disclosure of documents during discovery could

automatically constitute a subject matter waiver. n60.7

If a disclosure is made at the federal level, the federal rule on subject matter waiver governs subsequent state court determinations on the scope of waiver by that disclosure. This provision is intended to assure protection and predictability on courts' treatment of subject matter waiver. The Advisory Committee reasoned that if a federal court's determinations as to waiver are not enforceable in a state court, then the burdensome costs of privilege review and retention are unlikely to be reduced. n60.8

[iii] Protection From Inadvertent Waiver of Privilege and Protection

When made in a federal proceeding or to a federal office or agency, the disclosure does not operate as a waiver in a federal or state proceeding if: n60.9

(1) the disclosure was inadvertent;

(2) the holder of the privilege or protection took reasonable steps to prevent disclosure; and

(3) the holder promptly took reasonable steps to rectify the error.

"Reasonable steps to rectify the error" may include following the steps established in *Federal Rule of Civil Procedure 26(b)(5)(B)* for claiming privilege or protection as to information already produced (*see* [b], *above*). Rule 26(b)(5)(B) allows a party who has produced information subject to a claim of privilege or of protection as trial preparation material to notify any party that received the information of the claim and the basis for it. After being notified, a party must promptly return, sequester, or destroy the specified information. The party who received the information also must take reasonable steps to retrieve the information if that party had already disclosed it before being notified. In addition, the party receiving the information may present the information to the court under seal for a determination of the claim, but may not use or disclose the information while awaiting a resolution of the claim. n60.10

This provision of Rule 502 is intended to resolve a conflict in the federal courts over whether an inadvertent disclosure of a privileged communication or protected information constitutes a waiver (*see* [c], *above*). A few courts had concluded that a disclosure must be intentional to be a waiver; a few courts held that any inadvertent disclosure constituted a waiver without regard to precautions taken to avoid disclosures. Most courts, however, found a waiver only if the disclosing party acted carelessly in disclosing the communication or information and failed to request its return in a timely manner. n60.11 Rule 502 codifies the majority view: Inadvertent disclosure of protected communications or information in connection with a federal proceeding or to a federal office or agency does not constitute a waiver if the holder took reasonable steps to prevent disclosure and also promptly took reasonable steps to rectify the error. n60.12

Evidence Rule 502 does not attempt to codify factors to determine the reasonableness of precautions taken to prevent inadvertent disclosures. However, the Advisory Committee did note that, depending on the circumstances, a party that uses advanced analytical software applications and linguistic tools in screening for privilege and work product may be found to have taken "reasonable steps" to prevent inadvertent disclosure. The implementation of an efficient system of records management before litigation may also be relevant. n60.13

Courts may also apply the traditional factors formulated by the courts for determining whether inadvertent disclosure waives privilege (*see* [5][c], *above*) to determine whether a party took reasonable steps to prevent disclosure and attempted to rectify the error. n60.13.1

[iv] Effect of Court Orders and Party Agreements

Federal courts may enter confidentiality orders providing that disclosure of privileged or protected material in the litigation pending before the court does not constitute waiver in other state or federal proceedings. n60.14 Under such an order, a party producing materials in response to a discovery request is protected against a waiver of the privilege or protection without first taking any steps to identify and prevent the disclosure of privileged or protected materials. n60.14.1 Either party may request the court to enter a confidentiality order or the court may enter the order on its own. Courts are expected to liberally approve requests for confidentiality orders, which are intended to substantially reduce privilege-review costs. Entry of a confidentiality order will prevent nonparties to the litigation from obtaining privileged material produced pursuant to such a confidentiality order.

The rule also encompasses situations in which the parties agree to provide documents under a "claw-back" or "quick peek" arrangement (*see § 37A.24*). These types of arrangements allow the parties to produce documents for review and return without engaging in a privilege review, but without waiver of privilege or work product protection, as a way to avoid the excessive costs of full privilege review and disclosure when large numbers of documents are involved. The rule provides the parties with predicable protection from waiver when responding to a court order for production of documents pursuant to such an arrangement. n60.15

An agreement on the effect of a disclosure in a federal proceeding is binding only on the parties to the agreement, unless it is incorporated into a court order. n60.16 This provision is intended to make clear that if parties want protection against nonparties from a finding of waiver by disclosure, the agreement must be made part of a court order. n60.17

[6] Email Messages Between Attorney and Client

[a] Secure Transmission of Email Messages

A communication from a client to an attorney for the purpose of obtaining legal advice that is intended to be confidential is privileged and protected from discovery under federal common law (*see generally § 26.47* and *Weinstein's Federal Evidence,* Ch. 503, *Lawyer-Client Privilege* (Sup. Ct. Standard 503)).

A large body of jurisprudence governing communications between an attorney and a client offers general guidance in applying the attorney-client privilege to email communications. n61 However, only limited case law specifically addresses the issue of whether the transmission of a confidential communication by email is compromised, defeating the application of the attorney-client privilege. n62 The general consensus among commentators, and the better view, is that privileged communications sent by unencrypted email do not lose the privilege protection solely on grounds that an email transmission over the Internet may be intercepted and compromised. n63 However, the level of confidence in the reliability of email transmissions is subject to change depending on emerging technologies that are making it easier to intercept an email message.

In general, the attorney-client privilege applies to a communication only when several conditions have been met (*see § 26.49*). n64 The party asserting the privilege has the burden to prove each of these elements (*see § 37A.32[2]*). n65 The special nature of an email message often implicates two of the elements: (1) whether the party intended the message to be confidential; and (2) whether the privilege was waived.

Whether a communication transmitted by email is sufficiently protected from outside eavesdropping to warrant reliance on it as a means of confidential transmission has not been directly answered by the courts. The dearth of pertinent case law on this subject has led many commentators to fill the vacuum and opine on whether the attorney-client privilege can apply to an email message. n66 Court opinions dealing with analogous situations, such as the interception of telephone calls, faxes, letters, and telexes, have been examined to draw insights on how a court might address the reasonable expectation of confidentiality when communicating by email. Virtually all analyses conclude that email communication is sufficiently secure from interception to sustain a level of confidentiality adequate to uphold the attorney-client privilege. Email communications are relatively secure. An email message is routed by way of the Internet from one

undisclosed computer network to another until it reaches the recipient. The possibility is remote that someone might intercept a single email message at one of the intermediate computer way stations. n67 The security of communicating by email has been compared favorably with communicating by mail or telephone, types of communications that have long been held to be means of confidential communication.

In addition, an attorney has a professional ethical duty to ensure and preserve the confidentiality of communications with a client. The American Bar Association has taken the position that an attorney does not violate the Model Rules of Professional Conduct if information is transmitted by unencrypted email to a client. The ABA specifically premised its position on its understanding of existing technology, which viewed email transmission as totally random and extremely difficult to intercept. The ABA acknowledged the possibility that emerging technologies can make email communications less reliable in the future. n68

[b] Applying Attorney-Client Privilege to Email Communications

Courts have applied the attorney-client privilege to email communications. n69 Most cases have not explicitly addressed the issue of whether the attorney-client privilege applies to email transmissions. n70 Rather, the courts seem to assume that the privilege attaches to emails in the same manner as it would to any other document. For example, in line with the general rule that a client cannot push a document under the umbrella of privilege merely by turning it over to an attorney (*see § 26.49[1]*), courts have ruled that copying emails to counsel, without more, does not provide a basis for attaching attorney-client privilege to those emails. n70.1 Thus, the courts dwell on such issues as maintaining confidentiality, n71 or assuring that the communications were made for the purpose of giving legal advice. n72

Authorities are split on whether a privilege log should list separate entries for each email within an email strand. An email strand occurs when the email actually consists of more than one message, usually formatted with the most recent message first. Email strands may span several days, the individuals receiving or being copied on the emails within a strand may vary, and one email in the strand may contain purely factual non-privileged information, while another may seek or render legal advice. Some courts hold that each email should be listed separately to enable the opposing party to determine whether each email in the strand is entitled to privilege, on the theory that this inquiry is necessary if the court is to determine that the entire strand is to receive protection. n73 Other courts have concluded that one email strand should receive only a single entry in a privilege log. n73.1 These courts reason that even though one email is not privileged, a second email that forwards that prior email to counsel might be privileged in its entirety. Particularly when a group of emails on a topic are gathered together and forwarded to or from counsel, opposing counsel might be able to discern legal strategy from the way materials are gathered, thereby revealing a privileged communication. If the individual attachments are non-privileged, they may already have been disclosed individually anyway, and it might be confusing to require a party to list documents in its privilege log that it had already furnished to opposing counsel. n73.2

Even if a separate listing of each email in an email strand is not required because privilege attaches to the entire strand, a party may be required to claim privilege separately as to individual emails in the strand. In other words, if an individual email is not produced on grounds of privilege, it must be logged individually in order to claim the privilege, although it did not have to be detailed in the log entry describing the strand email message sent to the attorney. n73.3

An email string submitted to counsel--containing both privileged and nonprivileged information--may be privileged in its entirety, even if parts of that string in another context would be nonprivileged. n74 On the other hand, if an email string with otherwise privileged attachments is sent to a third party, the privilege is lost with respect to that email and all of the attached emails. n75

Whether text repeated in an email string remains privileged is determined by analyzing the most recent email. If the last email is privileged, everything in the string is privileged. Conversely, if the last email is not protected by privilege, earlier emails in the string may lose their protection. n76

Legal Topics:

For related research and practice materials, see the following legal topics:
Civil ProcedureDiscoveryElectronic DiscoveryDiscoverabilityCivil ProcedureDiscoveryPrivileged MattersWork ProductGeneral OverviewCivil ProcedureDiscoveryProtective OrdersCivil ProcedureDiscoveryRelevanceCivil ProcedureDiscoveryUndue Burdens

FOOTNOTES:
(n1)Footnote 1. *Fed. R. Civ. P. 26(b)(1)* and *(3)*.

(n2)Footnote 2. **Party raising privilege bears burden.** *See Fed. R. Civ. P. 26(b)(5)*.

5th Circuit See BG Real Estate Serv., Inc. v. Amer. Equity Ins. Co., 2005 U.S. Dist. LEXIS 10330, at *9-10 (E.D. Lo. May 18, 2005) (party resisting production because of asserted privilege has burden to substantiate it).

*10th Circuit See Zapata v. IBP, Inc., 1994 U.S. Dist. LEXIS 16285, at *22-23 (D. Kan. Nov. 10, 1994)* (party must identify privileged material).

(n3)Footnote 3. **Elements of privilege log identified.** *See* Heartland Surgical Specialty Hosp., LLC v. Midwest Div., Inc., (D. Kan. Feb. 23, 2007) (contents of privilege log were specified, including description of document, date document was prepared, date of document, identity of person who prepared document, identity of person for whom document was prepared, purpose of document, number of pages, and grounds for withholding document); *see also Rambus, Inc. v. Infineon Techs. AG, 220 F.R.D. 264, 272 (E.D. Va. 2004)* (log must describe ground of putative protection with degree of specificity that allows opposing party to assess assertion of privilege against applicable tests, because opposing party does not have access to putatively privileged document when seeking to mount challenge to privilege claim).

(n4)Footnote 3.1. **Categorical privilege log sufficient in some cases.** *See Orbit One Communications, Inc. v. Numerex Corp., 255 F.R.D. 98, 109 (S.D.N.Y. 2008)* (categorical privilege log appropriate when itemized description of documents too burdensome and greater detailed information would not help in determining whether document was privileged).

(n5)Footnote 4. **"Email strand" defined**. *In re Universal Service Fund Telephone Billing Practices Litig., 232 F.R.D. 669, 674 (D. Kan. 2005)* (email strands are not like minutes of a meeting or transcript of conversation, but actually consist of several distinct communications).

(n6)Footnote 5. **Privilege log must identify individual components of emails.** *In re Universal Service Fund Telephone Billing Practices Litig., 232 F.R.D. 669, 674 (D. Kan. 2005)* (although party failed to separate individual components of email strand in privilege log, court did not impose sanctions or deem attorney-client privilege waived because electronic discovery is rapidly evolving area in which litigants and judges often have little or conflicting guidance).

(n7)Footnote 6. *Fed. R. Evid. 501*.

(n8)Footnote 7. **Intentional or inadvertent waiver of privilege.**

3d Circuit See United States v. Keystone Sanitation Co., 885 F. Supp. 672, 675-676 (M.D. Pa. 1994) , clarified, 899 F. Supp. 206 (M.D. Pa. 1995) (inadvertent disclosure of email message pertaining to attorney billing statements, claimed to be protected under both attorney-client privilege and work product

protection, waived privilege and protection).

5th Circuit See Alldread v. City of Grenada, 988 F.2d 1425, 1434 (5th Cir. 1993) (voluntary disclosure waives privilege).

(n9)Footnote 8. **Waiver of privilege analysis for inadvertent disclosure varies among jurisdictions.** *See Simon Prop. Group L.P. v. mySimon, Inc., 194 F.R.D. 644, 648-650 (S.D. Ind. 2000)* (different approaches to handling issue identified).

(n10)Footnote 9. **Privilege applied to Internet questionnaire.** *Barton v. U.S. Dist. Court, 410 F.3d 1104, 1112 (9th Cir. 2005)* ("changes in law and technology that allow lawyers to solicit clients on the Internet and receive communications from thousands of potential clients cheaply and quickly do not change the applicable principles").

(n11)Footnote 10. **Privilege protects lawyer's work prepared for litigation.** *Fed. R. Civ. P. 26(b)(3)*; *Hickman v. Taylor, 329 U.S. 495, 510-511, 67 S. Ct. 385, 91 L. Ed. 451 (1947)* .

(n12)Footnote 11. **Work product protection may be waived.** *See In re Chrysler Motors Corp. Overnight Evaluation Program Litig., 860 F.2d 844, 846-847 (8th Cir. 1988)* (disclosing confidential computer tape to opponent in settlement negotiations waives protection).

(n13)Footnote 12. **Discovery of ordinary or fact work product permitted on lesser showing.** *Fed. R. Civ. P. 26(b)(3)(A)(ii)*; *see Maloney v. Sisters of Charity Hosp., 165 F.R.D. 26, 30 (W.D.N.Y. 1995)* (computer printouts contained statistical data determined to be "fact work product," but plaintiff failed to demonstrate sufficient need for items, particularly because no appropriate depositions were taken).

(n14)Footnote 13. **Near absolute protection for opinion work product.** *Fed. R. Civ. P. 26(b)(3)(B)*; *Upjohn Co. v. United States, 449 U.S. 383, 398, 101 S. Ct. 677, 66 L. Ed. 2d 584 (1981)* ; *see also Shipes v. BIC Corp., 154 F.R.D. 301, 305 (M.D. Ga. 1994)* ("It is questionable whether any showing justifies disclosure of an attorney's mental impressions.").

(n15)Footnote 14. **Work product protection applies to documents prepared "because of" existing or expected litigation.** *United States v. Adlman, 134 F.3d 1194, 1195 (2d Cir. 1998)* (document contained legal analysis of likely IRS challenge to proposed business reorganization).

(n16)Footnote 15. **Work product must be prepared for some litigation purpose.**

2d Circuit United States v. Adlman, 134 F.3d 1194, 1195 (2d Cir. 1998) ("Whether it can fairly be said that the Memorandum was prepared because of the expected litigation really turns on whether it would have been prepared irrespective of the expected litigation with the IRS.").

10th Circuit See Colorado ex rel. Woodard v. Schmidt-Tiago Constr. Co., 108 F.R.D. 731, 734 (D. Colo. 1985) (plaintiff failed to show that computerized analysis of contract bids was done in contemplation of litigation instead of for use in ordinary course of business).

(n17)Footnote 15.1. **Witness statement prepared through email.** *Gerber v. Down East Community Hosp., 266 F.R.D. 29, 32-33 (D. Me. 2010)* (like short-hand or stenographic recording of witness statement, email interview was produced by counsel for litigation purposes and witness's email participation is comparable to participation in recorded oral interview or creation of written statement).

(n18)Footnote 16. **Computers can generate mountains of documents.** *See IBM Corp. v. United States, 493 F.2d*

112, 121 (2d Cir. 1973) (80 million documents).

(n19)Footnote 17. *See Manual for Complex Litigation § 11.446 (4th ed. 2004)*.

(n20)Footnote 18. A short list of Windows-based software programs include: In Vzn, Summation, Blaze, Paradox, Docu Find, D Base, Concordance, For Pro, Discovery Proe, Zy Index and Zy Image, JFS Litigator's Notebook, DB/Text Works, Excalibur EFS, Intellect. *See* Computer L. Rev. & Tech. J. (Summer 1997) at 12.

(n21)Footnote 19. *Fed. R. Civ. P. 26(b)(3)(A)(ii)*; *see Portis v. City of Chicago, 2004 U.S. Dist. LEXIS 12640, at *10-15 (N.D. Ill. July 7, 2004)* (database represented ordinary work product and court granted access, on condition that requesting party pay one-half the cost in compiling database).

(n22)Footnote 20. **Attorney's personal involvement in developing support system key to determining opinion work product.** *See Shipes v. BIC Corp., 154 F.R.D. 301, 309 (M.D. Ga. 1994)* (in-house corporate legal department maintained computer database on ongoing litigation that was protected under work product protection).

(n23)Footnote 21. **Work product protection may be waived if disclosed and used by trial expert.** *See Hoffman v. United Telecomms., Inc., 117 F.R.D. 436, 439 (D. Kan. 1987)* (computer file containing personnel database protected under work product, but information must be disclosed to other party if used for expert's report at trial).

(n24)Footnote 22. **Disclosure of data arrayed in particular way may reveal attorney's trial strategy.** *See National Union Elec. Corp. v. Matsushita Elec. Indus. Co., Ltd., 494 F. Supp. 1257, 1259 (E.D. Pa. 1980)* (original motion to produce denied because requested data "was arrayed in a particular way so that disclosure might have revealed something about [plaintiff's] trial strategy. So viewed, the information sought would have been similar to plaintiff's trial support system which was protected from discovery under the work product notion ...").

(n25)Footnote 23. **Selection of documents used in support system may reveal attorney's litigation strategy.**

2d Circuit See Santiago v. Miles, 121 F.R.D. 636, 638 (W.D.N.Y. 1988) (selection and compilation of documents by counsel pertinent to litigation may fall within opinion work product).

3d Circuit See Sporck v. Peil, 759 F.2d 312, 315-316 (3d Cir. 1985) (identity of documents used for preparation of week-long deposition was protected from disclosure as opinion work product because selection process itself represented attorney's mental impressions and legal strategy).

D.C. Circuit See United States v. AT&T, 642 F.2d 1285, 1289 (D.C. Cir. 1980) (disclosure of database would reveal which documents opposing party believes are important).

(n26)Footnote 24. **Computerized litigation support system based on attorney involvement subject to opinion work-product protection.**

2d Circuit See Santiago v. Miles, 121 F.R.D. 636, 638 (W.D.N.Y. 1988) (computer program developed with assistance of attorney for litigation purposes that analyzed prison-work assignments was protected from disclosure as "opinion" work product).

11th Circuit See Shipes v. BIC Corp., 154 F.R.D. 301, 309 (M.D. Ga. 1994) (entire computer database maintained by corporate legal department on ongoing litigation protected under work product protection).

(n27)Footnote 25. **Too many documents used in litigation support system may defeat opinion work product**

protection.

5th Circuit See In re Shell Oil Refinery, 125 F.R.D. 132, 133-134 (E.D. La. 1989) (selection of 65,000 documents from defendant's depository of 660,000 documents was not protected under work product doctrine because large number of selected documents could not reveal attorney's litigation strategy).

*7th Circuit See Portis v. City of Chicago, 2004 U.S. Dist. LEXIS 12640, at *9 (N.D. Ill. July 7, 2004)* (vast number of documents catalogued "virtually eliminates the possibility" that plaintiff's litigation strategy could be discerned).

D.C. Circuit See Washington Bancorporation v. Said, 145 F.R.D. 274, 278 (D.D.C. 1992) (extensive information contained in four-volume index of 2,400 boxes of documents makes it virtually impossible to glean attorney's litigation strategy from index).

(n28)Footnote 25.1. **Indices containing large number of documents may reflect only fact-based work product.** *See Disability Rights Council of Greater Washington v. Washington Metro. Transit Auth., 2007 U.S. Dist. LEXIS 39605, at *15-17 (D.D.C. June 1, 2007)* (gleaning trial strategy merely from identity of large volume of documents unlikely).

(n29)Footnote 26. Misko, Jr. & Ames, *Using Technology in the Management and Trial of Complex Cases*, Comp. L. Rev. & Tech. J. 1, 4 (Summer 1997).

(n30)Footnote 27. **Organization of computer data may reveal opinion work product.**

2d Circuit See Santiago v. Miles, 121 F.R.D. 636, 638 (W.D.N.Y. 1988) (selection and compilation of certain documents for pretrial discovery reflect attorney's mental impressions or legal theories).

3d Circuit See National Union Elec. Corp. v. Matsushita Elec. Indus. Co., 494 F. Supp. 1257, 1259-1260 (E.D. Pa. 1980) (organization of data in computer software might reveal party's litigation strategy and was initially protected from discovery, but later opened because identical information had been provided in hard copy).

11th Circuit See Shipes v. BIC Corp., 154 F.R.D. 301, 309 (M.D. Ga. 1994) (computer database maintained by in-house legal department to manage ongoing lawsuit claims undoubtedly contains attorney work product that would be impossible to separate from non-work product material).

(n31)Footnote 28. **Volume of electronically stored information increases exposure of privileged documents in discovery.** *See American Brass v. United States, 699 F. Supp. 934, 937 (Ct. Int'l Trade 1988)* (producing computer magnetic tapes risks disclosure of clients' names, marketing strategies, and other confidential information to competitors).

(n32)Footnote 29. *Manual for Complex Litigation § 11.446 (4th ed. 2004)*.

(n33)Footnote 30. **Subject matter waiver.** *Fed. R. Civ. P. 26(f)*, Committee Note of 2006 (*reproduced verbatim at § 26App.11[2]*); *see Crossroads Systems (Texas) v. Dot Hill Systems Corp., 2006 U.S. Dist. LEXIS 36181, at *11 (W.D. Tex. May 31, 2006)* ("Once a party waives the attorney-client privilege with respect to one communication, the privilege is waived with respect to all communications relating to the subject matter of the disclosed communication.").

(n34)Footnote 31. **Electronically stored information provided to testifying expert subject to disclosure.**

*2d Circuit See United States Fidelity & Guar. Co. v. Braspetro Oil Servs. Co., 2002 U.S. Dist. LEXIS 111, at *23 (S.D.N.Y., Jan. 4, 2002)* (privilege waived for information in 60 electronic CD-ROMs containing scanned images of 1.1 million documents because they were provided to testifying expert).

*6th Circuit See Univ. of Pittsburgh v. Townsend, 2006 U.S. Dist. LEXIS 72523, at *4-5 (E.D. Tenn. Oct. 4, 2006)* (all information, including attorney opinion work product, provided to testifying expert must be disclosed; work-product protection does not apply).

(n35)Footnote 32. **Privileges may be waived intentionally.**

4th Circuit In re Weiss, 596 F.2d 1185, 1186 (4th Cir. 1979) (attorney-client privilege subject to waiver).

9th Circuit See Samuels v. Mitchell, 155 F.R.D. 195, 199 (N.D. Cal. 1994) (privilege waived by disclosure to accountant for purpose other than securing legal advice).

(n36)Footnote 33. **Inadvertent disclosure may waive privilege.** *See, e.g., United States v. Keystone Sanitation Co., 885 F. Supp. 672, 676 (M.D. Pa. 1994) , clarified, 899 F. Supp. 206 (M.D. Pa. 1995)* (balance of factors weighed in favor of defendants having waived privilege by inadvertent disclosure).

(n37)Footnote 33.1. *See Fed. R. Evid. 502(b)* (inadvertent disclosure does not operate as waiver if party "took reasonable steps to prevent disclosure" and reasonable steps to rectify error).

(n38)Footnote 34. *Fed. R. Civ. P. 26(b)(5)(B)*; *see* Scheindlin, *E-Discovery: The Newly Amended Federal Rules of Civil Procedure*, Part IV., *Rule 26(b)(5)(B)--A Procedure for Retrieving Privileged Information* (Matthew Bender 2006).

(n39)Footnote 34.1. **Clawback provision.**

3d Circuit See Rhoads Indus., Inc. v. Building Materials Corp. of Am., 254 F.R.D. 216, 218 (E.D. Pa. 2008) (after plaintiff inadvertently produced over 800 allegedly privileged electronic documents, parties engaged in Rule 26(b)(5) procedure for return or sequestration of inadvertently produced documents.

11th Circuit See Williams v. Taser Int'l, Inc., 2007 U.S. Dist. LEXIS 40280, at *21-23 (N.D. Ga. June 4, 2007) (court ordered production of electronically stored information under protocol it devised, which included clawback provision similar to provision in Rule 26(b)(5)).

(n40)Footnote 35. *Fed. R. Civ. P. 26(b)(5)*, Committee Note of 2006 (*reproduced verbatim at § 26App.11[2]*).

(n41)Footnote 36. *Fed. R. Civ. P. 26(b)(5)(B).*

(n42)Footnote 37. *Fed. R. Evid. 502(b).*

(n43)Footnote 37.1. **Reasonable steps to rectify error.** *Fed. R. Evid. 502(b)*; *see Fed. R. Civ. P. 26(b)(5)(B)*; *see also Rhoads Indus., Inc. v. Building Materials Corp. of Am., 254 F.R.D. 216, 226 (E.D. Pa. 2008)* (by its very terms Evidence Rule 502 looks to what was "reasonable," and this test must be applied on objective basis).

(n44)Footnote 37.2. *See Fed. R. Evid. 502(b)* advisory committee's note (2008).

(n45)Footnote 38. **Burden on party asserting privilege or protection to show it has not been waived.** *See Williams v. Sprint/United Management Co., 2006 U.S. Dist. LEXIS 47853, at *30-31 (D. Kan. July 1, 2006)* (party asserting attorney-client privilege must show that privilege has not been waived when communications were inadvertently disclosed).

(n46)Footnote 39. **Federal courts take different approaches to inadvertent waiver issue.**

1st Circuit *Amgen Inc. v. Hoechst Marion Roussel, Inc., 190 F.R.D. 287, 290 (D. Mass. 2000)* (discussing three different approaches).

2d Circuit See *Hydraflow, Inc. v. Enidine, Inc., 145 F.R.D. 626, 638 (W.D.N.Y. 1993)* (inadvertent disclosure did not waive attorney-client privilege).

(n47)Footnote 40. **Some jurisdictions hold that privilege may not be inadvertently waived.**

2d Circuit See *Atronic Int'l, GmbH v. Semispecialists of Amer. Inc., 2005 U.S. Dist. LEXIS 24585, at *3-4 (E.D.N.Y. Oct. 18, 2005)* (protection against waiver of attorney-client privilege when communication inadvertently disclosed is not absolute).

3d Circuit See *Redland Soccer Club, Inc. v. Department of the Army, 55 F.3d 827, 856 (3d Cir. 1995)* (inadvertent disclosure did not result in waiver).

7th Circuit See *Mendenhall v. Barber-Greene Co., 531 F. Supp. 951, 954 (N.D. Ill. 1982)* (inadvertent disclosure should not be grounds for waiver).

8th Circuit See *Kansas-Nebraska Natural Gas Co. v. Marathon Oil Co., 109 F.R.D. 12, 21 (D. Neb. 1983)* (inadvertent production of exhibit did not waive attorney-client privilege).

11th Circuit See *Smith v. Armour Pharm. Co., 838 F. Supp. 1573, 1577 (S.D. Fla. 1993)* (privilege holder must intentionally waive privilege).

(n48)Footnote 41. **Other jurisdictions hold that privileges may be waived on inadvertent disclosure.**

1st Circuit See *FDIC v. Singh, 140 F.R.D. 252, 253 (D. Me. 1992)* (inadvertent production of privileged material waives privilege); *International Digital Sys. Corp. v. Digital Equip. Corp., 120 F.R.D. 445, 450 (D. Mass. 1988)* (adopting strict rule waiving attorney-client privilege if documents inadvertently disclosed during discovery).

D.C. Circuit See *Wichita Land & Cattle Co. v. American Fed. Bank, F.S.B., 148 F.R.D. 456, 457 (D.D.C. 1992)* (inadvertent disclosure of privileged material waives privilege); *see also* *In re Sealed Case, 877 F.2d 976, 980 (D.C. Cir. 1989)* (privilege lost through inadvertent waiver).

(n49)Footnote 42. **Remaining jurisdictions consider multi-factor test in determining whether inadvertent disclosure waives privilege.**

1st Circuit *Amgen Inc. v. Hoechst Marion Roussel, Inc., 190 F.R.D. 287, 292 (D. Mass. 2000)* (applying balancing test, court found magnitude of inadvertent disclosure so overwhelming as to result in waiver).

2d Circuit See Bank Brussels Lambert v. Credit Lyonnais (Suisse) S.A., 160 F.R.D. 437, 444-445 (S.D.N.Y. 1995) (paralegals missed some confidential documents in pre-disclosure review of 70,000 pages).

3d Circuit Rhoads Indus., Inc. v. Building Materials Corp. of Am., 254 F.R.D. 216, 219-220 (E.D. Pa. 2008) (case of first impression in district applying balancing of factors test to electronic discovery).

4th Circuit See In re Grand Jury Investigation, 142 F.R.D. 276, 279-282 (M.D.N.C. 1992) (applies multi-factor test to inadvertent disclosure of privileged documents during discovery, emphasizing low number of privileged documents inadvertently disclosed among 300,000 documents reviewed).

5th Circuit See Alldread v. City of Grenada, 988 F.2d 1425, 1433-1434 (5th Cir. 1993) (although inadequate precautions were taken to safeguard confidentiality, no waiver because defendant immediately notified plaintiff of inadvertent disclosure and interests of fairness warranted maintaining privilege).

7th Circuit See Golden Valley Microwave Foods, Inc. v. Weaver Popcorn Co., 132 F.R.D. 204, 207 (N.D. Ind. 1990) (court examined delay and scope and burden factors to find waiver).

8th Circuit See Starway v. Independent Sch. Dist. No. 625, 187 F.R.D. 595, 597 (D. Minn. 1999) (regarding inadvertent disclosure, court should consider reasonableness of precautions, promptness of remedial measures, number and extent of disclosures, and administration of justice).

9th Circuit See Bud Antle, Inc. v. Grow-Tech, Inc., 131 F.R.D. 179, 183 (N.D. Cal. 1990) (privilege waived as to disclosed letter); *see also Transamerica Computer Co. v. IBM Corp., 573 F.2d 646, 649-651 (9th Cir. 1978)* (inadvertent disclosure of 1,138 privileged documents from review of 17 million pages within three months did not waive privilege).

10th Circuit See Wallace v. Beech Aircraft Corp., 179 F.R.D. 313, 314-316 (D. Kan. 1998) (inadvertent disclosure of two documents attached to several hundred pages did not waive attorney-client privilege).

(n50)Footnote 43. **Electronic documents converted to TIFF images and reviewed by attorneys.** *See Williams v. Sprint/United Management Co., 2006 U.S. Dist. LEXIS 47853, at *33-35 (D. Kan. July 1, 2006)* (precautions taken by responding party sufficient to protect attorney-client privilege).

(n51)Footnote 44. **Review of enormous number of emails weighs against waiver of attorney-client privilege for protected emails inadvertently disclosed**. *See Williams v. Sprint/United Management Co., 2006 U.S. Dist. LEXIS 47853, at *34-35 (D. Kan. July 1, 2006)* (inadvertent disclosure of 65 privileged emails among hundreds of thousands of pages of emails produced in discovery weighs against waiver of privilege).

(n52)Footnote 45. **Waiver analysis applies to both attorney-client privilege and work-product protection.**

3d Circuit See United States v. Keystone Sanitation Co., 885 F. Supp. 672, 676 (M.D. Pa. 1994) , clarified, 899 F. Supp. 206 (M.D. Pa. 1995) (waiver analysis applies both to attorney-client and work product protection).

D.C. Circuit But see United States v. AT&T, 642 F.2d 1285, 1299 (D.C. Cir. 1980) (waiver standard in work product different than in attorney-client privilege).

(n53)Footnote 45.1. *See Fed. R. Evid. 502(b)* advisory committee's note (2008).

(n54)Footnote 46. *Fed. R. Civ. P. 26(f)*, Committee Note of 2006 (*reproduced verbatim at § 26App.11[2]*); *Cole Screenprint, Inc. v. Superior Imaging Group, Inc., 2006 U.S. Dist. LEXIS 85869, at *26 (W.D. Wash. Nov. 27, 2006)* (parties entered into stipulated protective order that embodied Rule 26(b)(5) procedures for return of inadvertently produced privileged documents).

(n55)Footnote 47. **Use of stipulated agreement to prevent privilege waiver based on inadvertent disclosure.**

2d Circuit See generally Hydraflow, Inc. v. Enidine, Inc., 145 F.R.D. 626, 638 (W.D.N.Y. 1993) (protective order providing that inadvertent disclosure does not waive attorney-client privilege).

D.C. Circuit See Dowd v. Calabrese, 101 F.R.D. 427, 439-440 (D.D.C. 1984) (stipulation made at deposition).

(n56)Footnote 48. *Fed. R. Civ. P. 26(f)*, Committee Note of 2006 (*reproduced verbatim at § 26App.11[2]*).

(n57)Footnote 48.1. *Fed. R. Evid. 502(e).*

(n58)Footnote 49. **Third parties may modify protective order.** *See, e.g., United Nuclear Corp. v. Cranford Ins. Co., 905 F.2d 1424, 1428 (10th Cir. 1990)* (granting intervenor's motion to modify blanket confidentiality order to permit access to discovery for use in other litigation against defendants).

(n59)Footnote 50. **Privilege not waived if agreement incorporated in court order.**

4th Circuit See Hopson v. Mayor and City Council of Baltimore, 232 F.R.D. 228, 239-240 (D. Md. 2005) ("no-waiver" agreements are valid if court compelled production of inadvertently disclosed privileged electronic data in its discovery order incorporating parties' agreement).

9th Circuit See Collaboration Prop., Inc. v. Polycom Inc., 224 F.R.D. 473, 478-479 (N.D. Cal. 2004) (discovery order represented judicially sanctioned reservation of privilege that prevented waiver).

(n60)Footnote 51. **Third party bound under confidentiality agreement not to disclose privileged information.** *See American Brass v. United States, 699 F. Supp. 934, 937 (Ct. Int'l Trade 1988)* (protective order would impose sanctions on third party who assisted in reviewing electronic data and then disclosed information).

(n61)Footnote 52. **Disclosure by designated computer technician as court officer does not waive privilege.** *See Manual for Complex Litigation § 11.431 (4th ed. 2004)*; American Bar Association Civil Discovery Standards 28 (1999); *see also Simon Prop. Group L.P. v. mySimon, Inc., 194 F.R.D. 639, 642 (S.D. Ind. 2000)* (technician selected by parties to mirror image computer was designated by court as officer of court and disclosure of any privileged material was not deemed waiver).

(n62)Footnote 53. **Confidentiality agreement does not affect parallel litigation.** *See Chubb Integrated Sys. v. National Bank, 103 F.R.D. 52, 67-68 (D.D.C. 1984)* .

(n63)Footnote 54. **Disclosure of privileged matter by designated computer technician does not waive privilege.** *See Manual for Complex Litigation § 11.431 (4th ed. 2004)*; American Bar Association Civil Discovery Standards 28 (1999); *see also Simon Prop. Group, L.P. v. mySimon, Inc., 194 F.R.D. 639, 642 (S.D. Ind. 2000)* (technician selected by parties to mirror image computer was designated by court as officer of court and disclosure of privileged material was not deemed waiver of privilege).

(n64)Footnote 55. **Protective order to ensure confidentiality.** *See Fed. R. Civ. P. 26(c)(1)(G)* (trade secrets); *Fed. R. Civ. P. 26(b)(1)* (privileged matter); *Fed. R. Civ. P. 26(b)(3)* (work product).

3d Circuit See In re First Peoples Bank Shareholders Litig., 121 F.R.D. 219, 230 (D.N.J. 1988) (court established protocol governing review of attorney billing documents to ensure confidentiality, which limited disclosure to opposing counsel and consultants specially retained for litigation and prohibited distribution of copies to clients).

*7th Circuit See Haroco, Inc. v. American Nat'l Bank & Trust Co., 1987 U.S. Dist. LEXIS 9549, at *7 (N.D. Ill. Sept. 18, 1987)* (access to computer files permitted to determine relevancy "under whatever confidentiality restrictions may be appropriate").

9th Circuit See Transamerica Computer Co. v. IBM Corp., 573 F.2d 646, 652 (9th Cir. 1978) (court ruling explicitly preserved privilege claims if parties engaged in suitable screening techniques).

10th Circuit See Western Fuels Ass'n v. Burlington N. R.R., 102 F.R.D. 201, 204 (D. Wyo. 1984) (court order that inadvertent disclosure does not constitute waiver of attorney-client or work product privilege).

Fed. Circuit See American Brass v. United States, 699 F. Supp. 934, 937 (Ct. Int'l Trade 1988) (court established comprehensive protocol governing inspection of computer tapes ensuring confidentiality of documents).

(n65)Footnote 56. **Computer technician reviewing data should be covered under confidentiality agreement.** *See American Brass v. United States, 699 F. Supp. 934, 937-938 (Ct. Int'l Trade 1988)* (adequate sanctions in protective order must be fixed against disclosure by third parties assisting in reviewing electronic data).

(n66)Footnote 57. **Outside expert should not be associated with party's business competitor.**

*3d Circuit See Mid-Atlantic Equip. Corp. v. Cape Country Club, Inc., 1997 U.S. Dist. LEXIS 12312, at *7 (E.D. Pa. Aug. 8, 1997) , aff'd without op., 172 F.3d 860 (3d Cir. 1998)* (court prevented consultation with expert employed by party's direct competitor regarding confidential commercial information).

7th Circuit See Simon Prop. Group L.P. v. mySimon, Inc., 194 F.R.D. 639, 641-642 (S.D. Ind. 2000) (court developed protocol to permit mirror imaging of hard drives while prohibiting disclosure to plaintiff to protect defendant's business, privacy, and relationship with counsel).

(n67)Footnote 58. ***Simon Prop. Group, L.P.* case.** *Simon Prop. Group L.P. v. mySimon, Inc., 194 F.R.D. 639 (S.D. Ind. 2000) .*

(n68)Footnote 59. **Protocol for mirror-imaging of hard drives.** *Simon Prop. Group L.P. v. mySimon, Inc., 194 F.R.D. 639, 641 (S.D. Ind. 2000)* (plaintiff was entitled, at own expense, to attempt recovery of deleted computer files, whether used at home or at work).

2d Circuit See Rowe Entm't, Inc. v. William Morris Agency, Inc., 205 F.R.D. 421, 432-433 (S.D.N.Y. 2002) (confidentiality protocol).

*5th Circuit See Murphy Oil USA, Inc. v. Fluor Daniel, Inc., at *22-26 (E.D. La. Feb. 19, 2002)* (protocol prohibiting experts from disclosing information).

7th Circuit Simon Prop. Group L.P. v. mySimon, Inc., 194 F.R.D. 639, 641 (S.D. Ind. 2000) (plaintiff was entitled, at own expense, to attempt recovery of deleted computer files, whether used at home or at work).

(n69)Footnote 60. **Protective protocols.**

2d Circuit See Rowe Entm't, Inc. v. William Morris Agency, Inc., 205 F.R.D. 421, 432-433 (S.D.N.Y. 2002) (confidentiality protocol).

*5th Circuit See Murphy Oil USA, Inc. v. Fluor Daniel, Inc., 2002 U.S. Dist. LEXIS 3196, at *22-26 (E.D. La. Feb. 19, 2002)* (protocol prohibiting experts from disclosing information).

(n70)Footnote 60.1. *See* Congressional Record House No. 7817 (Sept. 8, 2008); *see also Spieker v. Quest Cherokkee, LLC, 2008 U.S. Dist. LEXIS 88103, at *13 (D. Kan. Oct. 30, 2008)* (court required parties to reexamine projected estimated cost of privilege review in light of Rule 502, which was enacted "to reduce the costs of exhaustive privilege reviews of ESI").

(n71)Footnote 60.2. *See Fed. R. Evid. 502(a)*.

(n72)Footnote 60.3. **Application date.** *See Fed. R. Evid. 502*, Pub. L. No. 110-322, § 1(c), 122 Stat. 3537; *see also Rhoads Indus., Inc. v. Building Materials Corp. of Am., 254 F.R.D. 216, 218 (E.D. Pa. 2008)* ("I conclude that it would be just and practicable to apply Rule 502 in the present case because it sets a well defined standard, consistent with existing mainstream legal principles on the topic of inadvertent waiver").

(n73)Footnote 60.4. *Fed. R. Evid. 502(a)*.

(n74)Footnote 60.5. **Fairness determination.**

1st Circuit See XYZ Corp. v. United States, 348 F.3d 16, 17 (1st Cir. 2003) (pre-Rule 502 decision: "the extrajudicial disclosure of attorney-client communications, not thereafter used by the client to gain adversarial advantage in judicial proceedings, cannot work an implied waiver of all confidential communications on the same subject matter.

2d Circuit See In re Grand Jury Proceedings, 350 F.3d 299, 306 (2d Cir. 2003) (pre-Rule 502 decision: "The crucial issue is not merely some connection to a judicial process but rather the type of unfairness to the adversary that results in litigation circumstances when a party uses an assertion of fact to influence the decisionmaker while denying its adversary access to privileged material potentially capable of rebutting the assertion.").

*10th Circuit Silverstein v. Fed. Bureau of Prisons, 2009 U.S. Dist. LEXIS 121753, at *33-39 (D. Colo. Dec. 14, 2009)* (failure to cure disclosure of privileged matter led to inference that disclosure was intentional and privilege, regarding subject matter that had been earlier disclosed, was waived).

(n75)Footnote 60.6. *See Fed. R. Evid. 502* advisory committee's note (2008).

(n76)Footnote 60.7. *See Fed. R. Evid. 502* advisory committee's note (2008); *see, e.g., Amobi v. Dist. of Columbia Dep't of Corr., 2009 U.S. Dist. LEXIS 114270, at *17-18 (D.D.C. Dec. 8, 2009)* (Evidence Rule 502 "overrides the long-standing strict construction of waiver in this Circuit," which would have required waiver of all privileged matter

dealing with the same subject matter that was inadvertently disclosed).

(n77)Footnote 60.8. *See Fed. R. Evid. 502* advisory committee's note (2008).

(n78)Footnote 60.9. *Fed. R. Evid. 502(b)*.

(n79)Footnote 60.10. *Fed. R. Civ. P. 26(b)(5)(B)*.

(n80)Footnote 60.11. *See Fed. R. Evid. 502* advisory committee's note (2008); *see, e.g., Hopson v. City of Baltimore, 232 F.R.D. 228 (D. Md. 2005)* (survey of conflicting case law on waiver through inadvertent disclosure).

(n81)Footnote 60.12. *See Fed. R. Evid. 502(b)* advisory committee's note (2008); *see also Laethem Equip. Co. v. Deere & Co., 2009 U.S. Dist. LEXIS 76840, at *19-20 (E.D. Mich. Aug. 27, 2009)* (defendant's contention that plaintiff was hiding evidence amounted to concession that plaintiff "endeavored *not* to disclose privileged information," supporting finding that disclosure was inadvertent under Evidence Rule 502).

(n82)Footnote 60.13. *See Fed. R. Evid. 502(b)* advisory committee's note (2008).

(n83)Footnote 60.13.1. **Traditional reasonableness factors.**

3d Circuit See Rhoads Indus., Inc. v. Building Materials Corp. Of Am., 254 F.R.D. 216, 218 (E.D. Pa. 2008) (after producing party has shown at least minimal compliance with the three factors in Rule 502, and if "reasonableness" is still in dispute, court should proceed to traditional five-factor test for determining whether party took reasonable steps to prevent disclosure and rectify error).

*D.C. Circuit See Amobi v. Dist. of Columbia Dep't of Corr., 2009 U.S. Dist. LEXIS 114270, at *25-26 (D.D.C. Dec. 8, 2009)* (in determining whether reasonable steps were taken, court considers quantity of ESI that was reviewed, efforts taken and methods adopted in privilege review, and quantity of ESI produced after privilege review).

(n84)Footnote 60.14. *Fed. R. Evid. 502(d)*.

(n85)Footnote 60.14.1. **No "reasonable steps" to prevent disclosure of privileged or protected information is required to prevent waiver if Rule 502(d) order is entered.**

*7th Circuit See Alcon Mfg., Ltd. v. Apotex Inc., 2008 U.S. Dist. LEXIS 96630, at *18 (S.D. Ind. Nov. 26, 2008)* ("expensive, painstaking review is precisely what new Evidence Rule 502 and the protective order in this case were designed to avoid").

*10th Circuit Compare Spieker v. Quest Cherokee, LLC, 2009 U.S. Dist. LEXIS 62073, at *10-11 (D. Kan. July 21, 2009)* (Rule 502(d) order would have obviated any requirement that party take reasonable steps to prevent disclosure of privileged or protected materials; privilege or protection would not be waived).

(n86)Footnote 60.15. *See Fed. R. Evid. 502(d)* advisory committee's note (2008).

(n87)Footnote 60.16. *Fed. R. Evid. 502(e)*.

(n88)Footnote 60.17. *See Fed. R. Evid. 502(e)* advisory committee's note (2008).

(n89)Footnote 61. **Jurisprudence on communications between attorney and client.**

3d Circuit See United States v. Keystone Sanitation Co., 885 F. Supp. 672, 675-675 (M.D. Pa. 1994) , clarified, 899 F. Supp. 206 (M.D. Pa. 1995) (inadvertent disclosure of email message pertaining to attorney billing statements claimed to be protected under attorney-client privilege and work product protection waived both privilege and protection).

4th Circuit See McCafferty's, Inc. v. Bank of Glen Burnie, 179 F.R.D. 163, 166-169 (D. Md. 1998) (general discussion of attorney-client privilege in case involving waiver of privilege when communication is discarded).

(n90)Footnote 62. **Limited caselaw addressing whether transmission of email is compromised.** *See In re Asia Global Crossing, Ltd. 322 B.R. 247, 256 (S.D.N.Y. 2005)* ("transmission of a privileged communication through unencrypted email does not, without more, destroy the privilege").

(n91)Footnote 63. *See, e.g.*, Miller, *For Your Eyes Only: The Real Consequences of Unencrypted E-mail in Attorney-Client Communication, 80 B.U.L. Rev. 613 (April 2000)*; Masur, *Safety in Numbers: Revisiting the Risks to Client Confidences and Attorney-Client Privilege Posed by Internet Electronic Mail, 1999 Berkeley Tech. L.J. 1117.*

(n92)Footnote 64. **Attorney-client privilege attaches when several elements established.**

2d Circuit See In re Horowitz, 482 F.2d 72, 81-82 (2d Cir. 1973) (privilege waived if disclosed to third party or if communication placed where others can easily view it).

3d Circuit See In re Gand Jury Investigation, 599 F.2d 1224, 1235 (3d Cir. 1979) (modified elements in applying privilege to corporate entity).

(n93)Footnote 65. **Party asserting privilege bears initial burden.** *In re Mentor Corp. Obtape Transobturator Sling Prods. Liab. Litig., 632 F. Supp. 2d 1370, 1381 (M.D. Ga. 2009)* (defendant failed to meet its burden of showing that email containing legal advice remained confidential).

(n94)Footnote 66. **Prevailing view protects privileged communication transmitted by email.** *See In re Asia Global Crossing, Ltd., 322 B.R. 247, 256 (S.D.N.Y. 2005)* (various state laws, commentary, and ethical rules support retaining privilege regarding communication sent by email).

(n95)Footnote 67. ABA Commission on Ethics and Professional Responsibility, Formal Op. 99-413 (1999); *but see* Masur, *Safety in Numbers: Revisiting the Risks to Client Confidences and Attorney-Client Privilege Posed by Internet Electronic Mail*, 1999 Berkley Tech. L.J. (Masur challenges commonly held presumption that email communications are secure and free from interception absent extraordinary measures: Email communications are less reliable than widely assumed and technological innovations are making it easier to intercept electronic messages).

(n96)Footnote 68. ABA Commission on Ethics and Professional Responsibility, Formal Op. 99-413 (1999) (footnote 40 lists opinions from 10 state ethics boards consistent with ABA opinion, and opinions from 4 other state ethics boards that caution lawyers not to use email to transmit sensitive communications or to obtain client's consent first before doing so).

(n97)Footnote 69. **Attorney-client privilege applied to emails.**

2d Circuit See TVT Records v. Island Def Jam Music Group, 214 F.R.D. 143, 144-145 (S.D.N.Y. 2003)

(email communications to and from in-house corporate counsel were protected by attorney-client privilege to extent they discussed legal strategy and advice, but emails discussing business strategy and negotiations were not protected by privilege).

3d Circuit See In re Gabapentin Patent Litig., 214 F.R.D. 178, 186 (D.N.J. 2003) (forwarding email to attorney does not amount to attorney-client communication).

7th Circuit See Muro v. Target Corp., 243 F.R.D. 301, 305-306 (N.D. Ill. 2007) (general rules of attorney-client privilege applied to emails); *Barton v. Zimmer, Inc., 2008 U.S. Dist. LEXIS 1296, at *16 (N.D. Ind. Jan. 7, 2008)* (court analyzed attorney-client privilege for emails).

9th Circuit See United States v. Chevron Texaco Corp., 241 F. Supp. 2d 1065, 1078 (N.D. Cal. 2002) (emails sent by defendant's in-house counsel were protected by attorney-client privilege).

10th Circuit See Anaya v. CBS Broadcasting, Inc., 251 F.R.D. 645, 653 (D.N.M. 2007) (attorney-client privilege protected email in which defendant sought to have script for story reviewed for legal issues and counsel provided legal advice regarding proposed script).

(n98)Footnote 70. **Privilege not destroyed.** *See In re Asia Global Crossing, Ltd. 322 B.R. 247, 256 (S.D.N.Y. 2005)* (privilege not destroyed if communication transmitted by email).

(n99)Footnote 70.1. **Copying email to counsel.** *Zelaya v. Unicco Service Co., 682 F. Supp. 2d 28, 39 (D.D.C. 2010)* (corporation cannot be permitted to insulate its files from discovery simply by sending "cc" to in-house counsel).

(n100)Footnote 71. **Maintaining confidentiality.** *See, e.g., United States v. Chevron Texaco Corp., 241 F. Supp. 2d 1065, 1078 (N.D. Cal. 2002)* (emails sent by defendant's in-house counsel were protected by attorney-client privilege except to extent that defendant failed to maintain confidentiality by discussing matters in emails with third parties).

9th Circuit See, e.g., United States v. Chevron Texaco Corp., 241 F. Supp. 2d 1065, 1078 (N.D. Cal. 2002) (emails sent by defendant's in-house counsel were protected by attorney-client privilege except to extent that defendant failed to maintain confidentiality by discussing matters in emails with third parties).

11th Circuit In re Mentor Corp. Obtape Transobturator Sling Prods. Liab. Litig., 632 F. Supp. 2d 1370, 1381 (M.D. Ga. 2009) (emails, which were not designated as "confidential" or "privileged," and which were sent to employees who were not in "need to know" status, were not protected by privilege because they were not kept confidential).

(n101)Footnote 72. **Privilege applies only to legal advice.**

2d Circuit See TVT Records v. Island Def Jam Music Group, 214 F.R.D. 143, 144-145 (S.D.N.Y. 2003) (email communications to and from in-house corporate counsel that discussed business strategy and negotiations were not protected by privilege).

*7th Circuit Barton v. Zimmer, Inc., 2008 U.S. Dist. LEXIS 1296, at *16 (N.D. Ind. Jan. 7, 2008)* (court determined privilege of email communications to and from outside counsel based on whether employees were sufficiently identified with corporation, whether communications contained legal advice, and whether emails revealed confidential communications).

9th Circuit Premiere Digital Access, Inc. v. Central Tel. Co., 360 F. Supp. 2d 1168, 1175 (D. Nev.

2005) (email written by defendant's in-house counsel, discussing procedures for terminating service contract with customer similarly situated to plaintiff, was protected by attorney-client privilege because when communications are made between in-house counsel in legal capacity and employees in scope of their employment, and for purpose of securing legal advice, communications are protected by attorney-client privilege for benefit of company).

10th Circuit See Anaya v. CBS Broadcasting, Inc., 251 F.R.D. 645, 653 (D.N.M. 2007) (attorney-client privilege protected email in which defendant sought to have script for news story reviewed for legal issues; emails constituted confidential communications made for purpose of obtaining and facilitating provision of legal advice).

(n102)Footnote 73. **Privilege log should list each email separately.** *See In re Universal Service Fund Telephone Billing Practices Litig., 232 F.R.D. 669, 674 (D. Kan. 2005)* (information provided in privilege log must be sufficient to enable court to determine whether each element of asserted privilege or protection is satisfied).

(n103)Footnote 73.1. **Single entry for entire strand.**

3d Circuit Rhoads Indus., Inc. v. Building Materials Corp. of Am., 254 F.R.D. 238, 240 (E.D. Pa. 2008) (even though one email is not privileged, subsequent privileged email that forwards that prior non-privileged email may allow privilege to attach to entire email chain, including non-privileged prior email message).

7th Circuit Muro v. Target Corp., 250 F.R.D. 350, 363 (N.D. Ill. 2007), aff'd on other grounds, 2009 U.S. App. LEXIS 19486 (7th Cir. Aug. 31, 2009) (court specifically rejected position that strand emails should be itemized separately and ruled that magistrate judge erred in finding privilege log inadequate for failure to separately itemize each individual email quoted in email strand).

9th Circuit See United States v. ChevronTexaco Corp., 241 F. Supp. 2d 1065, 1074 n.6 (N.D. Cal. 2002) (breaking strand emails into discrete email messages is "misleading" because what is communicated with each email is text of that email and all emails forwarded with it; if privileged attachments are sent to third party, privilege may be lost as to all attachments).

(n104)Footnote 73.2. **Listing each email separately might reveal privileged communication.** *See Muro v. Target Corp., 250 F.R.D. 350, 363 (N.D. Ill. 2007), aff'd on other grounds, 2009 U.S. App. LEXIS 19486 (7th Cir. Aug. 31, 2009)* (fact that non-privileged information was communicated to attorney may be privileged, even if underlying information remains unprotected).

(n105)Footnote 73.3. **Email from strand may require separate log entry.** *Rhoads Indus., Inc. v. Building Materials Corp. of Am., 254 F.R.D. 238, 240 (E.D. Pa. 2008)* (if email messages are part of routine business affairs, and are not for purpose of securing legal advice, they are discoverable).

(n106)Footnote 74. **Entire email strand may be privileged even if parts are nonprivileged.** *See Barton v. Zimmer, Inc., 2008 U.S. Dist. LEXIS 1296, at *16-17 (N.D. Ind. Jan. 7, 2008)* ("even though one e-mail is not privileged, a second e-mail forwarding the prior e-mail to counsel might be privileged in its entirety").

(n107)Footnote 75. **Privilege may be lost for entire strand.** *Continental Casualty Co. v. St. Paul Surplus Lines Ins. Co., 265 F.R.D. 510, 517 n.9 (E.D. Cal. 2010)* (email communications between attorney and client, which were also addressed or copied to insurer, were not protected by attorney-client privilege).

(n108)Footnote 76. **Last email in string determines privilege.** *Continental Casualty Co. v. St. Paul Surplus Lines Ins. Co., 265 F.R.D. 510, 517 n.9 (E.D. Cal. 2010)* (even though one email is not privileged, second email that forwards prior email to counsel "might be privileged in its entirety").

Moore's Federal Practice: Discovery of Electronically Stored Information

Volume 7: Analysis: Civil Rules 30-37A
Chapter 37A Discovery of Electronically Stored Information
D. SCOPE OF DISCOVERY OF ELECTRONICALLY STORED INFORMATION

7-37A Moore's Federal Practice: Electronic Discovery § 37A.33

AUTHOR: by John K. Rabiej

§ 37A.33 Request for Discoverable Electronically Stored Information Must Be Reasonable

[1] Rule 26(b) Cost-Benefit Limits

[a] Purposes of Limits

Discovery requests are subject to the general cost-benefit limitations contained in Rule 26(b)(2)(C). n1 The limitations provide guidance on ascertaining the reasonableness of a discovery request. In applying these limits, a court considers several factors to determine the reasonableness of a discovery request to produce electronically stored information, which is otherwise relevant and not privileged or protected, including the following: n2 "(i) the discovery sought is unreasonably cumulative or duplicative, or can be obtained from some other source that is more convenient, less burdensome, or less expensive; (ii) the party seeking discovery has had ample opportunity to obtain the information by discovery in the action; or (iii) the burden or expense of the proposed discovery outweighs its likely benefit, considering the needs of the case, the amount in controversy, the parties' resources, the importance of the issues at stake in the action and the importance of the discovery in resolving the issues."

These limitations were added in 1983 (and restyled in 2007) and were intended to circumscribe the scope of discovery and promote greater judicial involvement in the discovery process in light of judicial reluctance to limit discovery. The objective was to guard against redundant or disproportionate discovery by giving the court authority to reduce the amount of discovery that may be directed to matters that are otherwise proper subjects of inquiry. n3 The limitations under Rule 26(b)(2)(C)(iii), referred to as the "proportionality test or proportionality analysis," are particularly pertinent in the discovery of electronically stored information (*see § 37A.34*).

The 2000 amendments to Rule 26(b)(1), which revised the scope of discovery, reiterated the reference to the cost-benefit limitations imposed by Rule 26(b)(2): n4 "This otherwise redundant cross-reference has been added to emphasize the need for active judicial use of subdivision (b)(2) to control excessive discovery." n5 The changes highlighted the court's authority to restrict burdensome and unreasonable discovery requests and served "to encourage more frequent consideration of the (b)(2) principles." n6

The prefatory language that introduces the limits in Rule 26(b)(2) literally applies only when the "frequency and extent" of discovery are at issue. The reference in Rule 26(b)(1) to the (b)(2) limits makes clear that the analysis applies to all stages and aspects of discovery. n7

[b] Courts May Limit Discovery Request Seeking Cumulative or Duplicative Materials

A court may limit discovery if it finds that the discovery is cumulative or duplicative, or is obtainable from some other source that is more convenient, less burdensome, or less expensive. n8 For further discussion, see *§ 26.60[2]*.

[c] Courts May Limit Discovery if Alternative, More Convenient Means Are Available

A discovery request may be limited if alternative sources are available to produce the requested information that are "more convenient, less burdensome, or less expensive." n9 However, if no alternative means exist to obtain relevant evidence that is essential to prove a case, the severest sanctions will be imposed if that evidence is destroyed. n10 For further discussion, see *§ 26.60[3]*.

[2] Discovery Request Limited Under Proportionality Test

[a] Factors Used in Proportionality Analysis

The reasonableness of a discovery request is evaluated under a proportionality test, which weighs the burden and expense in retrieving the requested matter against its likely benefits, taking into account the specificity of the discovery request and the following factors: n11

- The amount in controversy;
- The needs of the case;
- The parties' resources;
- The importance of the proposed discovery in resolving the issues; and
- The importance of the issues at stake in the litigation.

Courts have from early on relied explicitly or implicitly on this analytical framework to resolve electronically stored information discovery issues, even though the proportionality test has infrequently been cited in traditional paper-based discovery. n12

These cost-benefit factors were first adopted in 1983. However, the expectation that the Rule 26(b)(2)(C)(iii) proportionality test would have a substantial impact on litigation practices was not realized. The provision was seldom relied on in "paper" discovery, ostensibly because parties were pessimistic about their chances to succeed, particularly since the "subject-matter" scope of discovery under Rule 26(b) was viewed as expansive. n13 The cost-benefit factors were highlighted in the 2000 amendments to Rule 26(b)(1) (*see § 37A.33*). n14 The 2000 amendments reemphasized a court's authority and responsibility to limit unreasonable discovery; the amendments were designed to reinvigorate the original purposes of the proportionality test, and were intended to result in greater scrutiny of broad requests to produce relevant evidence, including electronically stored information. n15 In fact, the courts have focused on the proportionality factors, often adjusting the factors to fit the circumstances in particular cases. n16 For further discussion, see *§ 37A.34*.

[b] Proportionality Analysis Routinely Applied to Electronically Stored Information

The vast information that can be stored in a computer can offer a wealth of potentially discoverable matter. Although much of the information may be easily accessed, examining and extracting privileged materials from a potentially enormous mass of documents often requires painstaking efforts. Moreover, retrieving residual-deleted data, embedded data, and data contained in backup tape systems requires in-depth and burdensome probing (*see §§ 37A.03*; *37A.05*). To prevent unreasonable demands, the costs and burdens of discovery of electronically stored information are weighed against its likely benefits, taking into account several factors under a proportionality analysis. n17 Together with amendments to the scope of discovery under Rule 26(b)(1), which limit discovery to matters relevant to a "claim or defense" of any party, Rule 26(b)(2) places a premium on the common-sense reasonableness of a discovery request (*see §§ 37A.33[1][a]*; *37A.34*). n18 The 2006 amendments to Rule 26 underscore the proportionality analysis when discovery is sought of electronically stored information that is not reasonably accessible (*see § 37A.35*).

The costs associated with producing electronically stored information have altered the traditional relationship between requesting and responding parties. Under Rule 26(b), a party must produce requested electronically stored information "as they are kept in the usual course of business or in a reasonably usable form or forms" (*see § 37A.11[2]*; *see also § 34.14*). n19 In traditional "paper" discovery, the cost of copying documents was borne by the requesting party. n20 However, the nature of electronically stored information, as well as the practice of producing hard copies of electronic documents instead of providing the information in an electronic format for inspection, has reversed the traditional relationship (*see § 34.14[5]*). n21 A responding party often produces electronically stored information in an inexpensive format (CD-ROM or diskette), eliminating much of the copying costs traditionally borne by the requesting party. The imbalance may be increased if the responding party's record-keeping system is such that the retrieval of electronically stored information involves special procedures, requiring that party to bear the additional expense associated with producing the documents for inspection. n22 To protect confidential or privileged matter from disclosure, a party will often designate its own technician to locate, retrieve, and copy documents for review by its lawyers before producing them.

Even when the responding party produces paper copies of electronically stored information, the copying costs are not usually borne by the opposing party. A party is ordinarily reluctant to open its computer records for inspection and copying in response to a discovery request. In practice, therefore, the responding party usually opts to bear the expense of providing hard copies of relevant electronically stored documents for inspection or more likely converting them into TIFF images and transmitting them on inexpensive media. n23 As a practical matter, this practice shifts the costs of copying from the requesting party to the responding party, who remains responsible for paying the costs of producing the information. For further discussion of cost sharing, see *§ 37A.36*.

Partially as a result of the shifting of costs, the courts have relied much more on the Rule 26(b)(2)(C) proportionality analysis when scrutinizing the reasonableness of a discovery request for electronically stored documents than in other discovery contexts (*see § 37A.34*). n24

Legal Topics:

For related research and practice materials, see the following legal topics:
Civil ProcedureDiscoveryElectronic DiscoveryGeneral OverviewCivil ProcedureDiscoveryProtective OrdersCivil ProcedureDiscoveryRelevanceCivil ProcedureDiscoveryUndue BurdensComputer & Internet LawGeneral Overview

FOOTNOTES:
(n1)Footnote 1. *Fed. R. Civ. P. 26(b)(1), (2)*.

(n2)Footnote 2. *Fed. R. Civ. P. 26(b)(2)(C)*.

(n3)Footnote 3. *Fed. R. Civ. P. 26(b)*, Committee Note of 1983 (*reproduced verbatim at § 26App.07[2]*).

(n4)Footnote 4. *Fed. R. Civ. P. 26(b)*.

(n5)Footnote 5. *Fed. R. Civ. P. 26*, Committee Note of 2000 (*reproduced verbatim at § 26App.10[2]*).

(n6)Footnote 6. Minutes of Advisory Committee on Civil Rules Meeting 14 (Mar. 16-17, 1998), at http://www.uscourts.gov/rules (reference in Rule 26(b)(1) was intentionally made to Rule 26(b)(2)(C)(i), (ii), and (iii) to emphasize the importance of each of them).

(n7)Footnote 7. **Proportionality analysis applies to all discovery stages.** *See Marker v. Union Fidelity Life Ins. Co., 125 F.R.D. 121, 124 (M.D.N.C. 1989)* (*Fed. R. Civ. P. 26(b)(2)* limitations expressly address only redundant and excessive use of discovery, but Rule can be used as guide in other discovery disputes weighing, for example, benefits of marginally relevant information with not insignificant costs in producing information).

(n8)Footnote 8. **Court may limit cumulative or duplicative discovery.** *Fed. R. Civ. P. 26(b)(2)(C)(i)*; *see Jones v. Goord, 2002 U.S. Dist. LEXIS 8707, at *42, *48 (S.D.N.Y. May 15, 2002)* (court rejected discovery request for production of electronic databases, in part, because voluminous paper-copy documents were produced earlier in litigation); *see also Cornell Research Found. Inc. v. Hewlett Packard Co., 223 F.R.D. 55, 74-75 (N.D.N.Y. 2003)* (court rejected party's contention that producing technical specifications in native format would be cumulative when documents had been earlier produced in hard copy).

(n9)Footnote 9. **Discovery limited if more convenient or cheaper source is available.** *Fed. R. Civ. P. 26(b)(2)(C)(i).*

2d Circuit Rowe Entm't, Inc. v. William Morris Agency, Inc., 205 F.R.D. 421, 430 (S.D.N.Y. 2002) ("Some cases that have denied discovery of electronic evidence or have shifted costs to the requesting party have done so because equivalent information either has already been made available or is accessible in a different format at less expense.").

9th Circuit See Williams v. Owens-Illinois, Inc., 665 F.2d 918, 932-933 (9th Cir. 1982) (lower court's refusal to require production of computer tapes, which required plaintiff to rely on hard copy wage cards instead of electronic data, was not abuse of discretion, in part, because defendant was required to process whatever computer runs plaintiff requested).

11th Circuit Cf. Bashir v. AMTRAK, 929 F. Supp. 404, 413 (S.D. Fla. 1996) (no sanction for failing to retain computer tape when affidavits of witnesses were available addressing same issue).

(n10)Footnote 10. **Default judgment entered for destruction of evidence unavailable from any other source.** *See Computer Assocs. Int'l, Inc. v. American Fundware Inc., 133 F.R.D. 166, 169-170 (D. Colo. 1990)* (computer source code destroyed, leading to default judgment in copyright infringement case).

(n11)Footnote 11. **Elements of proportionality analysis.** *Oppenheimer Fund, Inc. v. Sanders, 437 U.S. 340, 359, 98 S. Ct. 2380, 57 L. Ed. 2d 253 (1978)* (Court noted some factors when rejecting plaintiff's claim to shift notification costs in class action lawsuit); *see* American Bar Association Civil Discovery Standards 29(b)(iv) (1999).

2d Circuit See Zubulake v. UBS Warburg LLC, 2003 U.S. Dist. LEXIS 7939, at *49-51 (S.D.N.Y. May 13, 2003) (establishing three-step analysis for deciding disputes regarding scope and cost of electronic data discovery).

*7th Circuit See In re Brand Name Prescription Drugs Antitrust Litig., 1995 U.S. Dist. LEXIS 8281, at *4 (N.D. Ill. June 13, 1995)* (in addition to considering whether expense involved in producing discovery is inordinate and excessive, court may consider factors such as whether relative expense and burden in obtaining data would be greater to requesting party as compared to responding party, and whether

responding party will benefit to some degree in producing data in question).

10th Circuit See Bills v. Kennecott Corp., 108 F.R.D. 459, 460, 464 (D. Utah 1985) (court ruled that $5,000 costs incurred in providing computer generated information in class action was not inappropriate and relied on following standards: (1) amount of money involved is not excessive or inordinate; (2) relative expense and burden in obtaining data is substantially greater for requesting party as compared with responding party; (3) amount of money necessary to obtain requested data as set forth by responding party represents substantial burden to requesting party; and (4) responding party is benefitted in its case to some degree by providing requested data in question).

Fed. Circuit See Timken Co. v. United States, 659 F. Supp. 239, 241, 269-272 (Ct. Int'l Trade 1987) (court reversed administrative agency denial of request for computer tapes of confidential information that contained 15,000 pages of computer printout in part because of plaintiff's burden in recreating information in electronic format, which would require roughly 7,500 hours at cost of $200,000).

(n12)Footnote 12. **Proportionality analysis relied on in discovery of electronically stored records.** *See Fed. R. Civ. P. 26(b)(2)(C).*

2d Circuit Zubulake v. UBS Warburg LLC, 217 F.R.D. 309, 316 (S.D.N.Y. 2003) ("Rule 26(b)(2) imposes general limitations on the scope of discovery in the form of a 'proportionality test' ").

4th Circuit See Marker v. Union Fidelity Life Ins. Co., 125 F.R.D. 121, 124-125 (M.D.N.C. 1989) (production of marginally relevant electronically stored documents was burdensome and not warranted under *Fed. R. Civ. P. 26(b)(2)(C)(iii)* analysis).

7th Circuit See Simon Prop. Groups, L.P. v. MySimon, Inc., 194 F.R.D. 639, 641 (S.D. Ind. 2000) (*Fed. R. Civ. P. 26(b)(2)(C)(iii)* proportionality analysis applied to request to recover deleted computer files).

9th Circuit See Playboy Enters. v. Welles, 60 F. Supp. 2d 1050, 1054 (S.D. Cal. 1999) (applying proportionality analysis to recovery of admittedly deleted emails).

(n13)Footnote 13. Minutes of Committee on Civil Rules Meeting 13 (Mar. 16-17, 1998), *at* http://www.uscourts.gov/rules (Rule 26(b)(2) limits intended to stimulate judicial involvement, but inexplicably failed to do so).

(n14)Footnote 14. *See Fed. R. Civ. P. 26(b)(1), (2)*; *see also Thompson v. United States Dep't of Hous. & Urban Dev., 219 F.R.D. 93, 98 (D. Md. 2003)* ("In addition to the tests fashioned by these courts, it also can be argued with some force that the Rule 26(b)(2) balancing factors are all that is needed to allow a court to reach a fair result when considering the scope of discovery of electronic records").

(n15)Footnote 15. *See Fed. R. Civ. P. 26(b)(2)(C)(iii)*; *see also* Minutes of Committee on Civil Rules Meeting 14 (Mar. 16-17, 1998), *at* http://www.uscourts.gov/rules ("Technological advances in storing and retrieving information have only exacerbated a problem that already was made acute by document discovery excesses. Adoption of the (Rule 26(b)(2)) proposal will send an important signal that discovery must be better controlled. Reasonable proportionality is required by (b)(2) now, and it has not been made to work.").

(n16)Footnote 16. **"Balancing" factors in Rule 26(b)(2)(C) all that is needed.** *See Thompson v. U.S. Dept. of Housing and Urban Dev., 219 F.R.D. 93, 98 (D. Md. 2003)* (Rule 26(b)(2) balancing factors are sufficient to evaluate appropriate scope of discovery).

(n17)Footnote 17. **Courts fashion reasonable limits**. *Fed. R. Civ. P. 26(b)(2)(C)(iii)*.

4th Circuit See Thompson v. United State Dep't of Housing & Urban Dev., 219 F.R.D. 93, 97 (D. Md. 2003) (courts have attempted to fashion reasonable limits on requests to search for electronically stored information based on proportionality test).

8th Circuit See In re Zurn Pex Plumbing Prods. Liab. Litig., 2009 U.S. Dist. LEXIS 47636, at *6-7 (D. Minn. June 5, 2009) (keyword search resulted in roughly 361 gigabytes of data or nearly 27 million pages of documents; "in an effort to control costs," court limited search to 14 keywords).

*10th Circuit See Apsley v. The Boeing Co., 2007 U.S. Dist. LEXIS 5144, at *22-23 (D. Kan. Jan. 17, 2007)* (court ordered parties to provide more information on costs and benefits of proposed discovery so that it could apply proportionality test).

(n18)Footnote 18. *See Fed. R. Civ. P. 26(b)(1), (2)*.

(n19)Footnote 19. *Fed. R. Civ. P. 34(b)*; *see Fed. R. Civ. P. 34(b)*, Committee Note of 1980 (*reproduced verbatim at § 34App.04[2]*).

(n20)Footnote 20. **Traditional rule requires production costs to be borne by requesting party.**

2d Circuit See Riddell Sports, Inc. v. Brooks, 158 F.R.D. 555, 559 (S.D.N.Y. 1994) (defendant must pay for copy of any transcripts produced by plaintiff).

3d Circuit Caruso v. Coleman Co., 157 F.R.D. 344, 349-350 (E.D. Pa. 1994) (defendant who alleged burdensomeness of request required to allow plaintiffs to examine relevant records, but not required to make copies).

6th Circuit See Delozier v. First Nat'l Bank, 109 F.R.D. 161, 164 (E.D. Tenn. 1986) (if after inspection of readable microfilm records plaintiff desires copies of portions, plaintiff must bear expense of copying).

(n21)Footnote 21. **Traditional relation of requesting party incurring copying costs reversed in production of electronically stored documents.**

10th Circuit See Bills v. Kennecott Corp., 108 F.R.D. 459, 462 (D. Utah 1985) (practice of shifting document production costs to requesting party by making records available for inspection and copying has been fundamentally changed by storing documents on computers).

*11th Circuit See CBT Flint Partners, LLC v. Return Path, Inc., 2009 U.S. Dist. LEXIS 121188, at *14-16 (N.D. Ga. Dec. 30, 2009)* (court concluded that production in paper form of 1.4 million documents would have cost much more than fees of e-discovery consultant in collecting and retrieving ESI, and it taxed consultant's fees of $243,453 as costs under *28 U.S.C. § 1920*); *cf.* AutoMed Tech., Inc. v. Knapp Logistics & Automation, Inc., 2006 U.S. Dist. LEXIS 76610, at *10 (N.D. Ga. Oct. 19, 2006) (requesting party required to pay costs incurred to scan documents produced in response to discovery request).

(n22)Footnote 22. **Responding party responsible for costs of special procedures required to use documents.**

See Delozier v. First Nat'l Bank, 109 F.R.D. 161, 164 (E.D. Tenn. 1986) (if bank's microfilmed documents are not readable unless photocopied by special equipment, bank must bear costs of producing documents).

(n23)Footnote 23. **Responding party reluctant to open its computer for inspection.** *See Bills v. Kennecott Corp., 108 F.R.D. 459, 462 (D. Utah 1985)* (parties are hesitant to "open up their computer banks for inspection pursuant to discovery requests").

(n24)Footnote 24. **Undue expense and burden examined in discovery of computer records.** *Fed. R. Civ. P. 26(b)(2)(C)(ii)*.

10th Circuit See Bills v. Kennecott Corp., 108 F.R.D. 459, 464 (D. Utah 1985) (cost-shifting by producing volumes of hard copy documents no longer available for computer records).

D.C. Circuit See Alexander v. FBI, 194 F.R.D. 316, 336 (D.D.C. 2000) (proportionality analysis applied to restoration of emails on backup system).

Fed. Circuit See Torrington Co. v. United States, 786 F. Supp. 1027, 1028-1030 (Ct. Int'l Trade 1992) (party failed to articulate need for computer magnetic tapes, paper documents provided alternative source of information, and opposing party enumerated hardships if compelled to produce tapes).

Moore's Federal Practice: Discovery of Electronically Stored Information

Volume 7: Analysis: Civil Rules 30-37A
Chapter 37A Discovery of Electronically Stored Information
D. SCOPE OF DISCOVERY OF ELECTRONICALLY STORED INFORMATION

7-37A Moore's Federal Practice: Electronic Discovery § 37A.34

AUTHOR: by John K. Rabiej

§ 37A.34 Applying Proportionality Analysis to Discovery of Electronically Stored Records

[1] Likely Benefits from Electronically Stored Information

[a] Extent of Benefits

Under the Rule 26(b)(2)(C) proportionality analysis, the first issue is to determine the "likely benefits" of the requested electronically stored information. In assessing the likely benefits, the need for and purpose of the requested electronically stored information in the litigation must be identified and explained. n1 At a minimum the electronically stored information must be relevant to a pleaded "claim or defense" of any party, unless the court finds good cause to extend relevancy to the "subject matter" of the action (*see §§ 37A.33*; *37A.31*). n2 For further discussion, see [b] through [f], *below*.

[b] Requested Matter Has Independent Evidentiary Significance

The likely benefits of electronically stored information that in itself bears independent evidentiary significance is apparent and is subject to production absent an overriding privilege claim. n3 Evidence essential to prove a party's case often outweighs the costs and burdens incurred in retrieving the information under the proportionality analysis. n4 An obvious example is discovery of a computer software program that is subject to trademark or copyright infringement claims. n5 Other examples include computerized accounting records n6 and email messages that are relevant to prove a discrimination claim. n7

Nevertheless, a blanket discovery request for all electronically stored documents that may have independent evidentiary significance, without any limits, is unreasonable. For example, a mere suspicion that a responding party will fail to produce all relevant information in accordance with a discovery request, including electronic documents bearing evidentiary significance, is insufficient to order production of all computerized data. n8

[c] Requested Matter Exists Only in Electronic Form

If electronically stored information represents the sole source of relevant evidence and no hard-copy printout or other evidence of the document exists, a responding party must demonstrate extraordinary hardship to resist discovery under the Rule 26(b)(2)(C)(iii) proportionality analysis. n9

The responding party's burden in an I.R.S. proceeding under *26 U.S.C. § 7602* challenging a tax return is nearly absolute. The party must produce the original medium on which its financial record-keeping system is stored and may not substitute a duplicate of the computer tape or a hard copy print. Moreover, the government need not reimburse the defendant if the defendant wants to duplicate the computer tapes to ensure against risk of loss or damage. n10

Email correspondence often exists only in electronic format. If otherwise relevant, it is subject to discovery. n11

[d] Requested Matter Used to Dispute Authenticity of Document

Many software computer programs retain a record of all input changes and revisions to a document (*see § 37A.05[2][a]*). The computer's ability to retain a comprehensive record of all earlier edits and versions of a document can be particularly useful in ascertaining the authenticity of a disputed document. n12 Retrieving some of the earlier edits or versions may be easy, while an extraordinary effort may be required to retrieve other changes.

Because it is easy to allege that a document has been altered or testimony fabricated, more than mere speculation of document tampering is required under the Rule 26(b)(2)(C) proportionality analysis. n13 In weighing the likely benefits against the costs, a substantial probability of document tampering should be shown when both the likelihood of finding relevant evidence of tampering is low and the burden of its retrieval is heavy. n14

If retrieval of electronically stored information to prove the authenticity of a disputed document is burdensome, a responding party should be prepared to offer less burdensome alternatives. For instance, if the authenticity of an entire computerized database containing electronic duplicates of thousands of hard-copy documents is disputed, one alternative short of printing all electronic documents is to randomly select an appropriate number of computerized documents and verify them against paper copies. n15 However, if the request is relatively unintrusive and easy to accommodate--for example, a request for a computer's files list that is easily accessed and merely identifies the authors and documents' revision and creation dates--it is reasonable. n16 When the request is presumptively reasonable, only a general proffer may be necessary to demonstrate that a particular document was antedated or otherwise subject to tampering. n17 Even less may be required in challenging the authenticity of a document. Despite little more than plaintiff's speculation that a computer program would provide relevant information in a case alleging discriminatory lending practices, the court required production of a computer program used by the defendant insurance company to verify data disclosed in hard copy. n18 In an I.R.S. proceeding, no showing of fabrication was required to discover a computer tape to ensure the veracity of a hard-copy document. n19

[e] Requested Matter Needed to Verify or Impeach Testifying Expert

[i] Underlying Information Needed to Understand Computer Program

The underlying electronically stored information relied on by an expert to develop a model or other simulation that may be used at trial is subject to discovery (*see* [ii], *below*). n20 Effective cross-examination of the expert often requires a full understanding of how the computer program works that might be obtained only by examining the database, source code, information explaining the source code, and a user's manual. n21 Unlike a request for evidence of document tampering that may entail a broad search (*see* [b], [d], *above*), a request for electronically stored information relied on by an opposing party's expert usually requires only a limited and well-defined search. In these cases, the likely benefits of the expert's electronically stored information are substantial and will be needed to test the computer program's accuracy. n21.1

[ii] Underlying Electronically Stored Data Relied on by Expert

Courts have been solicitous of a party requesting discovery for purposes of conducting effective cross-examination of a trial expert who bases an opinion on a computer simulation or other computer model software program. If a party seeks to use electronically stored information in the presentation of its case, the underlying data and programming methods that are essential to understand the program are discoverable. n22 The scope of discoverable information can also include alternative data considered, but not used, by the expert under certain circumstances. n23

A user's manual and the computer program's source code, which may be substantial in size, provide information on how to operate the program. A codebook describes and explains the source code, which is essential to test the program for purposes of a thorough cross-examination. A party who receives the underlying data and source code of a computer program (that will be used at trial) only in a hard-copy format may face substantial expense and burden in translating and verifying the data. In applying the Rule 26(b)(2)(C) proportionality test in these cases, the responding party's costs of furnishing the information in a computerized format are usually low, while ensuring the accuracy of the computer program's results is often essential. Accordingly, a responding party is ordinarily required to provide the underlying database and information on its programming methods in an electronic format to facilitate trial preparation, especially because the requesting party would otherwise face significant hardships in recreating the computer program. n24 Providing a computerized database eliminates the time-consuming task of manually inputting extensive information contained in a source code. Without a computerized version of a source code, a party must manually encode the "alphabet soup" source code and verify its results, a time-consuming and burdensome task. The benefits of producing the source code in an electronic format usually outweigh the costs. n25

Problems can occur when a computer program has not been adequately documented and an inadequate or no codebook exists. Reconstruction of the source code is time-consuming and laborious. However, the responsibility to maintain a documented computer program lies with the party creating it and any failure to document a program should be rectified by its authors. Before disclosure, a party must be careful to protect its proprietary interest in a custom-built computer program. Any disclosure of such a program should be contingent on a confidentiality agreement limiting access and prohibiting unauthorized disclosure to safeguard against revealing commercial secrets.

[iii] Adequate Opportunity to Verify Computer-Based Simulation Model or Analysis

An opposing party should be afforded a reasonable opportunity to test any computer simulation model or analysis that will be introduced at trial well before trial in the interests of fairness and to avoid unnecessarily belabored discussion of highly technical, tangential issues at trial. n26 The timeliness of a request for materials relevant to a computer simulation or model will be taken into consideration in the proportionality analysis. n27 For example, tardy requests submitted on the eve of trial for extensive documentation of a computer simulation or model are especially subject to court scrutiny and rejection. n28

[f] Electronically Stored Information Relied on by Non-Testifying Expert

Electronically stored information relied on by an expert retained or specially employed in anticipation or preparation of trial but who is not expected to be called as a witness at trial is nonetheless discoverable on a showing of "exceptional circumstances under which it is impracticable for the party to obtain facts or opinions on the same subject by other means." n29 For example, information relied on by an expert in developing computer models or other computer-based exhibits may be subject to discovery. n30

A party seeking discovery of an opponent's non-testifying expert may be responsible for paying the other party a fair portion of the fees and expenses reasonably incurred by the latter party in obtaining facts and opinions from the experts. n31 However, if the computerized database developed by the expert is independently beneficial to the responding party, the costs in developing the database may be apportioned between the parties.

[2] Evaluating Burdens

[a] Extent of Intrusiveness

The degree of intrusiveness in retrieving electronically stored information is a key factor in the Rule 26(b)(2)(C) proportionality analysis. n32 The mutability and inherent redundancy of electronically stored files create a large pool of discoverable records that can be simultaneously stored in many different locations. Moreover, electronically stored information can be located on inaccessible sources. An exhaustive search of computer-based information, though technologically feasible, can entail substantial burdens that may not be worth the effort, especially if the benefits derived from the search are marginal or unlikely. Narrowing the scope of an electronically stored records search to reasonable limits often is a primary derivative benefit of a Rule 26(b)(2)(C) analysis. For further discussion, see [b] through [d], *below.*

If a discovery request is intrusive and unlikely to culminate in providing relevant and useful information, it is unreasonable, and the court should deny it. n33 The party resisting discovery must make a particularized showing that the discovery request is unduly burdensome or expensive. n34

[b] Search Limited to Single Electronically Stored File

The extent of discovery intrusiveness is ordinarily quite low if a single or a few electronically stored records are identified and requested. The request is usually reasonable under the Rule 26(b)(2)(C) analysis even if the likelihood of obtaining relevant evidence is not high. For example, a request for a computer record containing a list of file names would ordinarily be reasonable. n35 However, some credible evidence must be presented that relevant information will be found even if the sources to be searched are limited. n36

Retrieval of a relevant earlier version of a single document that was later edited may not be intrusive and should be produced, if otherwise discoverable. n37 Contrarily, requesting an entire computer database that likely contains information irrelevant to the pleaded claims and defenses is too broad (*see § 37A.10[4]*). n38

[c] Search Limited to Single Computer Hard Drive

A computer's hard drive or a software program often contains non-discoverable documents, such as confidential or irrelevant files. A showing that a search of a computer's hard drive will likely result in finding the requested information is required to prevent what would otherwise be a "fishing expedition." n39 A limited search of a computer's hard drive is less likely to be intrusive and impose undue burdens and expense under the Rule 26(b)(2)(C) analysis. For example, a request to locate and retrieve the names of the authors and dates on which each document is entered and revised on a computer file screen usually would be reasonable. The degree of intrusiveness in producing the file screen is much less than in producing the contents of each computer document file. Limiting a search of a computer hard drive to a list of all documents would more likely be proper. n40 The failure to produce readily accessible data on a server because an employee was too inexperienced does not excuse a party from taking appropriate steps to perform the search and retrieve relevant information. n40.1

When an inspection by the opposing party of a computer's hard drive is appropriate, adequate safeguards must be taken to protect any confidential and privileged documents that are likely to be stored in the database (*see § 37A.44[3][d]*). Ordinarily, the protocol for protecting disclosure of privileged and confidential documents is negotiated between the parties. n41

[d] Search of Multiple Computers

Discovery of documents that may be located in a large number of computers raises distinct and difficult problems. In a networked computer system in which computers are linked, a single word-search request can locate information

contained in any of the linked computers. Large organizations and businesses frequently have several networked drives. Under these circumstances, each of the networked drives might have to be searched. Moreover, computers also have individual drives that are available to the user but that are not on the network, such as the "C" drive. Searches of networked drives might not locate relevant documents contained in non-networked drives. Separate search requests need to be executed on each computer to locate documents on non-networked drives. n42

A party seeking intrusive corporate-wide discovery must demonstrate a particularized need and relevance for the information. n43 Copying a large number of computer hard drives can cause significant disruption to ongoing business operations and should be allowed only on a showing of sufficient justification. n44 The reasonableness of the request will be significantly affected by the number of individuals and computers affected. To meet the Rule 26(b)(2)(C) proportionality test, the search should be narrowed to a group of individuals, ordinarily no more than 20 or 30 in a large corporation, who likely may have relevant evidence in their computers. n45

A request to discover information on all computers may extend to employees' personal home computers that are used for business purposes. Relevant computer-generated information may be located off-site, for example, on laptop computers or home computers (*see § 37A.05[5]*). n46 Locating and retrieving data from off-site computers pose many practical problems. Once identified, it is difficult to distinguish a laptop computer used for personal or business purposes. n47

Legal Topics:

For related research and practice materials, see the following legal topics:
Civil ProcedureDiscoveryElectronic DiscoveryDiscoverabilityCivil ProcedureDiscoveryProtective OrdersCivil ProcedureDiscoveryUndue BurdensComputer & Internet LawGeneral OverviewEvidenceDemonstrative EvidenceComputer-Generated Evidence

FOOTNOTES:

(n1)Footnote 1. **Need and purpose of requested information must be identified.** *General Instrument Corp. Sec. Litig., 1999 U.S. Dist. LEXIS 18182, at *19 (N.D. Ill. Nov. 15, 1999)* (court determines that burden of retrieving emails from backup tapes exceeds benefit, placing "significant weight on its finding that the plaintiffs have not identified any specific factual issue for which they believe the requested documents would be necessary").

(n2)Footnote 2. *Fed. R. Civ. P. 26(b)(2)(C)(iii)*; *see* Ch. 26, *Duty to Disclose; General Provisions Governing Discovery* .

(n3)Footnote 3. **Evidence in electronic form is discoverable.** *See Fed. R. Civ. P. 26(b)(2)(C)(iii)*.

1st Circuit See Haseotes v. Abaca Int'l Computers, Inc., 120 F.R.D. 12, 14 (D. Mass. 1988) (in breach of contract case, court ordered inspection of newly developed computer technology as relevant to issue of lost profits).

6th Circuit See In re Air Disaster at Detroit Metro. Airport, 130 F.R.D. 634, 635-636 (E.D. Mich. 1989) (production of simulated flight computer tape required in passenger jet crash case).

(n4)Footnote 4. **Proportionality analysis applied to extracting source code.** *See OpenTV v. Liberate Tech., 219 F.R.D. 474, 479 (N.D. Cal. 2003)* (court requires parties to share equally cost incurred in extracting source code from database).

(n5)Footnote 5. **Computer software subject to copyright infringement claims discoverable.**

9th Circuit See Sega Enters. v. MAPHIA, 948 F. Supp. 923, 927 (N.D. Cal. 1996) (computer hard drive seized in copyright infringement case alleging copying and posting games developed by Sega on electronic bulletin board).

10th Circuit See Computer Assocs. Int'l, Inc. v. American Fundware, Inc., 133 F.R.D. 166, 170 (D. Colo. 1990) (default judgment entered for destroying computer source code, which was essential to prove claim that product was copied in copyright infringement case).

(n6)Footnote 6. **Computerized accounting records discoverable.** *See Smith v. MCI Telecomms. Corp., 137 F.R.D. 25, 26 (D. Kan. 1991)* (redacted version of computer manuals containing electronic accounting records ordered to be produced).

(n7)Footnote 7. **Email messages discoverable.** *See Strauss v. Microsoft Corp., 1995 U.S. Dist. LEXIS 7433, at *11-12 (S.D.N.Y. June 1, 1995)* (inappropriate emails of male supervisor relevant to issue of whether gender played role in supervisor's decision not to promote female employee to higher position).

(n8)Footnote 8. **Mere suspicion that responding party will fail to produce all relevant evidence insufficient.**

9th Circuit See Lawyers Title Ins. Corp. v. United States Fidelity & Guar. Co., 122 F.R.D. 567, 570 (N.D. Cal. 1988) (plaintiff's request for all computerized records of claims during five years too broad and not warranted on mere asserted need "to facilitate the production of relevant matter").

D.C. Circuit See Alexander v. FBI, 188 F.R.D. 111, 115 (D.D.C. 1998) (party's alleged history of stonewalling production of documents and being less than candid insufficient reasons to justify "discovery into the scope of a document search").

(n9)Footnote 9. **Electronically stored information representing sole source of evidence discoverable.**

*1st Circuit See W.E. Aubuchon Co., Inc. v. Benefirst, LLC, 2007 U.S. Dist. LEXIS 44574, at *15-16 (D. Mass. Feb. 6, 2007)* (court ruled that scanned images of medical bills and payments, which represented sole evidence because responding party had destroyed original paper copies after scanning them, were critical to party's claims).

D.C. Circuit See Armstrong v. Bush, 139 F.R.D. 547, 555 (D.D.C. 1991) (plaintiff disputed defendant's assertion that computer-stored information was also printed and preserved for record-keeping purposes; court approved discovery of electronic records).

Fed. Circuit See Daewoo Elecs. Co. v. United States, 650 F. Supp. 1003, 1006 (Ct. Int'l Trade 1986) (production of sequential electronic files required because no other source was available; raw data had been destroyed).

(n10)Footnote 10. **Computer tapes must be produced in IRS proceeding.** *See United States v. Davey, 543 F.2d 996, 999-1001 (2d Cir. 1976)* (*26 U.S.C. § 7602* authorizes government access to all relevant taxpayer records).

(n11)Footnote 11. **Relevant email is discoverable.** *In re Brand Name Prescription Drugs Antitrust Litig., 1995 U.S. Dist. LEXIS 8281, at *1 (N.D. Ill. June 13, 1995)* .

(n12)Footnote 12. **Examination of electronically stored information to determine authenticity of document.**

1st Circuit See Premier Homes and Land Corp. v. Cheswell, 240 F. Supp. 2d 97, 98 (D. Mass. 2002) (plaintiff belatedly conceded that email was fabricated after defendant's consultants had, pursuant to court order, created mirror images of plaintiff's computer hard drives and backup tapes).

2d Circuit See Cerruti 1881 S.A. v. Cerruti, Inc., 169 F.R.D. 573, 582 (S.D.N.Y. 1996) (court appointed expert to examine hard drive to determine whether electronic documents were fabricated).

(n13)Footnote 13. **Suspicion that document was tampered with insufficient.** *See Fed. R. Civ. P. 26(b)(2)(C).*

1st Circuit See Fennell v. First Step Designs, Ltd., 83 F.3d 526, 532 (1st Cir. 1996) (lower court rejected protocol submitted by plaintiff on computer inspection procedures to discover alleged fabrication of document because no "particularized likelihood of discovering appropriate information" was shown).

7th Circuit See Sattar v. Motorola, Inc., 138 F.3d 1164, 1171 (7th Cir. 1998) (plaintiff's contempt motion for violating discovery order denied when plaintiff failed to show any evidence that defendant had deleted or modified emails); *see also Stallings-Daniel v. Northern Trust Co., 2002 U.S. Dist. LEXIS 4024, at *27-34 (N.D. Ill. Mar. 11, 2002)* (speculation that party tampered with electronic documents based on party's misconduct in earlier case was inadequate to require electronic discovery of emails).

(n14)Footnote 14. **Minimal evidence of tampering insufficient.** *See Turner v. Resort Condominiums Int'l, LLC, 2006 U.S. Dist. LEXIS 48561, at *11-12 (S.D. Ind. July 13, 2006)* (metadata suggesting that document was modified after lawsuit was filed insufficient to offset substantial evidence confirming content and authenticity of document).

(n15)Footnote 15. **Alternative means of locating relevant evidence should be proposed if request is otherwise burdensome.** *See In re First Peoples Bank Shareholders Litig., 121 F.R.D. 219, 226 (D.N.J. 1988)* (court instructed party to select 50 electronic documents and check them against original paper documents in discovery dispute about attorney's fee request in class action derivatives lawsuit).

(n16)Footnote 16. **Forensic examination of hard drive may be permitted to establish authenticity, if cost assumed by requesting party.** *See Laurin v. Pokoik, 2004 U.S. Dist. LEXIS 24010, at *5-6 (S.D.N.Y. Nov. 30, 2004)* (court provided opportunity to examine hard drive to establish authenticity of disputed document if requesting party paid costs).

(n17)Footnote 17. **Request for unintrusive search reasonable.** *See Momah v. Albert Einstein Med. Ctr., 164 F.R.D. 412, 418 (E.D. Pa. 1996)* (although "close question," court ordered production of computer file screen listing names of documents to determine whether any documents were back-dated).

(n18)Footnote 18. **Minimal showing that requested information is relevant to authenticity.** *See Dunn v. Midwestern Indem., 88 F.R.D. 191, 195 (S.D. Ohio 1980)* (court suggested its own theories on how information contained in computer program could be relevant).

(n19)Footnote 19. **No showing by government required in I.R.S. proceeding.** *See United States v. Davey, 543 F.2d 996, 1001 (2d Cir. 1976)* (government is entitled to original electronic record instead of relying on hard copy, which is subject to tampering).

(n20)Footnote 20. *Fed. R. Civ. P. 26(a)(2)(B)(ii)* (data relied on by trial expert discoverable).

(n21)Footnote 21. **Explanatory information required to fully understand and test computer software**

application.

2d Circuit See Shu-Tao Lin v. McDonnell Douglas Corp., 574 F. Supp. 1407, 1412 (S.D.N.Y. 1983) , aff'd in part, reversed in part, 742 F.2d 45 (2d Cir. 1984) (preferred practice is to provide adversary all underlying data supporting computer analysis or model well before trial).

5th Circuit See Pearl Brewing Co. v. Jos. Schlitz Brewing Co., 415 F. Supp. 1122, 1134 (S.D. Tex. 1976) (documentation of intricate details of computer programs, including source code and explanation of code symbols, required to understand expert's testimony).

(n22)Footnote 21.1. **Computer program source code relevant to determining quality of product delivered under contract.** *See Metavante Corp. v. Emigrant Savings Bank, 2008 U.S. Dist. LEXIS 89584, at *5-7 (E.D. Wis. Oct. 24, 2008)* (court ordered plaintiff to produce source code used by plaintiff in performance of its technology outsourcing agreement).

(n23)Footnote 22. **Computer software programs and explanatory information must be produced for effective cross-examination of trial expert.**

2d Circuit See Shu-Tao Lin v. McDonnell Douglas Corp., 574 F. Supp. 1407, 1412 (S.D.N.Y. 1983) , aff'd in part, reversed in part, 742 F.2d 45 (2d Cir. 1984) (preferred practice is to provide adversary all underlying data supporting computer analysis or model well before trial).

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6th Circuit See City of Cleveland v. Cleveland Elec. Illuminating Co., 538 F. Supp. 1257, 1267 (N.D. Ohio 1980) (hard copy written reports, without underlying data, inadequate to test accuracy of results of elaborate calculations based on computer simulations).

8th Circuit Jochims v. Isuzu Motors, Ltd., 145 F.R.D. 507, 511 (S.D. Iowa 1992) (copy of plaintiff expert's computer program, source code, and user's manual provided to defendant).

(n24)Footnote 23. **Alternative data and test results may be discoverable.**

5th Circuit Pearl Brewing Co. v. Jos. Schlitz Brewing Co., 415 F. Supp. 1122, 1140 (S.D. Tex. 1976) (alternative data inputs not discoverable because they were product of non-trial experts and no "exceptional circumstances" under former *Fed. R. Civ. P. 26(b)(4)(B)* (now *Fed. R. Civ. P. 26(b)(4)(D)*) were shown).

10th Circuit Bartley v. Isuzu Motors Ltd., 151 F.R.D. 659, 660 (D. Colo. 1993) (court ordered production of all computer simulations of vehicle collision generated by defendant's trial experts).

(n25)Footnote 24. **Hard copy of computer program insufficient.** *See Williams v. E.I. Du Pont de Nemours & Co., 119 F.R.D. 648, 650 (W.D. Ky. 1987)* (hard copy of documents insufficient to understand computer program).

(n26)Footnote 25. **Source code produced in computerized format necessary to fully understand and test application.** *See Williams v. E.I. Du Pont de Nemours & Co., 119 F.R.D. 648, 651 (W.D. Ky. 1987)* (to ensure effective

cross-examination, court ordered production of computerized database, codebooks, user's manual, and all documents used in encoding database).

(n27)Footnote 26. **Reasonable opportunity to study computer software program before trial.** *See Perma Research & Dev. Co. v. Singer Co., 542 F.2d 111, 115 (2d Cir. 1976)* (dissenting opinion cautions that introduction of computer simulation model should not be accepted at trial without careful examination); *Shu-Tao Lin v. McDonnell Douglas Corp., 574 F. Supp. 1407, 1412 (S.D.N.Y. 1983) , aff'd in part, rev'd in part, 742 F.2d 45 (2d Cir. 1984)* (defendant did not have adequate opportunity to review computer analysis and model of decedent's lost income before trial).

(n28)Footnote 27. *See Fed. R. Civ. P. 26(b)(2)(C).*

(n29)Footnote 28. **Untimely requests for computerized material explaining software or computer model are unreasonable.**

5th Circuit See EEOC v. General Dynamics Corp., 999 F.2d 113, 115-116 (5th Cir. 1993) (request for computer program to check veracity of data denied as untimely on eve of trial when party should have made request earlier).

7th Circuit See Jochims v. Isuzu Motors, Ltd., 145 F.R.D. 507, 510-511 (S.D. Iowa 1992) (defendant earlier provided plaintiff with source code and user's manual for one computer simulation model; plaintiff's request for validation reports consisting of tens of thousands of pages and hundreds of computer diskettes about related computer simulation model on eve of trial was unduly burdensome).

(n30)Footnote 29. *Fed. R. Civ. P. 26(b)(4)(D)(ii).*

(n31)Footnote 30. **Information relied on by expert subject to discovery.** *See Pearl Brewing Co. v. Jos. Schlitz Brewing Co., 415 F. Supp. 1122, 1134 (S.D. Tex. 1976)* (documentation explaining how source code functions required to understand how computer works).

(n32)Footnote 31. **Potential cost sharing.** *Fed. R. Civ. P. 26(b)(4)(E)*; *see Pearl Brewing Co. v. Jos. Schlitz Brewing Co., 415 F. Supp. 1122, 1139 (S.D. Tex. 1976)* (requesting party required to pay costs incurred in deposing non-testifying experts who worked on computer program that will be used by another expert at trial).

(n33)Footnote 32. *Fed. R. Civ. P. 26(b)(2)(C)(iii).*

(n34)Footnote 33. **Request for intrusive search unlikely to locate relevant evidence is unreasonable.** *See Fennell v. First Designs, Ltd., 83 F.3d 526, 532 (1st Cir. 1996)* (lower court required parties to submit protocol to inspect computer that would have "minimal degree of intrusion time-wise and interference-wise" with ongoing business operations).

(n35)Footnote 34. **Particularized showing must be supported by facts.** *See Thompson v. U.S. Dept. of Housing and Urban Dev., 219 F.R.D. 93, 98 (D. Md. 2003)* ("affidavit or similar submission is required to present facts supporting the challenge" based on undue expense or burden).

(n36)Footnote 35. **Request for single computer file reasonable.** *See Momah v. Albert Einstein Med. Ctr., 164 F.R.D. 412, 418 (E.D. Pa. 1996)* (information requested to verify dates on which particular documents created and edited).

3d Circuit See Momah v. Albert Einstein Med. Ctr., 164 F.R.D. 412, 418 (E.D. Pa. 1996) (information requested to verify dates on which particular documents created and edited).

*6th Circuit See Thielen v. Buongiorno USA, Inc., 2007 U.S. Dist. LEXIS 8998, at *8-9 (W.D. Mich. Feb. 8, 2007)* (court granted defendant's motion to mirror image plaintiff's single computer under confidential review protocol on condition that defendant incur costs of procedure).

*10th Circuit See Semsroth v. City of Wichita, 2006 U.S. Dist. LEXIS 83363, at *36-37 (D. Kan. Nov. 15, 2006)* (court required search of single email backup tape because cost was relatively minimal, even though it found likelihood of finding significant evidence questionable and speculative).

(n37)Footnote 36. **Speculative conjecture that a single email exists insufficient.** *See Williams v. Massachusetts Mutual Life Ins. Co., 226 F.R.D. 144, 146 (D. Mass. 2005)* (assertion that relevant email exists, without any corroborating evidence, insufficient to permit onsite inspection, even if requesting party agrees to pay costs).

(n38)Footnote 37. **Request for edits to a single document reasonable.** *See McGuire v. Acufex Microsurgical, Inc., 175 F.R.D. 149, 151-152 (D. Mass. 1997)* (deleted paragraph from personnel evaluation memorandum was relevant to discrimination complaint).

(n39)Footnote 38. **Request to search entire database unreasonable.**

*7th Circuit See Murlas v. Mobil Oil Corp., 1995 U.S. Dist. LEXIS 3489, at *12-13 (N.D. Ill. Mar. 16, 1995)* (producing entire computerized database would be burdensome, with much of the information irrelevant to case).

9th Circuit See Bob Barker Co., Inc. v. Ferguson Safety Prod., Inc., 2006 U.S. Dist. LEXIS 14789, at *12-13 (N.D. Cal. Mar. 9, 2006) (court denied discovery request for "database" because database was "dynamic collection of data that changes over time" and general request without further specification was too indefinite).

(n40)Footnote 39. **Showing required that relevant evidence will likely be obtained from comprehensive search of computer.**

1st Circuit See Williams v. Massachusetts Mutual Life Ins., Co., 226 F.R.D. 144, 146 (D. Mass. 2005) (requesting party must proffer "at least some reliable information" that responding party is unwilling to produce electronically stored information before court orders inspection of computer); *Fennell v. First Stage Designs, Ltd., 83 F.3d 526, 532 (1st Cir. 1996)* (lower court rejected request to mirror image computer's hard drive to search for evidence indicating fabrication of electronic document because it would "involve a fishing expedition without any particularized likelihood of discovering appropriate information").

*5th Circuit See BG Real Estate Serv., Inc. v. American Equity Ins., Co., 2005 U.S. Dist. LEXIS 10330, at *5 (E.D. La. May 18, 2005)* (discovery request for entire hard drive is overly broad and would retrieve irrelevant evidence).

(n41)Footnote 40. **Request for computer file screen reasonable.**

3d Circuit See Momah v. Albert Einstein Med. Ctr., 164 F.R.D. 412, 418 (E.D. Pa. 1996) (court ordered production of computer file screen listing documents).

11th Circuit See Rates Tech., Inc. v. Elcotel, Inc., 118 F.R.D. 133, 135 (M.D. Fla. 1987) (defendant offered to permit plaintiff to inspect computer program, instead of furnishing copy of entire program, and produce documents selected by plaintiff unless objectionable).

(n42)Footnote 40.1. **Party required to hire forensic expert because employee assigned to perform task was not physically or emotionally able to search documents.** *See Canon U.S.A., Inc. v. S.A.M., Inc., 2008 U.S. Dist. LEXIS 47712, at *12-14 (E.D. La. June 20, 2008)* (court granted plaintiff's motion to compel defendant to hire forensic expert to conduct search of hard drive).

(n43)Footnote 41. **Parties negotiate protocol for confidentiality agreements.** *See Mary Imogene Bassett Hosp. v. Sullivan, 136 F.R.D. 42, 48-50 (N.D.N.Y. 1991)* (court approved inspection of database containing 84 million documents but directed that parties agree on and execute appropriate protective order stipulation to ensure confidentiality).

(n44)Footnote 42. **Search of employees "C" and "F" non-network computer drives.** *See Alexander v. FBI, 188 F.R.D. 111, 117 (D.D.C. 1998)* (recovery of residual-deleted files from non-networked "C" or "F" drives of single employee's computer would cost about $15,675 and take about 265 hours).

(n45)Footnote 43. **Burden on requesting party to show particularized need and relevance of intrusive discovery request.**

9th Circuit See Lawyers Title Ins. Corp. v. United Sates Fidelity & Guar. Co., 122 F.R.D. 567, 570 (N.D. Cal. 1988) (request for extensive information about corporation's computer system rejected as too broad absent particularized showing of need).

10th Circuit See Mackey v. IBP, Inc., 167 F.R.D. 186, 195-196 (D. Kan. 1996) (plaintiff in retaliatory-discharge case permitted discovery of records only in employer's plant and not other plants).

(n46)Footnote 44. **Copying computer hard drives intrusive and burdensome.**

2d Circuit See In re Grand Jury Subpoena Duces Tecum Dated November 15, 1993, 846 F. Supp. 11, 13-14 (S.D.N.Y. 1994) (government request for copy of company officers' hard drives and all floppy disks created by officers unreasonable, particularly when "key word" search could identify requested information).

*9th Circuit See Symantec Corp. v. McAfee Assocs., Inc., 1998 U.S. Dist. LEXIS 22591, at *10-11 (N.D. Cal. Aug. 13, 1998)* (unpublished decision) (court denied discovery request to copy all hard drives that had access to particular server).

(n47)Footnote 45. **Scope of requested search must be reasonable.**

*2d Circuit See Quinby v. WestLB AG, 2006 U.S. Dist. LEXIS 64531, at *8-10 (S.D.N.Y. Sept. 5, 2006)* (court reduced party's request to search 19 employees' emails using 170 separate search terms to 17 employees' emails using 3 to 15 search terms); *see also Reino de Espana v. American Bureau of Shipping, 2006 U.S. Dist. LEXIS 81415, at *3 (S.D.N.Y. Nov. 3, 2006)* (court found discovery request targeting 98 individuals appropriate in case involving multiple agencies of foreign country).

*6th Circuit Flexsys Americas LP v. Kumho Tire U.S.A., Inc., 2006 U.S. Dist. LEXIS 88303, at *9-*10*

(N.D. Ohio Dec. 6, 2006) (court limited plaintiff's discovery of electronically stored information to 10 employees selected by defendant in corporation).

(n48)Footnote 46. **Relevant evidence found in personal laptop computer.** *See Century-ML Cable Corp. v. Carrillo, 43 F. Supp. 2d 176, 178 (D.P.R. 1998)* ; *see also McGuire v. Acufex Microsurgical, Inc., 175 F.R.D. 149, 151-152 (D. Mass. 1997)* (relevant document found in home computer files).

(n49)Footnote 47. **Difficult to distinguish personal computers used exclusively for personal or other purposes.** *See Gates Rubber Co. v. Bando Chem. Indus., 167 F.R.D. 90, 126 (D. Colo. 1996)* (plaintiff sanctioned for failing to present evidence that defendant employee stored business records or documents on disks in personal computer, or that he had duty to preserve disks from overwriting).

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Moore's Federal Practice: Discovery of Electronically Stored Information

Volume 7: Analysis: Civil Rules 30-37A
Chapter 37A Discovery of Electronically Stored Information
D. SCOPE OF DISCOVERY OF ELECTRONICALLY STORED INFORMATION

7-37A Moore's Federal Practice: Electronic Discovery § 37A.35

AUTHOR: by John K. Rabiej

§ 37A.35 Specific Discovery Limits on Inaccessible Electronically Stored Information

[1] Information Inaccessible Because of Undue Costs or Burdens

[a] No Duty to Search Electronically Stored Information on Inaccessible Sources

Under the 2006 amendment to Rule 26, a responding party may designate and need not search sources of electronically stored information that it identifies as not reasonably accessible because of undue costs and burdens. A source of information is not reasonably accessible if locating, retrieving, and restoring the information is unduly burdensome or expensive. n1

The responding party must describe the sources of the inaccessible electronically stored information that it is not searching, by category or type, in detail sufficient to allow the opposing party to evaluate the burdens and costs of producing the requested matter and the likelihood of finding useful information. n2 The responding party, however, need not designate individual documents as inaccessible. Unlike a privilege log in which a party identifies individual documents withheld from production, a responding party need only identify the sources of inaccessible electronically stored information, e.g., electronically stored information contained in backup tapes for specific months.

No specific examples of inaccessible sources are given in Rule 26 because emerging technologies can alter the accessible or inaccessible status of a data source at any time. For illustrative purposes, examples of generally acknowledged inaccessible sources include deleted electronically stored information and electronically stored information contained in certain legacy computer systems or backup tape systems. n3 Until technology reduces the costs and burdens in retrieving electronically stored information from these sources, a responding party need not ordinarily search and produce them in discovery unless good cause is shown (*see* [2], *below*).

[b] Party Is Responsible for Complexity of Own Computer System

The difficulties in retrieving pertinent information are ordinarily assumed by the responding party because it has selected its own computerized record-keeping system. n4 On the other hand, the rationale for holding a party

responsible for costs incurred in retrieving data from its storage system because the party selected its own system is less persuasive when dealing with a computerized backup tape system that was created to permit recovery from a disaster, and not for archival preservation. n4.1 Backup tapes are not archives from which documents may easily be retrieved, so it is not always fair to say that because a party retained electronic information, it should necessarily bear the costs of production. n5 Although a party need not search inaccessible sources, the party may not structure its electronic information system to hamper discovery by intentionally placing relevant evidence on inaccessible sources. The prohibition is intended to address databases that are deliberately designed to be unwieldy for the sole purpose of frustrating discovery requests. n5.1 However, the prohibition may also implicate traditional databases if, for example, a party fails to suspend the routine purging of emails on an accessible active database that it knows or should know may be relevant evidence not otherwise available. In such a case, the party may be responsible to bear the entire cost of restoring the information from inaccessible backup tapes (*see § 37A.35[3][a]*). n6

[c] Burden on Responding Party to Show Undue Cost or Burden

As the party resisting discovery, the responding party--on a motion to compel discovery or for a protective order--has the initial burden to show that the discovery of the requested electronically stored information is not reasonably accessible because of costs and burdens. n7 The costs and burdens must be undue, that is to say, they must be disproportionate to the issues at stake in the litigation. Depending on the case, enormous expense in producing requested matter, alone, may be insufficient reason to excuse production. n8 The responding party should proffer affidavits showing the costs and amount of time and effort necessary to locate and retrieve inaccessible electronically stored information. n9

The costs and burdens in retrieving and restoring discoverable electronically stored records from an enormous database might not, alone, constitute an inaccessible source. n10 Translating computer data into a reasonably understandable form is a necessary and foreseeable burden. n11 Accordingly, the requesting party should not be forced to pay costs incurred in retrieving evidence as a result of the responding party's decision to choose a particular recording system. In this regard, a district court in the Tenth Circuit ruled that a party could not, as an alternative to producing electronically stored documents, allow the opposing party access to its computers so that the requesting party's technicians could inspect and make copies of any responsive electronic documents. The court found that this method of production was unacceptable because it would shift the burden and expense of discovery to the requesting party. n12

Electronic information can often be easily retrieved from a computer, which has strengthened the presumption that the responding party should bear the initial burden to show undue burden in retrieving the discoverable information. n13 A responding party's conclusory claims of costs and burdens will not satisfy a proper showing that electronically stored information is not reasonably accessible because of undue cost or burden. n14 Instead, the responding party should proffer affidavit evidence clearly showing the costs and burdens in searching the requested matter.

[d] Challenging Claim of Undue Cost or Burden

If the parties dispute the designation of inaccessible sources, they should first examine information that is accessible, which may be sufficient for litigation purposes, before determining whether to seek the asserted inaccessible information. If the requesting party continues to seek inaccessible information, the parties should discuss the burden and costs in locating and retrieving the electronically stored information, whether the costs or burdens are undue in light of its potential value and the probability of successful retrieval, and any conditions that may be appropriate to secure the information, including cost-sharing arrangements. n15 In these cases, the examination can be expanded to include consideration of the factors sufficient to demonstrate good cause, which would justify production of the information despite a finding that it is unduly burdensome and expensive (*see* [2], *below*). To facilitate this evaluation, the parties may agree to target a discrete number of electronically stored information sources or documents within designated sources to be examined as a "sampling." n16 A record of the actual costs incurred in responding to a discovery request from a "sampling" will better inform everyone of the true costs and burdens involved in an expanded discovery. n17

If the parties cannot reach agreement, the requesting party may file a motion to compel discovery, challenging the responding party's designation of electronically stored information as inaccessible. The requesting party should proffer some evidence refuting the contention that discovery is burdensome and inaccessible, and it should not rely solely on a conclusory assertion that the responding party has exaggerated the cost of retrieving ESI. n17.1 To protect its interests, the responding party may file a motion for a protective order to obtain guidance from the court on whether the information must be preserved. n18

Consistent with the regular practice under Rule 37, both parties must confer to resolve the dispute before proceeding to court. The responding party has the burden to show that the location, restoration, and review of electronically stored information is not reasonably accessible because of undue burden and cost (*see* [c], *above*). n19 Unless the cost and burden in producing electronically stored information are "undue" because they outweigh the likely benefits, the information must be produced. n20

[2] Production of Inaccessible Electronically Stored Information Only on Good Cause Showing

[a] Factors to be Considered

If electronically stored information is not reasonably accessible because it is unduly expensive or burdensome, a court may nonetheless order the responding party to produce it if the requesting party shows good cause, taking into account the cost-benefit factors under the Rule 26(b)(2)(C) proportionality test. In determining whether the costs and burdens involved in locating, retrieving, and reviewing electronically stored information outweigh the information's potential value, the following factors should be considered: "(1) the specificity of the discovery request; (2) the quantity of information available from other and more easily accessed sources; (3) the failure to produce relevant information that seems likely to have existed but is no longer available on more easily accessed sources; n20.1 (4) the likelihood of finding relevant, responsive information that cannot be obtained from other, more easily accessed sources; (5) predictions as to the importance and usefulness of the further information; (6) the importance of the issues at stake in the litigation; and (7) the parties' resources." n21

If the responding party has demonstrated that the costs and burdens are undue, the requesting party has the burden to show that the likely benefits of the search are substantial and outweigh the burden and expense incurred in extracting the inaccessible electronically stored information. n22 Expansive requests for all inaccessible electronically stored information likely will fail. Recovery of inaccessible deleted computer files or search of backup tapes should be undertaken only if a discovery request targets specific documents or range of documents that are important to the case and likely to be found. n23

A court should issue an order requiring production of information on an inaccessible source only if a requesting party makes a sufficient proffer showing some evidence, other than mere speculation, that relevant matter will likely be found in a search of inaccessible electronically stored information, e.g., information on a backup system. n24 Suspicion or mere speculation that backup computer tapes or deleted files might contain relevant evidence is not sufficient grounds for discovery and is tantamount to an impermissible "fishing expedition." (*see § 37A.34[1]*). n25 If a responding party fails to cooperate in the discovery process, however, a request to retrieve electronically stored information that is based on mere suspicion that relevant information exists may be reasonable. n26

[b] "Sampling" May Be Helpful in Evaluating Good Cause

Evaluating whether the costs and burdens in locating, restoring, and retrieving electronically stored information are undue and whether they outweigh the likely benefits of the requested information may be determined at a single court proceeding. However, it is more likely that evaluating the likely benefits of inaccessible electronically stored information, which has never been searched by the responding party, may require incremental fact investigations. When

neither party knows precisely what information is contained in the inaccessible sources, staged discovery may be appropriate to determine whether there is good cause to order a limited search of the information. Limited searches, or sampling, can provide useful information in determining the likely benefits and confirming the cost of searches. n27

Sampling may be appropriate in cases in which a party is unable to demonstrate the precise extent of relevant evidence located in large inaccessible databases, but is able to demonstrate that some of the items are likely relevant. In these cases, the party's showing may be insufficient to warrant a search of the entire database but sufficient to raise a reasonable belief that relevant information may be contained in the database. Although "fishing expeditions" should not be countenanced, n28 under certain circumstances, particularly when relevant evidence is asserted to be located in computer backup tapes, producing a "sampling" of the electronically stored documents may be advantageous to both sides. The "sampling" method may help the responding party reduce discovery costs, and it may help the requesting party assess the need for further discovery. Courts are relying on such sampling methods more often. n29 Because of the apparent benefits, parties are increasingly agreeing among themselves to adopt the "sampling" method as a reasonable means of staged discovery.

If the parties cannot reach an agreement and the issue is presented to the court for resolution, the responding party should submit a proffer that describes and explains with specificity the costs and burdens involved in a limited search of the requested matter, including any steps necessary to modify or develop computer software to accommodate the discovery request. The responding party's proffer should substantiate the reasons why the expense and burden are unreasonable. n30 If more information is needed to determine whether the burden and costs are undue, the court may order further sampling to determine whether discovery is appropriate. n31

[3] Types of Inaccessible Sources

[a] Discovery Request for Inaccessible Electronically Stored Information on Backup Tapes

A backup tape system of electronically stored files is designed to preserve data in the event of a catastrophe (*see § 37A.05[2]*). It is not designed to serve as an efficient search medium, and, to the contrary, any search of the backup tape system likely will be burdensome. Electronic information stored in a backup tape system is often poorly catalogued and locating individual files is cumbersome. n32 A single backup tape may contain as many as 25,000 email messages. n33 Recovery of files, especially email messages, presents significant problems (*see § 37A.04*) n34

A backup tape system contains many duplicates of a single file. Under common business practices, at least four copies of a single active file that has not been deleted from a computer during a particular month may be contained in a backup system's monthly tape. The same file may also be contained and duplicated in later monthly backup tapes. More duplicates of the same file will exist if the file was sent to another computer on the network that is backed up. If the file is retrieved as part of a general word search, all its copies will also appear as separate responses.

Besides the redundancy problem, the actual search of a magnetic backup tape is often laborious and time-consuming. A magnetic tape consists of individual segments that contain daily records. A review of the entire tape may be required to locate records stored on it. However, a word search of the entire tape is not feasible; instead each daily tape segment must be individually tagged and searched. n35

The burden of retrieving relevant emails from backup tape systems is especially onerous because of the potentially immense volume of messages, each of which requires privilege review. Unlike computer databases, word-processing files, and other electronic data that are grouped in separate, coherent categories for search purposes, email messages are stored indiscriminately in one large database file. Email messages are not filed in separate classification directories; rather, they are lumped together in a single directory, making word searches, particularly of computers on a network system, burdensome. Each backup tape must be searched. The search often recovers an enormous number of email messages, many of which are duplicates. Additionally, emails on backup tapes are not ordinarily amenable to word

searches, making the search that much more difficult. n36 Further complicating matters, email discovery may also prove expensive because organizations typically use different programs for data files and their email system. n37 In addition, printing copies of email messages that only contain a generic reference to a distribution list without identifying the sender or the individuals may raise other issues (*see § 37A.03[1]*). n38

Until technology simplifies searches of backup tapes, electronically stored information on them is presumed inaccessible, because of the costs and burdens. n39

A party is not obligated to search all emails on backup tape systems without a court order, because the cost and burden in retrieving and restoring email messages can be substantial and prohibitive (*see § 37A.35[3][a]*). n40 The proportionality analysis requires that the scope of the search of a backup system be reasonable. n41 However, a court may order the responding party to produce inaccessible electronically stored information on a backup tape if the requesting party shows good cause, taking into account the factors in Rule 26(b)(2)(C) (*see* [2], *above*). n42 Good cause is evaluated under the Rule 26(b)(2)(C) proportionality analysis, focusing on whether the costs and burdens in retrieving emails from a backup tape system outweigh its likely benefits. n43 When applying the proportionality test to emails on a backup tape system, the scope of the requested search must be reasonable. n44 A court may require the parties to consult with each other and formulate reasonable limits on the discovery of stored emails. n45

Under the proportionality analysis, the expense in retrieving emails is a significant but not a determinative factor. n46 The fact that the responding party selected its own method of email storage may play a key role under the proportionality analysis because it may affect the cost of retrieving and restoring electronically stored information. n47 A party may not structure its electronic information system to hamper discovery by intentionally placing relevant evidence on inaccessible sources. The prohibition is intended to address databases that are deliberately designed to be unwieldy for the sole purpose of frustrating discovery requests. However, the prohibition may also implicate traditional databases if, for example, a party fails to suspend its routine purging of emails on an accessible active database that it knows or should know may be relevant evidence not otherwise available. In such a case, the party may be responsible to bear the entire cost of restoring the deleted emails from inaccessible backup tapes (*see § 37A.35[3][a]*). n48

A party may be required to search backup tapes that ordinarily would be presumed to be inaccessible if the electronically stored information on the backup tapes had been earlier stored on an accessible source but later was deliberately lost. n49 Thus, a party who intentionally deletes emails from an active database, which were known (or should have been known) to contain relevant evidence, may not be relieved from searching inaccessible backup tapes for the emails because they were originally located on an active accessible database and later destroyed (*see § 37A.57[3]*). In determining whether the destruction of active database emails satisfies the good cause standard that requires the party to search its backup tapes, the steps taken by the party to identify and preserve the emails when they were on an active database are key factors (*see § 37A.57*). Accordingly, if a party fails to conduct a diligent search of emails on an active database before the emails are destroyed, for example, when they are deleted in accordance with a routine purging computer program, the party may be required to search for the emails on inaccessible backup tapes. n50 This does not mean that all backup tapes become accessible solely because emails on active databases were destroyed. There must be a showing that the responding party knew or should have known that the emails were relevant and yet it failed to take reasonable measures to preserve or prevent their destruction. A party may search backup tapes to retrieve relevant electronically stored evidence that was inadvertently deleted to dispel a bad faith allegation. n51 Once the need for the evidence is demonstrated, the costs and burdens must be evaluated to ensure that the discovery request is reasonable and justified under all the circumstances in a case.

Under one line of cases predating the 2006 amendment limiting disclosure of information from inaccessible sources, some courts required production of inaccessible electronically stored information on a seemingly minimal showing. In these cases, parties were required to retrieve data from computer backup systems notwithstanding the substantial expense and burden involved, n52 because the cost and burden in retrieving computer data from a backup tape system were viewed as ordinary and foreseeable risks in doing business. n53 Requiring the responding party to pay all costs

had been considered fair because the responding party presumably selected the particular computer system to further some current business purpose. Moreover, it had been considered unfair to penalize a requesting party for a business decision made by the responding party. The cases following this approach were particularly fact-driven, however, and involved major litigation with huge sums at stake, parties with sizeable resources, and potential evidence that was important in resolving issues, all of which supported requiring the responding party to pay the production costs. n54

Courts have begun to examine more closely requests requiring the responding party to produce emails from backup tapes, particularly because the benefits derived by a responding party from a computer backup tape system are usually limited. n55 Moreover, Rule 26(b)(2)(B) creates a presumption that electronically stored information on backup tapes ordinarily need not be searched. n56 The amended rule recognizes the fact that backup tapes serve no current business purpose other than to preserve data in the event of catastrophe. Typically, the responding party has little choice in selecting a backup tape system that meets discovery demands because the systems are designed to permit disaster recovery and not archival presentation. n57 Consequently, the mere fact that a responding party opts to use a particular backup tape system no longer justifies incurring the expense and burden in producing the information. n57.1 Instead, Rule 26, as amended in 2006, codifies emerging court practices, which recognize that such information is inaccessible, relieving the responding party from searching these sources unless the opposing party shows good cause why the sources should be searched, taking into account the factors in Rule 26(b)(2)(C). n58

The cost-benefit analysis under the proportionality test is applied to the facts of a given case. n59

If the likely benefits from evidence obtained from a search of backup tape systems are marginal (see [1], *above*), the discovery request should be denied or costs allocated among the parties under the proportionality analysis, especially on a showing of high costs incurred in retrieving the information (*see § 37A.36[3]* (discussion of cost allocation)). n60 Sampling of backup tapes can provide useful information when applying the proportionality test. In a sexual harassment action against the Department of Justice (DOJ), the DOJ was ordered to perform a "test run" backup restoration of emails attributable to a management-level employee accused of retaliation against the plaintiff, in an attempt to determine both the potential cost and effectiveness of a more inclusive search. The DOJ had argued that the remote possibility such a search would yield relevant evidence did not justify the huge expense involved. For the period of time in question (1992-1998), the DOJ had three different computer systems, but never a system-wide backup policy. In addition, the purpose of its backup tape system was to permit recovery from a disaster, not for archival preservation. As a result, backup tapes were not comprehensive, and not all documents and emails were preserved. Each backup tape might also contain duplicate emails and documents captured on previous backup tapes. Finally, the backup tapes needed to be "restored" or rendered readable by returning the files to a source, that is, a disk or hard drive, from which they could be read by one of the applications on which they were originally created. A systems analyst opined that merely restoring the email from a single backup tape would take eight hours at a cost of no less than $93 per hour. n61

The court, borrowing from the economic principle of "marginal utility," determined that the more likely it is that the backup tape contains information that is relevant to a claim or defense, the fairer it is that the party from whom the information is sought be made to search at its own expense. The less likely it is, the more unjust it would be to make the respondent search at its own expense. The difference is "at the margin." Here the court restated the Rule 26(b)(2)(C) proportionality test in determining whether "the burden or expense of the proposed discovery outweighs its likely benefit." n62 Given the complicated questions presented, the uncertainty that any of the restored emails would provide useful evidence, and the lack of precedential guidance, the magistrate judge came up with the "test run" plan, after which the parties were invited to argue whether the results and the expense justified any further search. The cost of the limited search was borne by the DOJ. n63 If court-ordered recovery of data from backup tapes eventually reveals that no relevant evidence was contained in the tapes or that the requesting party ignored the information retrieved from the tapes, costs incurred in the recovery process can later be assessed against the requesting party. n64

[b] Discovery Request for Inaccessible Residual-Deleted Data

Residual-deleted data is discoverable, although there is a presumption that such information is inaccessible and need not be searched for discovery purposes unless good cause is shown (*see* Ch. 34, *Producing Documents, Electronically Stored Information, and Tangible Things, or Entering onto Land, for Inspection and Other Purposes*). n65 Deleted computer data files that have been overwritten or wiped clean may be recovered by computer forensic technicians using extraordinary efforts. However, restoring the deleted information is difficult, partly because it is removed from the computer's directory. The unclassified file may be located anywhere on the hard drive and can be retrieved only if the entire hard drive or other storage medium is searched. Although relatively inexpensive software programs are available to recover deleted information on an individual hard drive or floppy diskette, running the software application can fail to capture important information and can easily destroy data if carelessly performed.

Expert technicians are required to recover deleted computer files without compromising any information on the computer. If forensic computer assistance is employed to restore deleted files or if the number of files to be searched is large, a mirror image of the computer's hard drive is likely necessary and the recovery costs can be substantial. This process can be expensive (*see § 37A.03[3]*). n66 Because recovering overwritten deleted matter is time consuming and costly, the process has been undertaken only in major criminal prosecutions and national defense situations. Alternative ways of producing the requested information may be feasible and should be explored. n67

Despite its intrusiveness, a thorough examination of a computer hard drive may be the sole means of locating inaccessible "residual-deleted" files, which are removed from a computer's directory and may be located anywhere on it (*see §§ 37A.03[3]*; *37A.10[1]*; *37A.35[2]*). n68 Conducting mirror imaging copying of a computer's hard drive to locate, retrieve, and restore deleted electronic information can involve substantial costs, disrupt ongoing business operations, and require special forensic recovery software programs. n69 Unless the opposing party shows good cause, a responding party should not be required to undertake recovery measures to retrieve deleted electronically stored information because it is inaccessible. n70

A court may order a party to search for residual-deleted information if the requesting party shows good cause, presenting sufficient evidence that an inspection and mirror imaging of a computer are warranted under the proportionality analysis. n71 Courts apply the proportionality test as part of the good cause showing, weighing the burdens, including the extent of the disruption to ongoing business operations and attendant costs, against the potential for finding relevant information that cannot be located by other means. n72 As a threshold matter for showing good cause, the requesting party bears the burden of demonstrating that relevant electronically stored information is likely to be retrieved from an on-site inspection of a computer. n73

A good cause showing may be made when a party concedes that files had been tampered with. For example, a complete hard-drive search was warranted when the responding party asserted that no documents were deleted, yet later admitted that a file had been deleted. n74 In another case, the burden was met and an inspection of computers was warranted on a showing that the responding party initially misrepresented maintaining a computerized database and later--after acknowledging that it maintained the computer database--asserted that relevant electronic evidence had been destroyed in the interim. n75 However, if no adequate showing of tampering is made, a party's request to inspect a computer's hard drive to determine whether hard-copy documents were altered will be denied. n76

A responding party may challenge a request to recover and restore deleted files, and it may ask the court to limit discovery. n77 The responding party should demonstrate that the inspection of computer equipment will cause undue hardship or expense; otherwise the court may order inspection. n78 The offer of proof should explain the burdens and costs associated with the particular discovery request in sufficient detail for the court to decide the issue. For example, the recovery of deleted email messages can be especially burdensome because the information in a backup tape system is largely unorganized, and searches are difficult and involve review of many duplicate files retained by the backup system. n79

At least one commentator has decried the discoverability of deleted computer data. A recovered computer file or email,

far from representing the truth, could just as easily consist of a bad idea, rightly rejected and tossed in an electronic wastebasket that, unfortunately, allows for future retrieval. n80 Discovery of computer-deleted material becomes meaningful only if the information was acted upon; mere expression is not equivalent to action. The preservation and discovery of deleted material, the view goes, will stifle the free exchange of ideas as embodied in the *First Amendment*. n81 In addition, according to this view, broad searches of employees' personal information on their workplace computers should be balanced against the employees' personal privacy interests. n82

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FOOTNOTES:

(n1)Footnote 1. **Accessibility of electronic data determined by costs incurred.** *Fed. R. Civ. P. 26(b)(2)(B).*

2d Circuit See Zubulake v. UBS Warburg LLC, 217 F.R.D. 309, 318 (S.D.N.Y. 2003) ("whether production of documents is unduly burdensome or expensive turns primarily on whether it is kept in an accessible or inaccessible format (a distinction that corresponds closely to the expense of production)").

*8th Circuit See Best Buy Stores, L.P. v. Developers Div. Realty Corp., 2007 U.S. Dist. LEXIS 88771, at *9 (D. Minn. Nov. 29, 2007)* (database not reasonably accessible because it would cost $124,000 to restore data).

(n2)Footnote 2. **Party obligated to undertake reasonable examination of its computer system and identify sources of inaccessible electronically stored information.** *Fed. R. Civ. P. 26(b)*, Committee Note of 2006 (*reproduced verbatim at § 26App.11[2]*).

*2d Circuit See Phoenix Four, Inc. v. Strategic Resources Corp., 2006 U.S. Dist. LEXIS 32211, at *17-19 (S.D.N.Y. May 23, 2006)* (sanctions imposed when counsel failed to verify with client whether email backup system existed).

6th Circuit See Wells Fargo Bank, N.A., v. LaSalle Bank Nat'l Ass'n, 2009 U.S. Dist. LEXIS 70514, at *7 (S.D. Ohio, July 24, 2009) (court excused party's failure to affirmatively disclose that it had not searched backup tapes and identified backup tapes as inaccessible because difficulty in retrieving ESI from backup tapes was presumed).

(n3)Footnote 3. **Legacy systems may be inaccessible.**

1st Circuit See W.E. Aubuchon Co., Inc. v. Benefirst, LLC, 245 F.R.D. 38, 42 (D. Mass. 2007) (magistrate judge, following *Zubulake* analysis, found that whether electronic data is accessible or inaccessible for purposes of Rule 26(b)(2)(B) depends largely on media on which it is stored).

*2d Circuit See Okoumou v. Safe Horizon, 2005 U.S. Dist. LEXIS 22412, at *5 (S.D.N.Y. Sept. 30, 2005)* (search of legacy email system subject to proportionality test).

(n4)Footnote 4. **Party generally responsible for costs incurred in retrieving information from system it selected.** *See Rowe Entm't, Inc. v. William Morris Agency, Inc., 205 F.R.D. 421, 429 (S.D.N.Y. 2002)* (traditional

rationale for holding party responsible for discovery costs incurred in retrieving data from filing system that it itself selected is less persuasive when dealing with computerized backup tape system, which serves no useful business purpose other than to protect against catastrophe).

1st Circuit See Kozlowski v. Sears, Roebuck & Co., 73 F.R.D. 73, 76 (D. Mass. 1976) (party cannot create cumbersome record-keeping system that defeats discovery); *see also Linnen v. A.H. Robins Co., 1999 Mass. Super. LEXIS 240, at *17-18 (June 15, 1999)* (retrieval cost is risk assumed when using computer technology).

2d Circuit See Rowe Entm't, Inc. v. William Morris Agency, Inc., 205 F.R.D. 421, 429 (S.D.N.Y. 2002) (traditional rationale for holding party responsible for discovery costs incurred in retrieving data from filing system that it itself selected is less persuasive when dealing with computerized backup tape system, which serves no useful business purpose other than to protect against catastrophe).

3d Circuit Caruso v. Coleman Co., 157 F.R.D. 344, 349 (E.D. Pa. 1994) (citing **Moore's** and stating principle).

6th Circuit See Delozier v. First Nat'l Bank, 109 F.R.D. 161, 164 (E.D. Tenn. 1986) (requesting party should not be responsible for production cost when costliness of discovery procedure is product of responding party's record-keeping scheme over which requesting party has no control); *see also Baxter Travenol Lab., Inc. v. LeMay, 93 F.R.D. 379, 383 (S.D. Ohio 1981)* (citing **Moore's;** plaintiff's unwieldy record-keeping system was not adequate excuse to frustrate discovery and plaintiff had not shown discovery to be burdensome despite contention that production would require search of several million documents).

*7th Circuit See In re Brand Name Prescription Drugs Antitrust Litig., 1995 U.S. Dist. LEXIS 8281, at *5 (N.D. Ill. June 13, 1995)* ("if a party chooses an electronic storage method, the necessity for a retrieval program or method is an ordinary and foreseeable risk"); *see also Alliance to End Repression v. Rochford, 75 F.R.D. 441, 447 (N.D. Ill. 1977)* (rejecting objection that materials would be difficult to produce because they are not kept in organized filing system).

11th Circuit Baine v. General Motors Corp., 141 F.R.D. 328, 331 (M.D. Ala. 1991) (stating rule).

(n5)Footnote 4.1. **Cost shifting not always appropriate solely because party selected particular backup tapes' storage system.** *See Semsroth v. City of Wichita, 2006 U.S. Dist. LEXIS 83363, at *12-15 (D. Kan. Nov. 15, 2006)* (court rejects bright-line argument that party should bear costs incurred to produce inaccessible information on backup tape system solely because it chose particular storage system).

(n6)Footnote 5. **Cost shifting when purpose of backup is not archival.** *See Rowe Entm't, Inc. v. William Morris Agency, Inc., 205 F.R.D. 421, 429 (S.D.N.Y. 2002)* (court adopted balancing approach to determining whether costs should be shifted).

(n7)Footnote 5.1. **Record system cannot be designed to frustrate search capability.** *See W.E. Aubuchon Co., Inc. v. Benefirst, LLC, 2007 U.S. Dist. LEXIS 44574, at *12 (D. Mass. Feb. 6, 2007)* (though responding party selected database, which had no indexing system for its business purposes, making it expensive to retrieve data requested by opponent, court found that electronically stored information was nonetheless inaccessible because of costs).

(n8)Footnote 6. **Costs may not be shifted if information converted from accessible to inaccessible form**. *See* Quinby v. WestLB AG, 2006 U.S. Dist. LEXIS 64531, at *30 (S.D.N.Y. Sept. 5, 2006) ("This would permit parties to maintain data in whatever format they choose, but discourage them from converting evidence to inaccessible formats

because the party responsible for the conversion will bear the cost of restoring the data.").

(n9)Footnote 7. **Initial burden on responding party to show undue expense or burden.** *Fed. R. Civ. P. 26(b)(2)(B).*

*5th Circuit See Auto Club Family Ins. Co. v. Ahner, 2007 U.S. Dist. LEXIS 63809, at *8-9 (E.D. La. Aug. 29, 2007)* (party required to make evidentiary showing demonstrating undue burden; mere statement of lawyer that information is not readily accessible is insufficient).

10th Circuit See Bills v. Kennecott Corp., 108 F.R.D. 459, 464 (D. Utah 1985) (cost of producing computer printout of requested data was appropriately borne by responding party); *Mackey v. IBP, Inc., 167 F.R.D. 186, 199 (D. Kan. 1996)* (defendant's statement that expenditure of $1,500 for 30 hours of computer programming failed to show sufficient burden for large corporation).

D.C. Circuit See Alexander v. FBI, 194 F.R.D. 316, 325-326 (D.D.C. 2000) .

(n10)Footnote 8. **Enormous expense alone may be insufficient to make request unreasonable.**

*1st Circuit See Linnen v. A.H. Robins Co., 1999 Mass. Super. LEXIS 240, at *17-18 (June 15, 1999)* (retrieval cost is risk assumed when using computer technology).

*7th Circuit See In re Brand Name Prescription Drugs Antitrust Litig., 1995 U.S. Dist. LEXIS 8281, at *2-3 (N.D. Ill. June 13, 1995)* (retrieval of data from estimated 30 million pages of email stored on backup tapes at cost of $50,000 to $70,000 was required by court in class action); *see also Danis v. USN Communs., Inc., 2000 U.S. Dist. LEXIS 16900, at *62-76 (N.D. Ill. Oct. 20, 2000)* .

(n11)Footnote 9. **Affidavits describing expense and burden in restoring backup tapes.**

*2d Circuit See Quinby v. WestLB AG, 2005 U.S. Dist. LEXIS 35583, at *5-6 (S.D.N.Y. Dec. 15, 2005)* (cost of "uncompressing" data on each backup tape was high).

10th Circuit See Super Film of Am., Inc. v. UCB Films, Inc., 219 F.R.D. 649, 656-657 (D. Kan. 2004) (conclusory statement that party does not have expertise to recover any further electronic documents without providing sufficient details showing that compliance would be unduly burdensome is not proper response; *see also Thompson v. Jiffy Lube Int'l, 2006 U.S. Dist. LEXIS 27837, at *7-8 (D. Kan. May 1, 2006)* (court requested additional information on whether alternative, less expensive means were available in lieu of $10 million estimate for providing information in TIFF images).

D.C. Circuit See Peskoff v. Faber, 240 F.R.D. 26 (D.D.C. 2007) (court required party to file affidavit specifying what steps it had taken to locate electronically stored information it claimed to be inaccessible).

(n12)Footnote 10. **Volume of matter requested in discovery does not excuse non-production.**

*4th Circuit See Parkdale Amer., LLC v. Travelers Casualty and Surety Co., 2007 U.S. Dist. LEXIS 88820, at *35 (W.D. N.C. Nov. 19, 2007)* (cost of retrieving and converting emails in LotusNotes estimated at $20,000 was insufficient to relieve party of obligation to produce emails, taking into account the amount in controversy and apparent resources of parties).

7th Circuit See Danis v. USN Communications, Inc., 2000 U.S. Dist. LEXIS 16900, at *150 (N.D. Ill. Oct. 20, 2000) (party "responsible for knowing what documents are discoverable and where to find them" even if volume of records is vast).

(n13)Footnote 11. **Translating electronic information into reasonable form is foreseeable burden.** *See Daewoo Elecs. Co. v. United States, 650 F. Supp. 1003, 1006 (Ct. Int'l Trade 1986)* (special reformatting of electronic data required to make it readable).

(n14)Footnote 12. **"Turning computer over to requesting party" may be unacceptable response.** *Super Film of Am., Inc. v. UCB Films, Inc., 219 F.R.D. 649, 656 (D. Kan. 2004)* (responding party argued that production of requested electronic versions of documents would be "unduly burdensome" because it did not have "knowledge or expertise" on how to retrieve documents from its two computers).

(n15)Footnote 13. **Assumption that computerized systems simplify retrieval process.** *See Orlowski v. Dominick's Finer Foods, Inc., 1995 U.S. Dist. LEXIS 12468, at *12-13 (N.D. Ill. Aug. 22, 1995)* (court rejected defendant's objections of burden involved in manually inspecting 16,500 personnel files because it presumed records were stored in some computerized form and easily retrieved).

(n16)Footnote 14. **Mere conclusions of burden insufficient.**

6th Circuit See Laufman v. Oakley Bldg. & Loan Co., 72 F.R.D. 116, 121 (S.D. Ohio 1976) (no specific showing of burdensomeness; mere conclusory objections insufficient reasons to resist production of documents).

*8th Circuit See Northern Natural Gas Co. v. Teksystems Global Applications, Outsourcing, 2006 U.S. Dist. LEXIS 64149, at *8 (D. Neb. Sept. 6, 2006)* (some evidentiary support required to support claim that discovery is unduly expensive or burdensome).

*10th Circuit See Zapata v. IBP, Inc., 1994 U.S. Dist. LEXIS 16285, at *9-11 (D. Kan. Nov. 10, 1994)* (no factual support given to show that request was burdensome to produce computer data, including but not limited to computer tapes, diskettes, and hard copies of computer data, and list of all computer codes and decoders related to it).

(n17)Footnote 15. **Parties should discuss costs and burdens of seeking inaccessible information.** *Fed. R. Civ. P. 26(b)(2)(C)*, Committee Note of 2006 (*reproduced verbatim at § 26App.11[2]*).

*9th Circuit See Mikron Indus., Inc. v. Hurd Windows & Doors, Inc., 2008 U.S. Dist. LEXIS 35166, at *6 (W.D. Wash. Apr. 21, 2008)* (producing party cannot rely exclusively on cost estimates and conclusory characterizations of ESI as inaccessible and must provide details regarding burden of search, number of backup tapes, different storage methods, extent of duplicative information, and extent to which information can be found on accessible sources).

*10th Circuit See Semsroth v. City of Wichita, 2006 U.S. Dist. LEXIS 83363, at *15-19 (D. Kan. Nov. 15, 2006)* (court ruled that minimal cost in producing requested information on backup tapes in itself was not determinative in deciding whether cost shifting is appropriate).

(n18)Footnote 16. **Sampling appropriate.**

2d Circuit See In re Priceline.com, Inc., 233 F.R.D. 88, 90 (D. Conn. 2005) (parties directed to confer on appropriate sampling of backup tapes).

*10th Circuit See Thompson v. Jiffy Lube Int'l, 2006 U.S. Dist. LEXIS 27837, at *10-11 (D. Kan. May 1, 2006)* (parties directed to consider whether random sampling would be adequate).

(n19)Footnote 17. **Sampling method establishes empirical record of actual expenses incurred.**

2d Circuit See Zubulake v. UBS Warburg LLC, 217 F.R.D. 309, 324 (S.D.N.Y. 2003) (sample restoration of computer backup tapes provides tangible evidence of costs).

*6th Circuit See Medtronic Sofamor Danek, Inc. v. Gary Karlin Michelson, 2003 U.S. Dist. LEXIS 8587, at *13-16 (W.D. Tenn. May 13, 2003)* (court shifted costs to requesting party because requesting party declined to accept opposing party's offer to assess relevance of backup tapes from sample tapes and failed otherwise to narrow scope of discovery request).

(n20)Footnote 17.1. **Contrary estimates of discovery search should be proffered to refute assertion that ESI is inaccessible**.

*3d Circuit See Major Tours, Inc. v. Colorel, 2009 U.S. Dist. LEXIS 97554, at *10 (D.N.J. Oct. 20, 2009)* (court discounts plaintiff's assertion that costs of retrieving ESI from backup tapes was exaggerated absent any contrary estimates or affidavits).

9th Circuit See Wells Fargo Bank, N.A., v. LaSalle Bank Nat'l Ass'n, 2009 U.S. Dist. LEXIS 70514, at *7 (S.D. Ohio, July 24, 2009) (court excused party's failure to affirmatively disclose that it had not searched backup tapes and identified backup tapes as inaccessible because difficulty in retrieving ESI from backup tapes was presumed).

(n21)Footnote 18. *See* former Fed. R. Civ. P. 37(f) (now see *Fed. R. Civ. P. 37(e)*, as restyled in 2007), Committee Note of 2006 (*reproduced verbatim at § 37App.09[2]*) (party may be required in good faith to take reasonable steps to preserve electronically stored information, which is subject to destruction through routine operation of computer system, if information is "likely to be discoverable and not available from reasonably accessible sources").

(n22)Footnote 19. **Convincing evidence required to resist production.**

4th Circuit See Thompson v. United States Dep't of Hous. & Urban Dev., 219 F.R.D. 93, 99 (D. Md. 2003) (despite court's warning, responding party failed to substantiate production costs, and, as a result, court could not shift costs incurred in discovery of electronic records to requesting party).

10th Circuit See Zapata v. IBP, Inc., 1994 U.S. Dist. LEXIS 16285, at *11-12 (D. Kan. Nov. 10, 1994) (respondent expected to assume cost of producing own documents without a showing that cost will be unduly burdensome).

(n23)Footnote 20. **Burden or expense must be "undue."** *See Fed. R. Civ. P. 26(b)(2)(C)(iii).*

6th Circuit See Dunn v. Midwestern Indem., 88 F.R.D. 191, 197 (S.D. Ohio 1980) (defendant ordered to

produce computer programs at estimated cost of up to $500,000, unless production was shown to be impossible, not merely impractical, time consuming, or laborious).

*11th Circuit See Zapata v. IBP, Inc., 1994 U.S. Dist. LEXIS 16285, at *4, *9 (D. Kan. Nov. 10, 1994)* (court ordered production of computer database, computer programs, and source code absent showing by defendant that request was unduly burdensome).

(n24)Footnote 20.1. **Relevant information no longer available from accessible sources.**

2d Circuit See Quinby v. WestLB, 245 F.R.D. 94, 103 n.12 (S.D.N.Y. 2006) (converting accessible ESI does not violate preservation obligation, but party responsible to pay costs to reconvert ESI into accessible form); *cf. Treppel v. Biovail, 233 F.R.D. 363, 372 n.4 (S.D.N.Y. 2006)* (converting accessible ESI into inaccessible ESI violates preservation obligation).

*8th Circuit See Best Buy Stores, L.P. v. Developers Div. Realty Corp., 2007 U.S. Dist. LEXIS 88771, at *10-11 (D. Minn. Nov. 29, 2007)* (party converting accessible ESI into inaccessible ESI alone does not establish sufficient good cause to require production, absent showing that ESI is relevant).

(n25)Footnote 21. *Fed. R. Civ. P. 26(b)(2)(C)*, Committee Note of 2006 (*reproduced verbatim at § 26App.11[2]*).

(n26)Footnote 22. **If retrieval process is burdensome, requesting party must make showing of need and likely benefits.** *See* ABA Discovery Standard 29(a)(iii) ("Unless the requesting party can demonstrate a substantial need for it, a party does not ordinarily have a duty to take steps to try to restore electronic information that has been deleted or discarded in the regular course of business but may not have been completely erased from computer memory.").

*1st Circuit Linnen v. A.H. Robins Co., 1999 Mass. Super. LEXIS 240, at *16-19 & n.6 (June 15, 1999)* (because evidence indicated valuable emails omitted from discovery, broad discovery request was not fishing expedition).

*2d Circuit See New York State NOW v. Cuomo, 1998 U.S. Dist. LEXIS 10520, at *7-8 (S.D.N.Y. July 13, 1998)* (requesting party failed to demonstrate any prejudice from deletion of computer files other than loss of opportunity to conduct fishing expedition).

(n27)Footnote 23. **Burdensome search narrowed.** *See Alexander v. FBI, 194 F.R.D. 316, 324, 339 (D.D.C. 2000)* (request to produce emails on backup systems of approximately 40 individuals using 36 search terms narrowed in light of retrieval burden and expense).

*1st Circuit But see Linnen v. A.H. Robins Co., 1999 Mass. Super. LEXIS 240, at *16-19 (June 15, 1999)* (subsequent evidence showed significant emails omitted from discovery, which substantiated renewed broad request for all emails).

7th Circuit See Danis v. USN Communs., Inc., 2000 U.S. Dist. LEXIS 16900 (N.D. Ill. Oct. 20, 2000) (search of backup tape limited to a certain time period when original computer record of specific documents was destroyed).

D.C. Circuit See Alexander v. FBI, 194 F.R.D. 316, 324, 339 (D.D.C. 2000) (request to produce emails on backup systems of approximately 40 individuals using 36 search terms narrowed in light of retrieval burden and expense); *see also Alexander v. FBI, 188 F.R.D. 111, 116-117 (D.D.C. 1998)* (broad request

to recover deleted files from computer systems rejected; parties instructed to discuss searching limited number of computers).

(n28)Footnote 24. **Broad word searches unreasonable because they capture too many irrelevant items.** *See McPeek v. Ashcroft, 212 F.R.D. 33, 34-35 (D.D.C. 2003)* (in determining whether to permit search of backup tapes, and extent of such search, court must consider likelihood that such information exists within period of time for which backup tapes are available); *Alexander v. FBI, 194 F.R.D. 316, 325-326 (D.D.C. 2000)* (word searches of backup systems based on names of persons will retrieve too many irrelevant documents that add to costs); *but see McPeek v. Ashcroft, 202 F.R.D. 31, 34-35 (D.D.C. 2001)* (although court asserts that producing backup computer tapes is unjustified if utility is marginal, it nonetheless ordered government to restore 12 months of backup email tapes on "theoretical possibility" that relevant document had been deleted).

(n29)Footnote 25. **Fishing expeditions not permitted.** *See McCurdy Group, LLC v. Am. Biomedical Group, Inc., 2001 U.S. App. LEXIS 10570, at *20-23 (10th Cir. May 21, 2001)* (defendant's skepticism that all relevant and non-privileged documents had been produced is insufficient "to warrant such a drastic measure [inspection of hard drive]"); *compare Koch v. Koch Indus., Inc., 969 F. Supp. 1460 (D. Kan. 1997) , aff'd in part, rev'd in part, 203 F.3d 1202 (10th Cir. 2000)* (party's renewed request for motion to compel discovery on eve of trial based on allegation that record disposition policy probably destroyed relevant documents was rejected because likelihood of finding more relevant evidence was speculative) *with Gates Rubber Co. v. Bando Chem. Indus., 167 F.R.D. 90 (D. Colo. 1996)* (on-site inspection of computers was ordered to copy all files when evidence was offered suggesting that responding party was destroying relevant computer records).

(n30)Footnote 26. **Failure to cooperate in discovery process lends credence to suspicion that requested information exists and should be produced**. *See* Tulip Comp. Int'l., B.V. v. Dell Comp. Corp., 2002 U.S. Dist. LEXIS 7792, at *18-19 (D. Del. Apr. 30, 2002) (court found party's constant delaying tactics in responding to discovery and production of evidence that was initially claimed not to exist justified production of electronic copies of emails on agreed upon set of terms, subject to privilege review, even though relevance of discoverable information was based on suspicion).

(n31)Footnote 27. **Staged discovery informs court's discovery rulings.**

2d Circuit See In re Priceline.com Inc. Securities Litigation, 233 F.R.D. 88, 90 (D. Conn. 2005) (court required parties to confer and decide on how many backup tapes to be restored as reasonable sampling).

7th Circuit See Wiginton v. C.B. Richard Ellis, Inc., 2004 U.S. Dist. LEXIS 15722, at *21-23 (N.D. Ill. Aug. 10, 2004) (results of test search supported additional search of backup tapes).

D.C. Circuit See In re: Rail Freight Fuel Surcharge Antitrust Litig, 258 F.R.D. 167, 170 (D.D.C. 2009) (court rejected defendant's request for phased ESI discovery using selected keywords relating to class certification issue and not relating to merits issues).

(n32)Footnote 28. *See § 37A.35[1][c]*.

(n33)Footnote 29. **Responding party provides samples instead of all information.**

2d Circuit See Zubulake v. UBS Warburg LLC, 217 F.R.D. 309, 324 (S.D.N.Y. 2003) (defendant ordered to produce 5 backup tapes from a total of 94 tapes).

5th Circuit See In re Vioxx Prod. Liability Litig., 501 F. Supp.2d 789, 792 (E.D. La. 2007) (court

ordered party to sample 2,600 out of 30,000 documents, majority of which were printouts of email communications, to determine privileged status).

9th Circuit See Hill v. Eddie Bauer, Corp., 242 F.R.D. 556, 564-565 (C.D. Cal. 2007) (court ordered party to provide sampling of records scanned electronically that otherwise would have taken 600 man-hours to review).

D.C. Circuit See McPeek v. Ashcroft, 202 F.R.D. 31, 34-35 (D.D.C. 2001) (DOJ ordered to perform restoration of a limited number of backup tapes).

(n34)Footnote 30. **Responding party should substantiate cost in retrieving electronically stored information when objecting to burdensome electronic discovery request.**

*2d Circuit See Gambale v. Deutsche Bank AG & Bankers Trust Co., 2002 U.S. Dist. LEXIS 22931, at *2 (S.D.N.Y. Nov. 19, 2002)* (court ordered defendant to provide affidavit explaining feasibility and cost of retrieving emails in response to motion to compel production).

*6th Circuit See Medtronic Sofamor Danek, Inc. v. Gary Karlin Michelson, M.D., 2003 U.S. Dist. LEXIS 8587, at *24-28 (W.D. Tenn. May 13, 2003)* (court estimated cost of designing and conducting search, privilege review, and physical production by extrapolation based on cost provided by responding party's vendor of restoring 124 backup tapes).

(n35)Footnote 31. **Courts may require sampling.**

2d Circuit See In re Priceline.com Inc. Securities Litig., 233 F.R.D. 88, 90 (D. Conn. 2005) (parties ordered to confer and attempt to agree on number of backup tapes that should be restored in sampling).

D.C. Circuit See J.C. Assoc. v. Fid. & Guaranty Ins. Co., 2006 U.S. Dist. LEXIS 32919, *4-5 (D.D.C. May 25, 2006) (court ordered sampling of 25 of 454 files and reserved option to order further sampling after reviewing results of initial sample).

(n36)Footnote 32. **Searching backup tapes burdensome**. *See Quinby v. WestLB AG, 2005 U.S. Dist. LEXIS 35583, at *22 (S.D.N.Y. Dec. 15, 2005)* (backup tapes are not organized for retrieval of individual files and often data is compressed).

(n37)Footnote 33. **Backup tapes store enormous amounts of data.** *Murphy Oil USA, Inc. v. Fluor Daniel, Inc., 2002 U.S. Dist. LEXIS 3196, at *6 (E.D. La. Feb. 19, 2002)* (defendant estimated that 93 backup tapes contained "2.3 million email communications plus attachments, or 19.7 million pages").

(n38)Footnote 34. **Archived emails not word searchable.** *See Alexander v. FBI, 188 F.R.D. 111, 117 (D.D.C. 1998)* (archived emails were not searchable by word; conversion of one month's backup tapes into word-searchable format required five to seven days of processing at cost of about $20,000).

2d Circuit See Rowe Entm't, Inc. v. William Morris Agency, Inc., 205 F.R.D. 421, 424-425 (S.D.N.Y. 2002) (retrieving backup emails involves three-stage process: (1) cataloguing--identifying backup tapes containing pertinent email boxes; (2) restoring--saving email messages to single database contained in a separate hard drive or disk; and (3) processing--printing and Bates-stamping);

*5th Circuit See Murphy Oil USA, Inc. v. Fluor Daniel, Inc., 2002 U.S. Dist. LEXIS 3196, at *6 (E.D. La. Feb. 19, 2002)* (following steps were needed to produce backup emails: (1) restore tapes, (2) convert emails to Tagged Image File Format (TIFF) files in order to make redactions, (3) break password protected email attachment files, and (4) print all TIFF images (at total cost of about $6.2 million)).

D.C. Circuit See Alexander v. F.B.I., 188 F.R.D. 111, 117 (D.D.C. 1998) (archived emails were not searchable by word; conversion of one month's backup tapes into word-searchable format required five to seven days of processing at cost of about $20,000).

(n39)Footnote 35. **Search of backup tape is burdensome.** *See* In re Brand Name Prescription Drugs Antitrust Litig., *1995 U.S. Dist. LEXIS 8281, at *2-4 (N.D. Ill. June 13, 1995)* (search required of 30 million pages of emails stored on technical backup tapes at cost of $50,000 to $75,000 in compiling, formatting, and retrieving responsive emails).

(n40)Footnote 36. **Emails on backup tapes are not word searchable.** *See Alexander v. FBI, 188 F.R.D. 111, 117 (D.D.C. 1998)* (archived emails were not searchable by word; conversion of one month's backup tapes into word-searchable format required five to seven days of processing at cost of about $20,000).

(n41)Footnote 37. **Separate programs for emails**. *See, e.g., Linnen v. A.H. Robins Co., 1999 Mass. Super. LEXIS 240, at *3, 10 Mass. L. Rep. 189 (June 15, 1999)* (company used different software systems for its email communications over decade).

(n42)Footnote 38. **Embedded information not revealed on printout.** *See Armstrong v. Executive Office of the President, Office of Admin., 1 F.3d 1274, 1280 (D.C. Cir. 1993)* (explaining differences between paper and electronic files).

(n43)Footnote 39. *Fed. R. Civ. P. 26(b)(2)(B)*; *see Cache La Poudre Feeds, LLC v. Land O'Lakes, Inc., 2007 U.S. Dist. LEXIS 15277, at *49-50 (D. Colo. Mar. 2, 2007)* (discussing cost and burdens in locating evidence on backup tapes, describing backup tapes as not reasonably accessible); *but see Semsroth v. City of Wichita, 2006 U.S. Dist. LEXIS 83363, at *35-36 (D. Kan. Nov. 15, 2006)* (emails on single backup tape were reasonably accessible without undue cost--approximately $2,600--or burden).

(n44)Footnote 40. **Cost of email recovery from backup system enormous.**

*1st Circuit See Linnen v. A.H. Robins Co., 1999 Mass. Super. LEXIS 240, at *12, 10 Mass. L. Rep. 189 (June 15, 1999)* (cost to search backup tapes estimated between $850,000 and $1.4 million).

*7th Circuit See In re Brand Name Prescription Drugs Antitrust Litig., 1995 U.S. Dist. LEXIS 8281, at *2-3 (N.D. Ill. June 13, 1995)* (estimated cost of $50,000 to $75,000 to retrieve email messages from backup tapes).

D.C. Circuit See Alexander v. FBI, 188 F.R.D. 111, 117 (D.D.C. 1998) (archived emails were not searchable by word; conversion of one month's backup tapes into word-searchable format required five to seven days of processing at cost of about $20,000).

(n45)Footnote 41. **Scope of backup system search must be reasonable.** *See* American Bar Association Civil Discovery Standards 29(a)(iii) (1999); *see also Alexander v. FBI, 194 F.R.D. 316, 330 (D.D.C. 2000)* (search of backup system for emails of 57 persons using 37 search terms required 10 weeks of processing at cost of over $1 million).

(n46)Footnote 42. *Fed. R. Civ. P. 26(b)(2)(B)*; *see Rowe Entm't, Inc. v. William Morris Agency, Inc., 205 F.R.D. 421, 429 (S.D.N.Y. 2002)* (court used balancing approach to determine whether cost-shifting was appropriate); *see also* § 37A.36[3].

(n47)Footnote 43. **Proportionality analysis applied.**

*1st Circuit See Linnen v. A.H. Robins Co., 1999 Mass. Super. LEXIS 240, at *16-19, 10 Mass. L. Rep. 189 (June 15, 1999)* (rather than search thousands of backup tapes for relevant emails, court ordered search of sampling of backup tapes, results of which would determine whether additional backup tapes would be searched).

2d Circuit Zubulake v. UBS Warburg LLC, 216 F.R.D. 280, 284-289 (S.D.N.Y. 2003) (applying proportionality test to email files contained in total of 77 backup tapes).

10th Circuit See Procter & Gamble Co. v. Haugen, 179 F.R.D. 622, 631 (D. Utah 1998) (court could not determine whether responding party acted in bad faith when it deleted email messages as part of its routine practice).

D.C. Circuit See Alexander v. FBI, 194 F.R.D. 316, 325-326 (D.D.C. 2000) (proportionality analysis applied to restoration of emails on backup system; marginal value of email messages from specific individual did not outweigh retrieval costs; request to produce emails on backup systems of approximately 40 individuals using 36 search terms narrowed in light of retrieval burden and expense).

(n48)Footnote 44. **Proportionality analysis requires that scope of search of backup tape system be reasonable.** *See* American Bar Association Civil Discovery Standards 29(a)(iii) (1999); *see also Alexander v. FBI, 194 F.R.D. 316, 330 (D.D.C. 2000)* (search of backup tape system for emails of 57 persons using 37 search terms required 10 weeks of processing at cost of over $1 million).

(n49)Footnote 45. **Court may require that parties confer and set limits.** *See In re Brand Name Prescription Drugs Antitrust Litig., 1995 U.S. Dist. LEXIS 8281, at *7-8 (N.D. Ill. June 13, 1995)* (parties required to consult with each other and agree on meaningful limits on scope of discovery of emails on backup tapes).

(n50)Footnote 46. **Expense is significant but not decisive factor.** *See Fed. R. Civ. P. 26(b)(2)(C)(iii)*; Danis v. USN Communications, Inc., 2000 U.S. Dist. LEXIS 16900, at *151 (N.D. Ill. Oct. 20, 2000) (no cost-shifting); *see also In re Brand Name Prescription Drugs Antitrust Litig., 1995 U.S. Dist. LEXIS 8281, at *3-4 (N.D. Ill. June 13, 1995)* (expense of retrieving email alone does not require cost-shifting).

(n51)Footnote 47. **Responding party's selection of email software relevant.** *See* Danis v. USN Communications, Inc., 2000 U.S. Dist. LEXIS 16900, at *55-56 & n.9 (N.D. Ill. Oct. 20, 2000) (recovery of emails from backup system foreseeable business operation).

2d Circuit But see Rowe Entm't, Inc. v. William Morris Agency, Inc., 205 F.R.D. 421, 429, 430-431 (S.D.N.Y. 2002) (computerized backup system serves "no current business purposes, but [is maintained by defendant] only in case of an emergency"; consequently, traditional rationale for requiring production at defendant's own expense because it selected system to serve a business purpose is not persuasive).

7th Circuit See Danis v. USN Communications, Inc., 2000 U.S. Dist. LEXIS 16900, at *55-56 & n.9 (N.D. Ill. Oct. 20, 2000) (recovery of emails from backup system foreseeable business operation); *see also In re Brand Name Prescription Drugs Antitrust Litig., 1995 U.S. Dist. LEXIS 8281, at *2-4, *7-8 (N.D. Ill. June 13, 1995)* (court required search of emails stored on backup tapes at substantial cost, but

part of high cost incurred in searching tapes resulted from limitations within software and electronic storage method chosen by responding party, and other manufacturers involved in class action litigation produced emails without insisting on cost-shifting).

(n52)Footnote 48. **Costs may not be shifted if information converted from accessible to inaccessible form**. *See* Quinby v. WestLB AG, 2006 U.S. Dist. LEXIS 64531, at *30 (S.D.N.Y. Sept. 5, 2006) ("This would permit parties to maintain data in whatever format they choose, but discourage them from converting evidence to inaccessible formats because the party responsible for the conversion will bear the cost of restoring the data.").

(n53)Footnote 49. **Deleting emails on active database and preserving them on backup tapes.** *Fed. R. Civ. P. 26(b)(2)(C)*, Committee Note of 2006 (*reproduced verbatim at § 26App.11[2]*); *see Quinby v. WestLB AG, 2006 U.S. Dist. LEXIS 64531, at *29 (S.D.N.Y. Sept. 5, 2006)* ("if a party creates its own burden or expense by converting into an inaccessible format [backup tapes] data that it should have reasonably foreseen would be discoverable material when it should have anticipated litigation, then it should not be entitled to shift the costs of restoring and searching the data").

(n54)Footnote 50. **Backup tapes not inaccessible if party intentionally destroyed emails on active database.**

3d Circuit See Wachtel v. Health Net, Inc., 2006 U.S. Dist. LEXIS 27117, at *25 (D.N.J. May 5, 2006) (defendant ordered to restore emails from backup tapes because it failed to preserve and diligently search for emails when they were on active database).

*11th Circuit See Wells v. XPEDX, 2007 U.S. Dist. LEXIS 29610, at *4-5 (M.D. Fla. April 23, 2007)* (court required additional information on scope of search of active databases before ruling on whether good cause was shown for search of backup tapes for emails purged under records-retention policy).

*D.C. Circuit See Disability Rights Council of Greater Washington v. Washington Metro. Transit Auth., 2007 U.S. Dist. LEXIS 39605, at *25-26 (D.D.C. June 1, 2007)* (court ruled that party's failure to suspend automatic email purging required party to search inaccessible backup tapes for requested information).

(n55)Footnote 51. **Search of backup systems to dispel bad faith.** *See McGuire v. Acufex Microsurgical, Inc., 175 F.R.D. 149, 152 (D. Mass. 1997)* (party spent 15 to 20 person-hours searching through backup tapes to locate document that had been admittedly altered in good faith).

(n56)Footnote 52. **Retrieval of relevant evidence from backup computer system.**

*1st Circuit See Linnen v. A.H. Robins Co., 1999 Mass. Super. LEXIS 240, at *16-19 (June 15, 1999)* (court limited search of backup tapes of emails to sampling; otherwise, cost was estimated to exceed $1,000,000).

*7th Circuit See In re Brand Name Prescription Drugs Antitrust Litig., 1995 U.S. Dist. LEXIS 8281, at *2-4 (N.D. Ill. June 13, 1995)* (court required search of emails stored on backup tapes at a substantial cost of $50,000 to $75,000 in class action suit); *see also Byers v. Illinois State Police, 2002 U.S. Dist. LEXIS 9861, at *35-36 (N.D. Ill. May 31, 2002)* (court focuses on marginal utility of proposed search of archived emails and unlikelihood that emails will contain relevant information).

(n57)Footnote 53. **Recovery from backup system is foreseeable business operation.**

7th Circuit See Danis v. USN Communications, Inc., 2000 U.S. Dist. LEXIS 16900, at *143 n.29 (N.D.

Ill. Oct. 20, 2000) (making computer backup tapes is useless unless party ensures that there is system capable of running it); *In re Brand Name Prescription Drugs Antitrust Litig., 1995 U.S. Dist. LEXIS 8281, at *4-5 (N.D. Ill. June 13, 1995)* (when party chooses electronic storage method, need for retrieval program or method is ordinary and foreseeable risk).

Fed. Circuit See Daewoo Elecs. Co. v. United States, 650 F. Supp. 1003, 1006 (Ct. Int'l Trade 1986) (normal and reasonable translation of electronic data into usable form by discovering party should be ordinary and foreseeable burden of respondent absent showing of extraordinary hardship).

(n58)Footnote 54. **Searches of backup systems usually involve huge stakes and parties with sizable resources.**

*1st Circuit See Linnen v. A.H. Robins Co., 1999 Mass. Super. LEXIS 240, at *18-22 (June 15, 1999)* (party required to search sampling of backup tapes containing emails--in manner based on overarching MDL discovery plan agreed on by all parties--after several relevant emails were found in other backup tapes indicating likelihood that more relevant emails would be found on remaining backup tapes).

*7th Circuit See In re Brand Name Prescription Drugs Antitrust Litig., 1995 U.S. Dist. LEXIS 8281, at *2-4, *7 (N.D. Ill. June 13, 1995)* (court required search of emails stored on backup tapes at substantial cost, but part of high cost incurred in searching tapes resulted from limitations within software used by responding party, and other manufacturers involved in class action litigation produced emails without insisting on cost-shifting).

(n59)Footnote 55. **Federal Rules amended to require good cause showing**. *See Fed. R. Civ. P. 26(b)(2)(B).*

(n60)Footnote 56. *Fed. R. Civ. P. 26(b)(2)(B).*

(n61)Footnote 57. **Backup systems not designed for search purposes.** *McPeek v. Ashcroft, 202 F.R.D. 31, 32 (D.D.C. 2001)* (burdensome to search backup tapes for relevant emails because system not designed for search purposes).

(n62)Footnote 57.1. **Cost shifting not always appropriate solely because party selected particular backup tapes' storage system.** *See Semsroth v. City of Wichita, 2006 U.S. Dist. LEXIS 83363, at *12-15 (D. Kan. Nov. 15, 2006)* (court rejects bright-line argument that party should bear costs incurred to produce inaccessible information on backup tape system solely because it chose particular storage system).

(n63)Footnote 58. *Fed. R. Civ. P. 26(b)(2)(B).*

(n64)Footnote 59. **Discovery costs should not be imposed on responding party solely because it selected particular backup system.** *Rowe Entm't, Inc. v. William Morris Agency, Inc., 205 F.R.D. 421, 429 (S.D.N.Y. 2002)* ("Thus, it is not enough to say that because a party retained electronic information, it should necessarily bear the cost of producing it.").

(n65)Footnote 60. **Proportionality analysis applied to retrieving emails in backup system.** *Fed. R. Civ. P. 26(b)(2)(C).*

7th Circuit See Wiginton v. C.B. Richard Ellis, Inc., 2004 U.S. Dist. LEXIS 15722, at *31 (N.D. Ill. Aug. 10, 2004) (court shifted 75% of cost of retrieving and restoring emails on backup tapes to requesting party after applying proportionality test).

D.C. Circuit See Alexander v. FBI, 194 F.R.D. 316, 332 (D.D.C. 2000) (marginal value of email messages from certain individual does not outweigh retrieval costs).

(n66)Footnote 61. **"Test run" case.** *McPeek v. Ashcroft, 202 F.R.D. 31, 32 (D.D.C. 2001)* (plaintiff requested that DOJ search its backup systems because the systems might store data deleted by user but stored on backup tape).

(n67)Footnote 62. *Fed. R. Civ. P. 26(b)(2)(C).*

(n68)Footnote 63. **"Test run" backup ordered.** *McPeek v. Ashcroft, 202 F.R.D. 31, 34 (D.D.C. 2001)* (magistrate judge acknowledged lack of controlling authority, and noted two main issues court must deal with are how much responding party will be required to produce, and who will pay costs of production, which can be exorbitant).

(n69)Footnote 64. **If information recovered from intrusive search is minimal or unusable, requesting party may be assessed costs incurred in search.** *See* Danis v. USN Communications, Inc., 2000 U.S. Dist. LEXIS 16900, at *21-22, *52 (N.D. Ill. Oct. 20, 2000) (substantial cost of $159,632 in rebuilding backup tapes needlessly incurred by responding party and would be used to offset costs incurred by requesting party in other legitimate discovery).

(n70)Footnote 65. **Deleted electronically stored information is discoverable.**

7th Circuit See Simon Prop. Group, L.P. v. mySimon, Inc., 194 F.R.D. 639, 640 (S.D. Ind. 2000) ("computer records, including records that have been 'deleted,' are documents discoverable under *Fed. R. Civ. P. 34*"); *Illinois Tool Works, Inc. v. Metro Mark Prods., Ltd., 43 F. Supp. 2d 951, 960-962 (N.D. Ill. 1999)* (court imposed sanctions for destruction of electronic records).

8th Circuit Antioch Co. v. Scrapbook Borders, Inc., 210 F.R.D. 645, 652 (D. Minn. 2002) ("Moreover, it is a well accepted proposition that deleted computer files, whether they be emails or otherwise, are discoverable.").

(n71)Footnote 66. **Recovery of deleted files is expensive.** *See Alexander v. FBI, 188 F.R.D. 111, 117 (D.D.C. 1998)* (restoring one employee's archived "C" or "F" drive required about 265 hours and costs approximately $15,675 in contractor's fees).

(n72)Footnote 67. **Restoration of all deleted computer files may be unreasonable.** *See Alexander v. FBI, 188 F.R.D. 111, 115 (D.D.C. 1998)* (restoration of all deleted files unreasonable, although parties instructed to discuss ways to narrow search).

(n73)Footnote 68. **Applying proportionality test.** *See Playboy Enters. v. Welles, 60 F. Supp. 2d 1050, 1054 (S.D. Cal. 1999)* (applying proportionality analysis to recovery of admittedly deleted emails; mirror imaging of single hard drive ordered to recover admittedly deleted emails; requesting party to pay costs).

(n74)Footnote 69. **Restoring archived or deleted files is expensive.**

6th Circuit See Kemper Mortg, Inc. v. Russell, 2006 U.S. Dist. LEXIS 20729, at *1-2 (S.D. Ohio Apr. 18, 2006) (party requests court to order mirror image copying at cost of $4,000 as part of its litigation hold but court declines to issue order and shift these copying costs to other party).

D.C. Circuit Alexander v. FBI, 188 F.R.D. 111, 117 (D.D.C. 1998) (restoring one employee's archived "C" or "F" drive required about 265 hours and cost approximately $15,675 in contractor's fees).

(n75)Footnote 70. **Recovery of residual-deleted files only on good cause showing.** *See Fed. R. Civ. P. 26(b)(2)(B)*; *see also Gates Rubber Co. v. Bando Chem. Indus., 167 F.R.D. 90, 104 (D. Colo. 1996)* (court ordered copying of hard drive to recover deleted computer files but noted that reasonable possibility based on evidence that access to lost material would have produced favorable evidence was required).

(n76)Footnote 71. **Burden on requesting party.**

*6th Circuit See Diepenhorst v. City of Battle Creek, 2006 U.S. Dist. LEXIS 48551, at *10 (W.D. Mich. June 30, 2006)* ("In the absence of a strong showing that the responding party has somehow defaulted in this [discovery] obligation, the court should not resort to extreme, expensive, or extraordinary means to guarantee compliance.").

*9th Circuit See Advante Int'l Corp. v. Mintel Learning Tech., 2006 U.S. Dist. LEXIS 45859, at *4-85 (N.D. Cal. June 29, 2006)* (court rejected motion for on-site inspection of computer because no "specific, concrete evidence of concealment or destruction of evidence" was shown).

*11th Circuit See Floeter v. City of Orlando, 2006 U.S. Dist. LEXIS 19577, at *9 (M.D. Fla. Apr. 14, 2006)* (court denied request for on-site inspection because requesting party made no showing that requested information was not produced).

(n77)Footnote 72. **Applying proportionality analysis to mirror imaging of computer.** *Fed. R. Civ. P. 26(b)(2)(C)(iii)*.

1st Circuit See Fennell v. First Step Design, Ltd., 83 F.3d 526, 534 (1st Cir. 1996) (likelihood of finding relevant information speculative and risk of disclosing privileged information significant; mirror imaging request denied).

*6th Circuit See Powers v. Thomas M. Cooley Law School, 2006 U.S. Dist. LEXIS 67706, at *16-18 (W.D. Mich. Sept. 21, 2006)* (after applying proportionality test, court found that the likely benefits of discovering relevant and material evidence did not outweigh burdens in conducting on-site inspection).

7th Circuit See Simon Prop. Group, L.P. v. MySimon, Inc., 194 F.R.D. 639, 641 (S.D. Ind. 2000) (mirror imaging of several personal computers ordered when "some troubling discrepancies with respect to defendant's document production" arose).

9th Circuit See Playboy Enters. v. Welles, 60 F. Supp. 2d 1050, 1052 (S.D. Cal. 1999) (mirror imaging of single hard drive ordered to attempt to recover admittedly deleted emails; requesting party to pay costs).

(n78)Footnote 73. **On-site computer inspection requires showing of need and likelihood of finding relevant evidence.**

1st Circuit See Fennell v. First Step Designs, Ltd., 83 F.3d 526, 533 (1st Cir. 1996) (party failed to demonstrate particularized likelihood of discovering evidence relevant to alleged document tampering).

9th Circuit See Playboy Enters. v. Welles, 60 F. Supp. 2d 1050, 1051 (S.D. Cal. 1999) (court ordered inspection of computer when defendant admitted to continuing past practice of deleting emails soon after they were sent or received).

(n79)Footnote 74. **Comprehensive search of computer database required on appropriate showing.** *See LEXIS-NEXIS v. Beer, 41 F. Supp. 2d 950, 953-954 (D. Minn. 1999)* (forensics experts discovered remnants of deleted files on computer's hard drive relating to files protected under court order).

(n80)Footnote 75. **Inspection of computers ordered when tampering with documents shown.** *See Gates Rubber Co. v. Bando Chem. Indus., 167 F.R.D. 90, 99 (D. Colo. 1996)* (plaintiff alleged that "there was evidence which suggested that [defendant] was engaged in a process of destroying evidence and erasing computer files"; court ordered on-site inspection to preserve evidence).

(n81)Footnote 76. **Inspection denied when no adequate showing of tampering was made.** *Fennell v. First Step Designs, Ltd., 83 F.3d 526, 533 (1st Cir. 1996)* (no "plausible basis for believing that specified facts, susceptible of collection within a reasonable time frame, probably exist").

(n82)Footnote 77. *Fed. R. Civ. P. 26(c)(1).*

(n83)Footnote 78. **Responding party bears burden of showing undue burden or expense.** *See Haseotes v. Abacab Int'l Computers, Inc., 120 F.R.D. 12, 14 (D. Mass. 1988)* (defendant failed to adequately demonstrate any injury if its computer was subjected to inspection).

(n84)Footnote 79. **Recovery of residual-deleted files from backup tape system is particularly burdensome.** *See Strasser v. Bose Yalamanchi, M.D., P.A., 669 So. 2d 1142, 1144-1145 (Fla. Dist. Ct. App. 4th Dist. 1996)* (court denied request to recover purged data because defendant's expert stated that deleted computer information was overwritten, making recovery impossible, while plaintiff's expert presented no countervailing evidence).

(n85)Footnote 80. Rosenbaum, *In Defense of the Delete Key, 3 Green Bag 2d. 393, 394 (Summer 2000)* ("legal discovery deep-sea fishes for snippets of deleted emails and deleted files in search of proof of imperfections. And the fish which are caught are thrown, as proof, into courtrooms throughout the land. In my view, they are just fish, and as valueless as the same fish might be if allowed to rot as long as the finally-recovered file has been deleted.").

(n86)Footnote 81. Rosenbaum, *In Defense of the Delete Key, 3 Green Bag 2d. 393, 395-396 (Summer 2000)* (author suggests "cyber statute of limitations" for "cyber trash"--computer data earmarked for deletion--absent evidence of pattern of egregious behavior or systematic conduct).

(n87)Footnote 82. Rosenbaum, *In Defense of the Hard Drive, 4 Green Bag 2d. 169, 169-171(Winter 2001)* ("just as an employee does not surrender all privacy rights on the company's premises, so they should not be automatically surrendered on the company's computer"; author suggests that employees receive reasonable notice of employer's concerns and an opportunity to limit or define scope of hard drive examination).

Moore's Federal Practice: Discovery of Electronically Stored Information

Volume 7: Analysis: Civil Rules 30-37A
Chapter 37A Discovery of Electronically Stored Information
D. SCOPE OF DISCOVERY OF ELECTRONICALLY STORED INFORMATION

7-37A Moore's Federal Practice: Electronic Discovery § 37A.36

AUTHOR: by John K. Rabiej

§ 37A.36 Production of Electronically Stored Information May Be Subject to Cost-Sharing

[1] Authority to Shift Discovery Costs

A court has the inherent authority to allocate discovery costs between the parties. n1 Rule 34 does not expressly provide a court with the power to shift discovery costs. The Advisory Committee Note, however, refers to the proportionality analysis in Rule 26(b), which explicitly provides that a judge may limit discovery "if the burden or expense of the proposed discovery outweighs its likely benefit." The power to limit includes the power to deny discovery altogether. By definition, this plenary power includes the less significant power to allocate discovery costs between parties. n2 A court has wide discretion in fashioning a fair and appropriate plan to apportion discovery costs among the parties. n3 Cost- shifting issues arise most often in discovery of electronically stored information that is not reasonably accessible, e.g., backup tapes, deleted matter, and legacy data. Rule 26(b)(2)(B) authorizes a court to "specify conditions for the discovery" of electronically stored information located on inaccessible sources. As a condition of discovery, a court may require the requesting party to pay all or part of the cost of discovery of electronically stored information on inaccessible sources. n4

Another source of authority for shifting the cost of discovery is Rule 45(d), which provides that a person responding to a subpoena need not provide discovery of electronically stored information from sources that are not reasonably accessible because of undue burden or cost. If the court nevertheless orders discovery in such cases, it may specify conditions for the discovery. n4.1 Rule 45(d) empowers a court to shift the cost of producing electronically stored information from the responding nonparty to the party requesting discovery when the discovery sought subjects the nonparty to an undue burden (*see § 37A.27*). n4.2

[2] When Issue Is Joined

The cost-shifting issue typically arises at one of two stages. A party may resist a discovery request as burdensome and seek a protective order. n5 Instead of denying discovery altogether, the court may condition some discovery on the payment of costs by the requesting party. A party may also resist a motion compelling discovery under Rule 37(a) by relying on the proportionality analysis (*see § 37A.33*). n6 Either situation can arise when a party challenges the

designation of certain sources of electronically stored information as not reasonably accessible. On both occasions, the parties must attempt to resolve the dispute without court intervention. n6.1 A motion requesting cost-shifting must be made before the cost is incurred. n6.2

[3] Factors to Be Considered in Cost-Sharing Analysis

Costs can be allocated between parties and need not be borne fully by one or the other party. n7 Cost shifting makes particularly good sense when the relevance or importance of the requested information is marginal and the retrieval costs are significant. n8

However, cost-shifting is not appropriate in all cases involving electronic discovery. n9 In determining whether to shift costs incurred in discovery of electronically stored information from the responding party to the requesting party, courts are developing a general analytical framework that applies the proportionality analysis and factors set out in Rule 26(b)(2)(C). Several key cases have emerged as particularly instructive. n10

In *Rowe Entertainment*, n11 a case alleging discriminatory and anti-competitive practices, plaintiffs, concert promoters, made sweeping discovery demands seeking production of backup tapes containing hundreds of thousands of employee email messages from four booking defendants. Affidavits proffered by the defendants showed that the cost of producing the backup tapes would be exorbitant (millions of dollars). Plaintiffs countered that the alleged cost was wildly exaggerated. They suggested alternative retrieval methods, which relied on a sample of backup tapes, instead of producing emails from all potential backup tapes, and mirror imaging of hard drives, instead of producing individual paper copies of emails. The court elaborated on the factors in Rule 26(b)(2)(C) that should be taken into account in the proportionality analysis, including: n12

- The specificity of the discovery requests. (The less specific the requesting party's discovery demands, the more appropriate it is to shift the costs of production to that party.)

- The likelihood of discovering critical information. (The more likely it is that relevant information will be found, the fairer it is that the responding party search at its own expense.)

- The availability of such information from other sources. n12.01 (Costs are more likely to be shifted to the requesting party when equivalent information either has already been made available or is accessible in a different format at less expense.) Deliberate transfer or conversion of information from an accessible to an inaccessible format is a factor in determining whether costs should be shifted. n12.1

- The purposes for which the responding party maintains the requested data. (If a party maintains electronic data for the purpose of using it in connection with current activities, for example, a computerized filing system, it may be expected to respond to discovery requests at its own expense. In other words, a party that expects to be able to access information for business purposes will be obligated to produce that same information in discovery. Conversely, a party who retains vestigial data for no current business purposes, but only in the case of an emergency or simply because it has neglected to discard it--for example, recovery of computer backup tapes to be used only in the event of a disaster--should not be put to the expense of producing it.)

- The relative benefit to the parties of obtaining the information. (When the responding party itself benefits from the production, there is less rationale for shifting costs to the requesting party.)

- The total costs associated with production. (If the total cost of the requested discovery is not substantial, there is no cause to deviate from the presumption that the responding party will bear the expense.)

- The relative ability of each party to control costs and its incentive to do so. n13 (When the discovery process is going to be incremental, it is more efficient to place the burden on the party who will decide how expansive discovery will be.)

- The resources available to each party. (The relative financial strength of the parties may be a neutral factor when each party has sufficient resources to conduct discovery.)

Even though the alternative retrieval methods suggested by the plaintiff substantially reduced costs, the court nonetheless shifted the cost to the plaintiff after carefully evaluating each of the eight factors. n14

The eight-factor test established by the magistrate judge in the *Rowe* case was modified by Judge Shira A. Scheindlin of the United States District Court for the Southern District of New York. In *Zubulake v. UBS Warburg LLC*, n15 the district court explained that the usual presumption is that a responding party must bear the expense of complying with discovery requests. Although the discovery of electronic data may be burdensome because otherwise-discoverable evidence is often only available from expensive-to-restore backup media, the courts should not abandon the usual presumption that a responding party bears the cost of production. The district court then emphasized that cost-shifting need not be considered in every case involving the discovery of electronic data. As with any type of discovery, cost-shifting should be considered only when electronic discovery imposes an undue burden or expense on the responding party. A presumption of undue burden or expense simply because electronic evidence is involved is unwarranted. In fact, electronic data is frequently cheaper and easier to produce than paper evidence because it can be searched automatically, key words can be run for privilege checks, and the production can be made in electronic form, obviating the need for mass photocopying. n16

The district court then compared the *Rowe* cost-shifting analysis with the Rule 26(b)(2)(C)(iii) proportionality analysis, focusing on the specific factors set out in the rule that should be taken into account in determining whether "the burden or expense of the proposed discovery outweighs its likely benefit." n17 It concluded that the *Rowe* cost-shifting analysis should be modified and refined because the factors set out by the *Rowe* court were incomplete and generally favored cost-shifting. To maintain the presumption that the responding party pays, the cost-shifting analysis must be neutral. Close calls should be resolved in favor of the presumption. The court found that the *Rowe* factors undercut that presumption for three reasons. First, the *Rowe* test is incomplete. Second, courts have given equal weight to all of the factors, when certain factors should predominate. Third, courts applying the *Rowe* test have not always developed a full factual record. n18

The district court modified the *Rowe* factors to create a new seven-factor test: n19

(1) The extent to which the request is specifically tailored to discover relevant information. n20

(2) The availability of the information from other sources.

(3) The total cost of production, compared to the amount in controversy.

(4) The total cost of production compared to the resources available to each party.

(5) The relative ability of each party to control the costs and its incentive to do so.

(6) The importance of the issues at stake in the litigation.

(7) The relative benefits to the parties of obtaining the information. n21

These seven factors should not be weighted equally. The first two factors are the most important. These two factors comprise the "marginal utility" test. This test can be summed up as follows: The more likely it is that the backup tape contains information that is relevant to a claim or defense, the fairer it is that the responding party search at its own expense. The less likely it is, the more unjust it would be to make the responding party search at its own expense. The difference is "at the margin." The last factor is the least important because it is fair to presume that the response to a discovery request generally benefits the requesting party. n22

Other district courts have adopted and applied the *Zubulake* analysis. n23 In adopting the seven-factor test, a magistrate judge in the Seventh Circuit added a factor that considers the importance of the requested discovery in resolving the issues in the litigation. n24

To summarize, the district court concluded that deciding disputes regarding the cost of discovery of electronic data requires a three-step analysis. First, it is necessary to understand the responding party's computer system thoroughly, with respect to both active and stored data. For data kept in an accessible format, the usual rules of discovery apply: The responding party should pay the costs of producing responsive data. A court ordinarily should consider cost-shifting only when electronic data is relatively inaccessible. n24.1 Second, because the cost-shifting analysis is so fact-intensive, it is necessary to determine what data may be found on the inaccessible media. Thus, the responding party may be required to restore and produce responsive documents from a small sample of the requested backup tapes. Third, in conducting the cost-shifting analysis, the seven-factor test should be applied, weighted more or less in the order stated by the court. n25

The *Zubulake* decision would permit cost-shifting only if electronically stored information is not reasonably accessible. n26 The court identified backup tapes and deleted data as examples of inaccessible sources and electronically stored information on active databases as accessible sources. However, it is not self-evident that every discovery request of electronically stored information on accessible active databases will not entail undue costs and burdens, solely because they are on an active database. Although the data may be retrievable, in some cases the review of an enormous mass of materials and the low likelihood of finding anything of value in them may support a finding that the costs and burdens are undue and that cost sharing is appropriate. n27 Although electronically stored information in an active database should be presumed to be accessible and discovery costs and burdens should not be undue in most cases, depending on the extent of the discovery request and the likelihood of finding anything of value, cost-shifting may be appropriate. Thus, extracting source code from a database and producing it in a reasonably usable form may be so burdensome and expensive that it supports a finding that the information is inaccessible. n28

[4] Allocating Costs of Privilege Review

Before producing a document in response to a discovery request, the responding party routinely reviews it and withholds from production any privileged or protected material. No software program or other automated method is available to easily redact privileged material from electronically stored information. n29 A paper copy usually is printed and privileged material later redacted, or, alternatively, redactions are manually input into electronic documents. The party asserting privilege or protection customarily incurs the cost of reviewing its documents, including electronic documents. n30 The cost incurred in document review is often a major component of the total discovery expense. Because of the special characteristics of electronic documents, the potentially enormous costs incurred in conducting a privilege or protection review are often singled out during the proportionality analysis. n31

Parties themselves regularly adopt protocols governing privilege and protection review to moderate costs. These protocols usually consist of agreements that permit a party to retrieve a privileged or protected document that was inadvertently produced in discovery without forfeiting the right to later assert a privilege or protection. n32 If the parties voluntarily fail to establish privilege or protection review protocols in cases in which the potential burden and cost of reviewing electronically stored documents may be high, courts have sometimes stepped in and fashioned protocols governing identification, retrieval, and restoration. Under some of these protocols, a party may be provided an election

either to require a full privilege or protection review of all documents or to produce the documents reserving the right to retrieve inadvertently produced privileged or protected documents (*see § 37A.32[5][d]*). Under these protocols, a party that insists on a full privilege or protection review prior to production of all electronic documents may be more likely to bear all or most of the expense than a party that produces the materials without first reviewing them for privilege.

For example, in *Rowe Entertainment*, n33 the defendants asserted that some of their emails were privileged and that it would be burdensome and expensive to review all emails to determine which ones were privileged. The defendants apparently retained privileged or confidential documents in electronic form, which were later captured and retained in backup tapes. The court analogized this situation to one in which a company fails to shred its confidential paper documents and instead leaves them intermingled with non-confidential, discoverable papers. The court concluded that the same principle applies to electronic data. Under a protocol established by the court, the expense of identifying, sorting, and retrieving these documents would be borne by the responding party if it insisted on a full privilege review before producing the documents. However, if the defendant decided to forego a full privilege review prior to production, the plaintiff would bear the expense incurred in identifying the pertinent backup tapes, retrieving and restoring individual emails, and providing them to defendant's counsel in hard copy form with Bates stamps. n34

Another court established a more limited protocol, holding that a responding party must have the opportunity to assert that an email is privileged without bearing the cost of retrieving it. Under the protocol established in this case, the plaintiff would bear the initial costs incurred in having experts identify and retrieve pertinent emails from backup tapes under a strict confidentiality order prohibiting disclosure to plaintiff's counsel if the defendant decided to review for privilege all documents before production. The defendant would then bear the costs of reviewing the retrieved documents for privilege and Bates stamping those that were not privileged for production. n35

For related discussion of the court's cost-shifting discretion, see *§ 37A.36*.

Legal Topics:

For related research and practice materials, see the following legal topics:
Civil ProcedureDiscoveryElectronic DiscoveryGeneral OverviewCivil ProcedureDiscoveryProtective OrdersCivil ProcedureDiscoveryRelevanceCivil ProcedureDiscoveryUndue BurdensComputer & Internet LawGeneral Overview

FOOTNOTES:

(n1)Footnote 1. **Court may allocate costs.**

> *6th Circuit See* Medtronic Sofamor Danek, Inc. v. Gary Karlin Michelson, M.D., 2003 U.S. Dist. LEXIS 8587, at *9-10 (W.D. Tenn. May 13, 2003) (cost of producing backup tapes shifted to requesting party because cost was determined to be unduly burdensome and expensive).
>
> *7th Circuit Byers v. Illinois State Police, 2002 U.S. Dist. LEXIS 9861, at *33-37 (N.D. Ill. May 31, 2002)* (cost of producing archived emails requested under Rule 34 shifted to requesting party when burden of request outweighed likely benefit).

(n2)Footnote 2. **Cost-shifting authority.** *See Fed. R. Civ. P. 26(b)(2)*; *Fed. R. Civ. P. 34(a)*, Committee Note of 1970 (*reproduced verbatim at § 34App.03[2]*); *Torrington Co. v. United States, 786 F. Supp. 1027, 1030 (Ct. Int'l Trade 1992)* ; *see also* Minutes of Committee on Civil Rules Meeting 16 (Mar. 16-17, 1998), *at* http://www.uscourts.gov/rules (Rule 26(c) authorizes cost-shifting and similar authority reposes in Rule 26(b)(2), which empowers court to deny discovery altogether).

(n3)Footnote 3. **Court has many options for allocating discovery costs.** *See Thompson v. United States Dep't of Hous. & Urban Dev., 219 F.R.D. 93, 99 (D. Md. 2003)* (court may shift discovery costs, in whole or in part, limit

number of hours spent on electronic document search, or restrict sources that party must search).

(n4)Footnote 4. **Court has authority to shift costs.**

2d Circuit See In re Priceline.com. Inc. Securities Litigation, 233 F.R.D. 88, 92 (D. Conn. Dec. 8, 2005) (cost-shifting determined under Rule 26(b)(2)).

6th Circuit See Laethem Equip. Co. v. Deere & Co., 261 F.R.D. 127, 146 (E.D. Mich. 2009) (court has power to condition discovery on payment by requesting party of part or all of reasonable costs of obtaining information from sources that are not reasonably accessible).

*7th Circuit See Portis v. City of Chicago, 2004 U.S. Dist. LEXIS 24737, at *18-19 (N.D. Ill. Dec. 7, 2004)* ("courts have ample power under Rule 26(c) to ... [require] that the discovering party pay costs").

(n5)Footnote 4.1. *Fed. R. Civ. P. 45(d)*.

(n6)Footnote 4.2. **Rule 45(d) used to shift cost of production.**

*2d Circuit See The Dow Chemical Co. v. Reinhard, 2008 U.S. Dist. LEXIS 35398, at *4 (S.D.N.Y. Apr. 29, 2008)* (" 'Despite the mandatory language of FRCP, courts in this Circuit have found that a court does have the discretion to split the costs between the nonparties and the requesting party when the equities of the particular case demand it.").

7th Circuit See Guy Chemical Co., Inc. v. Romaco AG, 243 F.R.D. 310, 313 (N.D. Ind. 2007) (magistrate judge found that party's request for nonparty's electronically stored business records, which would cost $7,200 to search and produce, imposed undue burden on nonparty; magistrate judge shifted cost of production to requesting party).

(n7)Footnote 5. *See Fed. R. Civ. P. 26(c)(1)*.

(n8)Footnote 6. *Fed. R. Civ. P. 26(b)(2)(C)*; *see In re Veeco Instruments, Inc. Sec. Litig., 2007 U.S. Dist. LEXIS 23926, at *3-4 (S.D. N.Y. April 2, 2007)* (on motion to compel discovery court deferred cost-shifting analysis until defendant incurred costs and produced restored backup tapes).

(n9)Footnote 6.1. **Parties obligated to meet and confer to try and resolve discovery dispute before requesting court intervention.** *See Mikron Indus., Inc. v. Hurd Windows & Doors, Inc., 2008 U.S. Dist. LEXIS 35166, at *2-3 (W.D. Wash. Apr. 21, 2008)* (court denied defendant's motion for protective order to shift costs of producing ESI, because defendant failed to comply with "meet and confer" requirement); *see also Frontier-Kemper Constructors, Inc. v. Elk Run Coal Co., Inc., 2007 U.S. Dist. LEXIS 86422, at 6 (S.D. W.Va. Nov. 21, 2007)* ("court finds that ... *Rule 37 of the Federal Rules of Civil Procedure* ... require[s] the parties to meet and confer as to virtually all discovery disputes which could lead to the filing of a motion to compel, for protective order, or for sanctions").

(n10)Footnote 6.2. **Cost-shifting motion must be made before cost is incurred.** *See* Cason-Merenda v. Detroit Med. Ctr., 2008 U.S. Dist. LEXIS 51962, at *5-6 (E.D. Mich. July 7, 2008) (Rule 26(b)(2)(B) and Rule 26(c) "plainly contemplate that a motion for protective relief (including cost shifting) is to be brought before the court in advance of the undue burden, cost or expense from which protection is sought").

(n11)Footnote 7. **Costs can be allocated between parties.** *See Manual for Complex Litigation § 11.446 (4th ed. 2004)*.

2d Circuit Zubulake v. UBS Warburg LLC, 217 F.R.D. 309, 316 (S.D.N.Y. 2003) (responding party "may invoke the district court's discretion under Rule 26(c) to grant orders protecting [it] from 'undue burden or expense' in doing so, including orders conditioning discovery on the requesting party's payment of the costs of discovery").

*7th Circuit In re Brand Name Prescription Drugs Antitrust Litig., 1995 U.S. Dist. LEXIS 8281, at *4-5 (N.D. Ill. June 13, 1995)* ("Central to any determination of whether a cost should be shifted ... is the issue of whether the expense or burden is 'undue.' ").

10th Circuit See Bills v. Kennecott Corp., 108 F.R.D. 459, 464 (D. Utah 1985) (if burden and expense are undue, cost may be shifted to requesting party).

(n12)Footnote 8. **Cost shifting for marginal information.** Report of Honorable Paul V. Niemeyer, Chair Advisory Committee on Civil Rules, to Committee on Rules of Practice and Procedure, 181 F.R.D. 24, 36-37 (1998); *see Laethem Equip. Co. v. Deere & Co., 261 F.R.D. 127, 146 (E.D. Mich. 2009)* (most practical way to curb tendency toward "excessive" demands of production from sources that are not reasonably accessible, for documents that are likely to be both duplicative and of marginal value, is to require party seeking discovery to pay for cost of finding and producing it).

(n13)Footnote 9. **Cost-shifting analysis not always required in electronic discovery.** *See Zubulake v. UBS Warburg LLC, 217 F.R.D. 309, 317 (S.D.N.Y. 2003)* (cost-shifting need not "be considered in every case involving the discovery of electronic data" primarily because responding party controls expenses incurred in producing materials).

(n14)Footnote 10. **Influential electronic discovery opinions.**

2d Circuit Zubulake v. UBS Warburg LLC, 217 F.R.D. 309, 320 (S.D.N.Y. 2003) ("In the year since *Rowe* was decided, its eight factor test has unquestionably become the gold standard for courts resolving electronic discovery disputes;" the court proceeded to slightly modify *Rowe* test).

7th Circuit See Wiginton v. C.B. Richard Ellis, Inc., 2004 U.S. Dist. LEXIS 15722, at *11 (N.D. Ill. 2004) (three main tests adopted by courts in analyzing cost shifting in discovery of inaccessible information, mentioning *Zubulake*, *Rowe*, and *McPeek*).

(n15)Footnote 11. *Rowe Entertainment, Inc. v. William Morris Agency, Inc., 205 F.R.D. 421 (S.D.N.Y. 2002)* .

(n16)Footnote 12. **Factors for determining whether to shift costs.** *Rowe Entertainment, Inc. v. William Morris Agency, Inc., 205 F.R.D. 421, 428-429 (S.D.N.Y. 2002)* (because of the sometimes substantial cost of locating and extracting electronically stored information, cost-shifting may be warranted).

(n17)Footnote 12.01. **Motion to search backup tapes denied because evidence could be obtained from other less burdensome and expensive sources.** *See Young v. Pleasant Valley School District, 2008 U.S. Dist. LEXIS 55585, at *7-8 (M.D. Pa. July 21, 2008)* (court directs plaintiffs to explore possible sources for emails other than backup tapes, including asking parents whether they sent complaints about school in emails).

(n18)Footnote 12.1. **Cost-shifting after conversion to inaccessible format.**

2d Circuit Quinby v. WestLB AG, 245 F.R.D. 94, 104-105 (S.D.N.Y. 2006) (defendant was not entitled to cost shifting for retrieving data defendant had converted into an inaccessible format that it should have

reasonably foreseen would be discoverable material at a time when it should have anticipated litigation, but defendant was entitled to cost-shifting for retrieving some data that it had converted to inaccessible format because defendant, in settlement with plaintiff, was released from claims arising from acts committed before 2003 and therefore could not have reasonably anticipated that electronic documents created by employees who left company before 2003 would be discoverable).

*D.C. Circuit Disability Rights Council of Greater Washington v. Washington Metro. Transit Auth., 2007 U.S. Dist. LEXIS 39605, at *25-27 (D.D.C. June 1, 2007)* (court ordered search of backup tapes).

(n19)Footnote 13. **Expense in restoring emails on backup tape system would have been eliminated if emails on active database produced earlier.** *See* Wachtel v. Health Net. Inc., 2006 U.S. Dist. LEXIS 27117, at *24 (D.N.J. May 5, 2006) (defendant required to assume entire cost of restoring emails from backup tape system because it failed to produce emails when they were on active database earlier in litigation).

(n20)Footnote 14. **Rule 26(b)(2)(C)(iii) criteria.** *Rowe Entm't, Inc. v. William Morris Agency, Inc., 205 F.R.D. 421, 429-432 (S.D.N.Y. 2002)* (court reviewed the eight factors).

2d Circuit Rowe Entm't, Inc. v. William Morris Agency, Inc., 205 F.R.D. 421, 429-432 (S.D.N.Y. 2002) (court reviewed the eight factors).

3d Circuit See In re Bristol-Myers Squibb Sec. Litig., 205 F.R.D. 437, 443 (D.N.J. 2002) (in evaluating allocation of discovery costs incurred in producing electronic information, court approvingly referred to *Rowe Entertainment*'s eight-factor analysis, noting "[f]or a more comprehensive analysis of cost allocation and cost shifting regarding production of electronic information in a different factual context, counsel are directed to the recent opinion in *Rowe Entertainment*").

*5th Circuit See Murphy Oil USA, Inc. v. Fluor Daniel, Inc., 2002 U.S. Dist. LEXIS 3196, at *9 (E.D. La. Feb. 19, 2002)* (court applied eight factors set out in *Rowe Entertainment*, noting approvingly that opinion "provides sound guidance for resolution of these issues where the retrieval, production and review of email from backup tapes is at issue").

(n21)Footnote 15. *Zubulake v. UBS Warburg LLC, 217 F.R.D. 309 (S.D.N.Y. 2003)* .

(n22)Footnote 16. **Usual presumption that responding party pays costs is applicable to electronic discovery.** *Zubulake v. UBS Warburg LLC, 217 F.R.D. 309, 317 (S.D.N.Y. 2003)* .

(n23)Footnote 17. *Fed. R. Civ. P. 26(b)(2)(C)(iii).*

(n24)Footnote 18. **Problems with *Rowe* test.** *Zubulake v. UBS Warburg LLC, 217 F.R.D. 309, 320 (S.D.N.Y. 2003)* .

(n25)Footnote 19. ***Zubulake* seven-factor test.** *See Zubulake v. UBS Warburg LLC, 217 F.R.D. 309, 322 (S.D.N.Y. 2003)*

(n26)Footnote 20. This factor consolidates the first two *Rowe* factors, which the *Zubulake* court found to be duplicative. The *Rowe* factors are: (1) "specificity of discovery request" and (2) "likelihood of discovering critical information."

(n27)Footnote 21. **Evaluating "marginal utility" of requested information.** *See* Wiginton v. CB Ellis, Inc., 2004 U.S. Dist. LEXIS 15722, at *21-23 (N.D. Ill. Aug. 10, 2004) (court compared number of responsive emails found in test

run with number of emails found in *Zubulake* in applying proportionality analysis).

(n28)Footnote 22. **Factors are not weighted equally.** *Zubulake v. UBS Warburg LLC, 217 F.R.D. 309 (S.D.N.Y. 2003)* .

(n29)Footnote 23. **Cost-shifting analysis applied.**

*2d Circuit Quinby v. WestLB AG, 2006 U.S. Dist. LEXIS 64531 at *34-53 (S.D.N.Y. Sept. 5, 2006)* (court shifts 30% of costs in restoring and searching backup tapes to requesting party after applying *Zubulake*).

*3d Circuit Major Tours, Inc. v. Colorel, 2009 U.S. Dist. LEXIS 97554, at *17-19 (D.N.J. Oct. 20, 2009)* (court concludes that plaintiffs and defendants should share cost of searching defendant's backup tapes equally after applying *Zubulake* cost-shifting analysis).

7th Circuit Hagemeyer N. Am., Inc. v. Gateway Data Sciences Corp., 222 F.R.D. 594, 602-603 (E.D. Wis. 2004) (court adopted *Zubulake* cost-shifting analysis and ordered defendant to restore sample of five backup tapes and make additional submissions addressing whether burden or expense of satisfying plaintiff's request to restore and produce backup tapes of emails and other documents would be proportionate to likely benefit).

9th Circuit OpenTV v. Liberate Techs., 219 F.R.D. 474, 477 (N.D. Cal. 2003) (magistrate judge applied cost-shifting analysis of *Zubulake II* in determining that parties should equally share cost of extracting requested source code from defendant's database, but, after extraction, defendant would bear cost of reviewing and copying source code).

(n30)Footnote 24. **Importance of discovery in resolving issues.** *Wiginton v. CB Richard Ellis, Inc., 229 F.R.D. 568, 573 (N.D. Ill. 2004)* (magistrate judge noted that this additional factor is explicitly set forth in Rule 26(b)(2)(C)(iii)).

(n31)Footnote 24.1. **Cost-shifting ordinarily applies to inaccessible electronically stored information.**

1st Circuit Dahl v. Bain Capital Partners, LLC, 655 F. Supp. 2d 146, 148 (D. Mass. 2009) (for all discovery, including electronic discovery, presumption is that parties must pay their own costs in replying to discovery requests, and Rule 26 cost-shifting provision is intended to apply to documents "not reasonably accessible").

D.C. Circuit See Peskoff v. Faber, 244 F.R.D. 54, 62-63 (D.D.C. 2007) (cost-shifting only possible if electronically stored information is inaccessible).

(n32)Footnote 25. *Zubulake v. UBS Warburg LLC, 217 F.R.D. 309 (S.D.N.Y. 2003)* .

(n33)Footnote 26. **Cost-shifting permissible only if electronically stored information is inaccessible**. *Zubulake v. UBS Warburg LLC, 216 F.R.D. 280, 284 (S.D.N.Y. 2003)* (when discovery request "seeks accessible data--for example, active on-line or near-line data--it is typically inappropriate to consider cost-shifting").

2d Circuit Zubulake v. UBS Warburg LLC, 216 F.R.D. 280, 284 (S.D.N.Y. 2003) (when discovery request "seeks accessible data--for example, active on-line or near-line data--it is typically inappropriate to consider cost-shifting").

9th Circuit See OpenTV v. Liberate Techs., 219 F.R.D. 474, 476 (N.D. Cal. 2003) (extracting source code from computer database was determined to be inaccessible and, thus, cost-shifting was appropriate).

D.C. Circuit Peskoff v. Faber, 240 F.R.D. 26, 31 (D.D.C. 2007) (cost-shifting does not even become a possibility unless there is first a showing of inaccessibility).

(n34)Footnote 27. **Cost shifting may target "accessible" electronically stored information.**

*2d Circuit See PSEG Power N.Y. v. Alberici Constructr., Inc., 2007 U.S. Dist. LEXIS 66767, at * 30-31 (N.D. N.Y. Sept. 7, 2007)* (court applied proportionality analysis to determine whether cost-shifting was appropriate to retrieve relevant accessible ESI, which would involve substantial costs and burden).

*5th Circuit See Multitechnology Serv. v. Verizon Southwest, 2004 U.S. Dist. LEXIS 12957, at *3-4 (N.D. Tex. July 12, 2004)* (court required parties to share costs of retrieving electronically stored information that requesting party claimed to be accessible).

D.C. Circuit But See Peskoff v. Faber, 240 F.R.D. 26, 31 (D.D.C. 2007) ("accessible data must be produced at the cost of the producing party; cost-shifting does not even become a possibility unless there is first a showing of inaccessibility").

(n35)Footnote 28. **Extracting source code is inaccessible data**. *See OpenTV v. Liberate Tech., 219 F.R.D. 474, 477 (N.D. Cal. 2003)* (125-150 hours needed to extract source code found to be sufficiently burdensome to make source of information inaccessible and subject to cost shifting).

(n36)Footnote 29. **Automated redaction of electronic document for privilege purposes is not available.** *See Jones v. Goord, 2002 U.S. Dist. LEXIS 8707, at *34 (S.D.N.Y. May 15, 2002)* (difficult to redact privileged material from electronic documents).

(n37)Footnote 30. **Responding party responsible for costs incurred in reviewing for privilege.**

2d Circuit See Zubulake v. UBS Warburg LLC, 216 F.R.D. 280, 290 (S.D.N.Y. 2003) (although initial costs incurred in retrieving and restoring information may be shifted, "responding party should always bear the cost of reviewing and producing electronic data once it has been converted to an accessible form").

*6th Circuit But see Medtronic Sofamor Danek, Inc. v. Gary Karlin Michelson, M.D., 2003 U.S. Dist. LEXIS 8587, at *48 (W.D. Tenn. May 13, 2003)* (costs incurred in privilege review of historical backup tapes that were very unlikely to contain relevant information were shifted to requesting party).

*7th Circuit See Computer Assocs. Int'l, Inc. v. Quest Software, Inc., 2003 U.S. Dist. LEXIS 9198, at *5 (N.D. Ill. June 3, 2003)* (costs incurred in culling out privileged material from computer hard drives may not be shifted to requesting party).

*11th Circuit But see CBT Flint Partners, LLC v. Return Path, Inc., 2008 U.S. Dist. LEXIS 84189, at *10 (N.D. Ga. Aug. 7, 2008)* (court ordered defendant to review its documents for privilege only on condition that plaintiff pay $300,000 for review costs).

(n38)Footnote 31. **Costs of privilege review pertinent factor in proportionality analysis.** *See Fed. R. Civ. P. 26(b)(2)*, Committee Note of 2006 (*reproduced verbatim at § 26App.11[2]*) (in determining whether cost-sharing is appropriate, a "producing party's burden in reviewing the information for relevance and privilege may weigh against permitting the requested discovery").

(n39)Footnote 32. **Privilege review protocols.** *See Zubulake v. UBS Warburg LLC, 216 F.R.D. 280, 290 (S.D.N.Y. 2003)* ("many parties to document-intensive litigation enter into so-called 'claw-back' agreements that allow the parties to forego privilege review altogether in favor of an agreement to return inadvertently produced privileged documents"); *see also Fed. R. Civ. P. 26(b)(5)*.

(n40)Footnote 33. ***Rowe* case.** *Rowe Entm't, Inc. v. William Morris Agency, Inc., 205 F.R.D. 421 (S.D.N.Y. 2002)* .

(n41)Footnote 34. **Cost of identifying privileged material.** *Rowe Entm't, Inc. v. William Morris Agency, Inc., 205 F.R.D. 421, 432 (S.D.N.Y. 2002)* (if defendants elected to conduct full privilege review of their emails prior to production, they would bear expense of review).

(n42)Footnote 35. **Retrieval costs borne by requesting party.** *Murphy Oil USA, Inc. v. Fluor Daniel, Inc., 2002 U.S. Dist. LEXIS 3196, at *19 (E.D. La. Feb. 19, 2002)* (defendants would bear only costs of reviewing individual emails retrieved by plaintiff's experts).

*2d Circuit See Gambale v. Deutsche Bank AG, 2002 U.S. Dist. LEXIS 22931, at *2 (S.D.N.Y. Nov. 19, 2002)* (decision arises from same district that issued *Rowe Entertainment v. William Morris Agency, 205 F.R.D. 421 (S.D.N.Y. 2002)* and offers party same email retrieval protocol as set out in *Rowe* as modified by *Murphy Oil USA, Inc.*).

*5th Circuit Murphy Oil USA, Inc. v. Fluor Daniel, Inc., 2002 U.S. Dist. LEXIS 3196 at *19 (E.D. La. Feb. 19, 2002)* (defendants would bear only costs of reviewing individual emails retrieved by plaintiff's experts).

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Moore's Federal Practice: Discovery of Electronically Stored Information

Volume 7: Analysis: Civil Rules 30-37A
Chapter 37A Discovery of Electronically Stored Information
D. SCOPE OF DISCOVERY OF ELECTRONICALLY STORED INFORMATION

7-37A Moore's Federal Practice: Electronic Discovery §§ 37A.37-37A.39

AUTHOR: by John K. Rabiej

[Reserved]

§§ 37A.37[Reserved]

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Moore's Federal Practice: Discovery of Electronically Stored Information

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E. FORM OF PRODUCTION OF ELECTRONICALLY STORED INFORMATION

7-37A Moore's Federal Practice: Electronic Discovery § 37A.40

AUTHOR: by John K. Rabiej

§ 37A.40 Early Consideration of Form or Forms of Production of Electronically Stored Information

Under the 2006 amendments, parties are directed early in the litigation to discuss any issues about producing electronically stored information in a particular form or forms. Parties must discuss these issues at the Rule 26(f) discovery-planning conference and at a Rule 16 pretrial conference. The Rule 16 case-management order should specify the form or forms that the electronically stored information will be produced, which is intended to reduce significantly the number of disputes litigated about the form of production. n1

Legal Topics:

For related research and practice materials, see the following legal topics:
Civil ProcedureDiscoveryElectronic DiscoveryGeneral OverviewCivil ProcedureDiscoveryRelevanceCivil ProcedurePretrial MattersConferencesPretrial ConferencesCivil ProcedurePretrial MattersConferencesPretrial Orders

FOOTNOTES:
(n1)Footnote 1. *See Fed. R. Civ. P. 16(b)(3)(B)(iii)*; *Fed. R. Civ. P. 26(f)(3)*.

Moore's Federal Practice: Discovery of Electronically Stored Information

Volume 7: Analysis: Civil Rules 30-37A
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E. FORM OF PRODUCTION OF ELECTRONICALLY STORED INFORMATION

7-37A Moore's Federal Practice: Electronic Discovery § 37A.41

AUTHOR: by John K. Rabiej

§ 37A.41 General Production Requirements Governing Paper and Electronically Stored Information

[1] Procedures Governing Production in Paper Format Do Not Apply to Production of Electronically Stored Information

Rule 34(b)(2)(E)(i) provides a party with the option to produce "documents" in one of two alternative forms, as they are kept in the usual course of business or organized and labeled to correspond to the categories in the request. n1 These traditional alternative forms of producing documents are intended to prevent a massive dumping of information in hard copy. n1.1

Rule 34 was amended in 2006 to provide production requirements specifically for electronically stored information because applying the paper-document production requirements to the unique characteristics of electronically stored information was not a good fit. n1.2 The amendment was patterned on the traditional production requirements governing paper documents. But amended Rule 34 sets a slightly different standard for electronically stored information production. Under the rule, the responding party may agree to produce electronically stored information in a form or forms that the opposing party requests. n1.3

Alternatively, if the party fails to request a specific form or forms of production, the responding party must produce the electronically stored information in the form it is regularly maintained or in a reasonably usable form. n1.4

The option to produce electronically stored information in a reasonably usable form is not precisely the same as the option to produce hard-copy documents organized and labeled to correspond to the request, but it is functionally analogous because producing electronically stored information in a word searchable format can enable a party to locate pertinent information, regardless of any index or labeling provided by the responding party. n1.5

Opinions in several cases have held that the production of electronically stored information must comply with the traditional production requirements governing the production of paper documents in addition to complying with the specific electronically stored information production requirements. In other words, these cases require as a threshold

matter that electronically stored information must be produced as they are kept in the usual course of business or must be organized and labeled to correspond to the categories in the production request. n1.6

These cases can impose an unwarranted burden not intended under the Rule 34(b)(2)(E)(ii) amendments, which expressly require that electronically stored information be produced only in the form it is regularly maintained or in a reasonably usable form. n2

Though not perfectly clear, a careful parsing of Rule 34 finds that the specific electronically stored information production requirements in the rule establish an alternative, mutually exclusive, and not supplemental, standard that is distinct from the traditional requirements governing production of paper documents. n2.1

If a party responds to a discovery request by producing an enormous volume of electronically stored information without any review for responsiveness, such a response may nonetheless violate the rule's "reasonably-usable-form" requirement even though it is produced in a searchable format. The sheer size of the data may overwhelm the ability to search the data effectively and amount to data dumping. n2.2 In most cases, however, producing a large, but not overwhelming, volume of electronically stored information in a searchable format should comply with the rule so long as the requesting party can easily electronically search it and narrow the review.

[2] Electronically Stored Information Must Be Translated into "Reasonably Usable Form"

A party must produce "documents or electronically stored information ... from which information can be obtained either directly or, if necessary, after translation by the responding party into a reasonably usable form." n3 A principal value of electronically stored information is the ease with which a mass of data can be organized and instantaneously retrieved. The same data, if produced in a paper format, would require the expenditure of enormous labor to analyze, organize, and file relevant information. n4 However, electronically stored information can be produced in many electronic formats, many of which are not usable by the opposing party.

An early court decision focused on the benefits of producing information in an electronic form. In *National Union Elec. Corp. v. Matsushita Elec. Indus. Co.,* n5 the responding party produced computer-generated data only in a paper printout. The requesting party filed a motion to compel production of the information in a machine-readable format, which would save substantial expense and months of analyzing paper printouts. The court ruled that the machine-readable format was the preferred means of production, because it found that a machine-readable format represented a "reasonably usable form" as required under Rule 34(a). n6

If electronically stored information is produced in a machine-readable format, it must be in a "reasonably usable form." n7 Although the requirement seems to be common sense, it was precedent setting when discovery of information in computers was first disputed. Merely producing an electronic document in response to a discovery request was problematical. Most software applications and programs were custom developed and were not purchased off-the-shelf. Without a codebook explaining the program, it was extremely difficult to run an application. The accuracy of the computer program also could not be evaluated absent this underlying information. Under these circumstances, the failure to provide a complete response to a request for a computer program, including source codes and codebooks explaining code symbols, was sanctionable (*see* Ch. 37, *Failure to Make Disclosures or to Cooperate in Discovery; Sanctions*). n8 However, as computer usage and technology matured, software applications have become more standardized, eliminating the need to obtain underlying explanatory source materials in many cases. For example, Word and WordPerfect word-processing software programs are now readily available.

On the other hand, customized computer software programs continue to be used to handle individualized databases. Producing these software programs, especially in cases involving legacy software programs, may require the responding party to produce the codebook, source code, user's manual, and all documents used in encoding the database so that the requesting party can understand or duplicate the computer record. n9 A hard-copy printout of explanatory source

materials, including the "alphabet soup" source code, may be inadequate. The requesting party's burden and cost in manually inputting voluminous source codes and then checking for accuracy when finished may be significant and outweigh the burdens imposed on the responding party under the proportionality analysis. n10 Producing a machine-readable copy of the software program--instead of a hard copy printout of the source code--is often cost effective and labor effective and may be necessary under Rule 34's requirement to produce electronic data in a "reasonably usable" form. Producing electronically stored information in an electronic format, however, does not require a party to provide computer personnel to assist the requesting party in understanding the data. n11

A series of cases chronicled by the Court of International Trade illustrate how the Rule 26(b)(2)(C)(iii) proportionality analysis was applied to requests for information in an electronic form in addition to or instead of paper. n12 The decisions turned on a wide range of factors, including, for example, the burden in maintaining confidentiality of documents, the relative resources of the parties, and the importance of the requested information. However, the primary factors continue to be the requesting party's need for the information and the burden imposed on the responding party to produce electronic information, including the difficulties in protecting privileged material. n13

Legal Topics:

For related research and practice materials, see the following legal topics:
Civil ProcedureDiscoveryDisclosuresSanctionsCivil ProcedureDiscoveryElectronic DiscoveryGeneral OverviewCivil ProcedureDiscoveryMisconductCivil ProcedureDiscoveryRelevanceCivil ProcedureSanctionsMisconduct & Unethical BehaviorGeneral Overview

FOOTNOTES:
(n1)Footnote 1. *Fed. R. Civ. P. 34(b)(2)(E)(i).*

(n2)Footnote 1.1. **Alternative method of production requires organization and labeling.** *Fed. R. Civ. P. 34(b)(2)(E)(i)*; *see Board of Educ. v. Admiral Heating & Ventilating, Inc., 104 F.R.D. 23, 36, & n.20 (N.D. Ill. 1984)* (plaintiffs selected option that organized and labeled documents to correspond with categories in request to forestall deliberate mixing of relevant and irrelevant documents).

(n3)Footnote 1.2. *Fed. R. Civ. P. 34(b)(2)(E)(i).*

(n4)Footnote 1.3. **Electronic data must be produced in electronic form on request.** *See Fed. R. Civ. P. 34(b)(1)(C)*; *Fed. R. Civ. P. 34(a)(1)(A).*

4th Circuit See Adams v. Dan River Mills, Inc., 54 F.R.D. 220, 222 (W.D. Va. 1972) (computer cards and tapes are discoverable even if hard-copy printouts are available).

*10th Circuit See York v. Hartford Underwriters Ins. Co., 2002 U.S. Dist. LEXIS 21458, at *3-6 (N.D. Okla. Nov. 4, 2002)* (data input into defendant insurance company's "Colossus" software program was discoverable despite claim that program was proprietary business information, although data production was not required because it was burdensome and requested information was "better pursued under notice" by deposition).

Fed. Circuit See Daewoo Elecs. Co. v. United States, 650 F. Supp. 1003, 1007 (Ct. Int'l Trade 1986) (court ordered responding party to produce magnetic tape containing computerized information).

(n5)Footnote 1.4. *Fed. R. Civ. P. 34(b)(2)(E)(ii).*

(n6)Footnote 1.5. **Index not required if format text-searchable.**

2d Circuit See Zakre v. Norddeutsche Landesbank Girozentralle, 2004 U.S. Dist. LEXIS 6026, at *3 (S.D.N.Y. Apr. 9, 2004) (no need to provide index of electronic documents if they are produced in text-searchable format, citing the Sedona Principles: *Best Practices, Recommendations & Principles for Addressing Document Discovery*, Sedona Conference Working Group Series 2004 -- Principle 11).

*Fifth Circuit But see Jackson v. City of San Antonio, 2006 U.S. Dist. LEXIS 8091, at *4 (W.D. Tex. Jan. 31, 2006)* (court rejected plaintiff's claim that production of computerized payroll data amounted to unauthorized "data dump" because production responded to discovery request and "burden of extracting the information requested is substantially the same for plaintiffs as defendants").

D.C. Circuit See In re Lorazepam & Clorazepate Antitrust Litigation, 300 F. Supp. 2d 43, 46 (D.D.C. 2004) (defendant ordered to determine additional costs incurred to render electronic information "searchable").

(n7)Footnote 1.6. **Court requires party to produce electronically stored information under production standards governing non-electronic documents.**

9th Circuit See Suarez Corp. Indus. v. Earthwise Techn., Inc., 2008 U.S. Dist. LEXIS 66560, at *8 (W.D. Wash. July 17, 2008) (court granted plaintiff's motion to compel defendant to produce electronically stored information as it was kept in usual course of business or was organized and labeled to correspond to categories of requests).

10th Circuit See MGP Ingredients, Inc. v. Mars, Inc., 2007 U.S. Dist. LEXIS 76853 (D. Kan. Oct. 15, 2007) (court applies standards governing production of paper documents to electronically stored information).

(n8)Footnote 2. *See* Rabiej, "Whether ESI Must Be Produced Either as Kept in Usual Course of Business or Organized to Correspond to Categories in the Discovery Request," *LexisNexis(R) Emerging Issues Analysis*, 2008 Emerging Issues 2628 (July 2008) (alternative electronically stored information production requirements designed to provide comparable, but distinct, production requirements).

(n9)Footnote 2.1. **Alternative production standards for electronically stored information.** *See* Rabiej, "Whether ESI Must Be Produced Either as Kept in Usual Course of Business or Organized to Correspond to Categories in the Discovery Request," *LexisNexis(R) Emerging Issues Analysis*, 2008 Emerging Issues 2628 (July 2008) (rulemakers deliberately noted that electronically stored information is not a subset of "documents"; it is a separate category of matter distinct from "documents"); *see also* Rosenthal, *A Few Thoughts on Electronic Discovery After December 1, 2006, 116 Yale L.J. Pocket Part 167, 173 (Dec. 2006)* (rule provides two production options; "these options [ordinarily maintained and a form or forms that are reasonably usable] are intended to be roughly analogous to the rule provisions for paper records; producing documents labeled to correspond to the categories in the request, or as they are maintained in the ordinary course of business").

(n10)Footnote 2.2. **Huge volume of data produced may require culling**. *See Reedhycalog UK, Ltd. v. United Diamond Drilling Services, Inc., 2008 U.S. Dist. LEXIS 93177, at *5-7 (E.D. Tex. Oct. 3, 2008)* (responding party produced 750 gigabytes of electronically stored information without any culling for responsiveness that included pictures and audio recordings; though electronically stored information was searchable, court ruled that production amounted to data dump).

(n11)Footnote 3. *Fed. R. Civ. P. 34(a)(1)(A)* (as restyled in 2007). The original proposal to amend Rule 34(a),

which was published in 1967, did not include the reference to a respondent's duty to translate information, if necessary, into a reasonably usable form. Instead it required that a party produce "other data compilations from which intelligence can be perceived, with or without the use of detection devices ... ." *See* Preliminary Draft of Proposed Amendments to Rules of Civil Procedure for the United States District Courts (November 1967). Read literally, the 1967 proposal required a party to produce only raw electronic data within its computer, which was probably created at that time by a unique customized software application readable only by the user's machines. Although the rule drafters believed that the courts would presumably apply a common-sense approach in interpreting the provision and require a respondent to translate the data, the proposal was explicitly modified to impose a duty on a respondent to translate the information into a reasonably usable form, such as a printout hard copy. *See* Letter from Albert Sacks, assistant reporter to the Advisory Committee on Civil Rules to John P. Frank (July 2, 1969), Records of the U.S. Judicial Conference: Committees on Rules of Practice and Procedure 1935-1988, Congressional Information Service, microformed on Fiche (CIS) ST-121 (009-012).

(n12)Footnote 4. **Producing data in electronic format facilitates its manageability.** Letter from Albert Sacks, assistant reporter to the Advisory Committee on Civil Rules to John P. Frank (July 2, 1969), Records of the U.S. Judicial Conference: Committees on Rules of Practice and Procedure 1935-1988, Congressional Information Service, microformed on Fiche (CIS) ST-121 (009-012) ("This revision (1970 amendments to Rule 34(a)) makes clear that the data compilation is itself discoverable when it is in usable form without translation; that a translation through detection devices (e.g., a printout) is discoverable when necessary to make the data usable by the discovering party; and that the underlying electronic data compilation is discoverable when necessary.").

*2d Circuit But see Jones v. Goord, 2002 U.S. Dist. LEXIS 8707, at *31-32, *48 (S.D.N.Y. May 15, 2002)* (court denied request for producing databases in electronic format because party failed to show how database's electronic format could be put to use).

4th Circuit See Adams v. Dan River Mills, Inc., 54 F.R.D. 220, 222 (W.D. Va. 1972) (defendant ordered to provide database consisting of master payroll file in computerized format at little expense; otherwise, plaintiff would need to spend significant funds to analyze hard copy files).

(n13)Footnote 5. ***National Union* case.** *National Union Elec. Corp. v. Matsushita Elec. Indus. Co., 494 F. Supp. 1257 (E.D. Pa. 1980)* .

(n14)Footnote 6. **Reasonably usable form required.** *Fed. R. Civ. P. 34(a)(1)(A)*; *see National Union Elec. Corp. v. Matsushita Elec. Indus. Co., 494 F. Supp. 1257, 1262 (E.D. Pa. 1980)* (analysis of hard copy printout of over 1,000 pages of data would have been difficult to manage absent computerized format conversion).

(n15)Footnote 7. **Need to produce in reasonably usable form.** *Fed. R. Civ. P. 34(a)(1)(A)* and *(b)(2)(E)(ii)*.

6th Circuit See Delozier v. First Nat'l Bank, 109 F.R.D. 161, 164 (E.D. Tenn. 1986) (if bank's microfilmed documents are not readable unless photocopied by special equipment, bank must bear costs of producing documents).

Fed. Circuit See Daewoo Elecs. Co. v. United States, 650 F. Supp. 1003, 1006 (Ct. Intl. Trade 1986) (producing electronic data in usable form should be the "ordinary and foreseeable burden" of respondent in absence of extraordinary hardship).

(n16)Footnote 8. **Codebook must be produced to check accuracy of computer program.** *See Fed. R. Civ. P. 37(a)(5)*; *see also Fautek v. Montgomery Ward & Co., 96 F.R.D. 141, 145 (N.D. Ill. 1982)* (party sanctioned for falsely reporting that no codebooks existed to decipher source code on computer tapes).

(n17)Footnote 9. **Customized software requires codebook to decipher it.**

6th Circuit See Williams v. E. I. Du Pont de Nemours & Co., 119 F.R.D. 648, 651 (W.D. Ky. 1987) (explanatory codebook source materials necessary for effective cross-examination of expert relying on computer model).

11th Circuit But see Bashir v. AMTRAK, 929 F. Supp. 404, 413 (S.D. Fla. 1996) (court declined to impose sanctions for failure to produce computer tape of train speed when other evidence, including hard copy documents, were available addressing issue).

(n18)Footnote 10. **Machine-readable source code required instead of hard copy printout.** *See Fed. R. Civ. P. 26(b)(2)(C)(iii)*; *see also In re Air Disaster at Detroit Metro. Airport, 130 F.R.D. 634, 635 (E.D. Mich. 1989)* (manually inputting 95 pages of single-spaced source code and checking for accuracy extremely time consuming).

(n19)Footnote 11. **Providing assistance to opponent to understand data not required.** *See In re Plastics Additives Antitrust Litig., 2004 U.S. Dist. LEXIS 23989, at *48-49 (E.D. Pa. Nov. 29, 2004)* (court rejected request for defendant to provide technical assistance in understanding data produced in discovery).

(n20)Footnote 12. **Cases applying proportionality analysis.** *Fed. R. Civ. P. 26(b)(2)(C)(iii)*; *see Torrington Co. v. United States, 786 F. Supp. 1027, 1029-1030 (Ct. Int'l Trade 1992)* (earlier cases involved balancing need for information in electronic format against hardship imposed on defendant; some denied plaintiff's request for computer tapes, while others granted requests for electronically stored data).

(n21)Footnote 13. **Request for data in electronic format denied under proportionality analysis.** *Fed. R. Civ. P. 26(b)(2)(C)(iii)*.

9th Circuit See Williams v. Owens-Illinois, Inc., 665 F.2d 918, 933 (9th Cir. 1982) (lower court did not abuse discretion in denying plaintiffs magnetic tapes of computer programs, which made it more difficult and time consuming to make statistical analysis from hard-copy documents in race discrimination case, when information was already submitted on wage cards).

Fed. Circuit See Torrington Co. v. United States, 786 F. Supp. 1027, 1029-1030 (Ct. Int'l Trade 1992) (party failed to articulate need for computer magnetic tapes, paper documents provided alternative source of information, and opposing party enumerated hardships if compelled to produce tapes).

Moore's Federal Practice: Discovery of Electronically Stored Information

Volume 7: Analysis: Civil Rules 30-37A
Chapter 37A Discovery of Electronically Stored Information
E. FORM OF PRODUCTION OF ELECTRONICALLY STORED INFORMATION

7-37A Moore's Federal Practice: Electronic Discovery § 37A.42

AUTHOR: by John K. Rabiej

§ 37A.42 If No Specific Production Form Requested or Party Opts to Produce Electronically Stored Information in an Alternative Form

[1] Responding Party Has Options

Under Rule 34, a party may request the opposing party to produce electronically stored information in a specific form. The responding party may agree with the request. But if the responding party objects, it "must state the [alternative] form or forms it intends to use" and attempt to resolve the issue with the opposing party. The rule instructs the parties to work out production arrangements between themselves; absent agreement, the parties are to raise the issue for the court's resolution *before* the responding party produces the electronically stored information. n1 Despite the rule's clear intent, disputes about the production form, often involving metadata, continue to needlessly arise--sometimes after massive amounts of electronically stored information have been produced.

[2] No Request for Specific Production Form

If no request for a specific production form is made, the responding party may produce the electronically stored information as it is "ordinarily maintained" or in a "reasonably usable form or forms." The options are not open ended and are intended to be limited to prevent other forms of production that might result in a "document dump" of irrelevant matter. In its written response to the discovery request, the responding party must inform the opposing party of the form or forms it intends to produce the request ed matter before doing so. n2 If the requesting party is not satisfied with the selected production form, the parties must confer to resolve the dispute before seeking a court resolution. n3 The responding party should defer producing electronically stored information in an alternative form until the opposing party agrees to the form or a court has ruled on the issue. If the responding party fails to disclose the production format, it risks a later court ruling that the selected form was not reasonably usable, forcing the party to reproduce the electronically stored information again in another form. n4

The parties are directed to discuss any issues about producing electronically stored information in a particular form or forms early in the litigation. n5 To facilitate the production process and to minimize disputes, a party should clearly specify the form that it wants the electronically stored information to be produced. n6

There are four alternative production forms of electronically stored information:

- Native--electronically stored information files are produced in their native format, using the same application software that generated the file.

- Near-Native (Quasi-Native)--electronically stored information files are extracted or converted into a searchable format, typically involving retrieval of emails and data from large databases.

- Near-Paper--electronically stored information files are converted into an image file format, e.g., TIFF or PDF.

- Paper--electronically stored information files are produced in a hard-copy, paper format.

Each of the four production formats has distinct advantages and disadvantages for both the requesting and producing parties, which can directly bear on a party's ability to search text, redact confidential matter, review metadata, and mark electronically stored information files for identification purposes, e.g., Bates numbering. Working with some of these formats may require special computer systems, software, or technical expertise. In addition, some formats may compromise the integrity of the electronically stored information.

In most circumstances, moreover, electronically stored information will not be produced in only a single format. Different types of electronically stored information may require production of electronically stored information in different formats, as anticipated by Rule 34(b). n7

FOOTNOTES:

(n1)Footnote 1. *See Fed. R. Civ. P. 34(b).*

(n2)Footnote 2. *Fed. R. Civ. P. 34(b)(2)(D).*

(n3)Footnote 3. *See Fed. R. Civ. P. 37(a)(1).*

(n4)Footnote 4. **Party may be required to produce electronically stored information in two formats.** *See Fed. R. Civ. P. 34(b)(2)(D)* committee note (2006) (*reproduced verbatim at § 34App.08[2]*) (if court finds form not reasonably usable, it can require party to incur costs and burdens in producing electronically stored information again in another form); *see also Covad Communications Co. v. Revonet, Inc., 2008 U.S. Dist. LEXIS 104204, at *11 (D.D.C. Dec. 24, 2008)* (court rules that production of emails should be in native file format, noting that defendant "ran the risk of what has now come to pass--that it would nevertheless have to produce the data in its native file format" even though it had earlier produced it in TIFF hard copy).

(n5)Footnote 5. **Early discussion of production formats crucial.** *See The Scotts Co. v. Liberty Mutual Ins. Co., 2007 U.S. Dist. LEXIS 43005 (E.D. Ohio 2007)* .

(n6)Footnote 6. **Requested form of production should be clearly stated.**

6th Circuit See Compuware Corp. v. Moody's Inv. Serv., Inc., 2004 U.S. Dist. LEXIS 25309, at *4-5 (E.D. Mich. Dec. 16, 2004) (party's request to produce all documents, including emails, produced in earlier litigation could not later be modified so that only relevant documents would be produced after responding party had produced all documents).

*7th Circuit See India Brewing, Inc. v. Miller Brewing Co., 2006 U.S. Dist. LEXIS 50550, at *9-11 (E.D. Wis. July 13, 2006)* (court upheld production of information in hard-copy form because party's request

for stored electronic documents did not specify form of production).

*10th Circuit See The Ponca Tribe of Indians of Oklahoma v. Continental Carbon Co., 2006 U.S. Dist. LEXIS 74225, at *6-7 (W.D. Okla. Oct. 11, 2006)* (court denied request to produce electronically stored information in native format because party failed to make clear request for production in this form).

(n7)Footnote 7. **Different production forms often required in individual cases.** *See Fed. R. Civ. P. 34(b)* committee note (2006) (*reproduced verbatim at § 34App.08[2]*) ("Requiring that such diverse types of electronically stored information all be produced in the same form could prove impossible, and even if possible could increase the cost and burdens of producing and using the information."); *see also*, Ball, *Piecing Together the E-Discovery Plan*, Trial, at 27 (June 2008) ("It is unnecessary--and rarely advisable--to employ a single form of production for all items.").

Moore's Federal Practice: Discovery of Electronically Stored Information

Volume 7: Analysis: Civil Rules 30-37A
Chapter 37A Discovery of Electronically Stored Information
E. FORM OF PRODUCTION OF ELECTRONICALLY STORED INFORMATION

1-37A Moore's Federal Practice: Electronic Discovery § 37A.43

AUTHOR: by John K. Rabiej

§ 37A.43 Determining Whether Production Form is Reasonably Usable

[1] Producing Electronically Stored Information in Native Format (As It Is Ordinarily Maintained)

n1-3On an opposing party's request or if no request for a specific form of production is made, a party may produce electronically stored information in a form in which it is ordinarily maintained, namely in its native format. n4 Producing electronically stored information files in the format that they were generated and maintained is commonly described as production in native format. n4.1 Native production requires the operation of the software application that generated the electronically stored information, e.g., MS Word documents files with a.doc extension, WordPerfect documents with a.wpd extension, MS Excel files with an.xls extension, and Adobe files with a.pdf extension. Large scale discovery cases typically involve electronically stored information produced by many different software applications, which can impose troublesome processing and review burdens. Email is not typically produced in native file format because the extraction of individual emails from a large database containing other emails requires conversion of the file format into a near-native format. In some cases, providing electronically stored information in its native format may be convenient for both parties.

Lawyers should address the issues arising from producing electronically stored information in native file format with metadata intact promptly at the Rule 26(f) conference to prevent disputes from later developing. The requesting party should be prepared to make a showing of particularized need for electronically stored information in its native file format with metadata intact. n4.2

If electronically stored information is produced in its native format, chain-of-custody requirements should be carefully followed and the integrity of the electronically stored information ensured. Metadata in native file productions is especially susceptible to alteration. Unless precautionary safeguards are taken, it is easy to alter metadata inadvertently when reviewing or copying electronically stored information in its native file format. n4.3 Minor intrusions, like opening a file, may change the metadata, e.g., the date last accessed or modified. Copying electronically stored information may alter the time displayed on emails, which originated in different time zones. Recording the hash value of the electronically stored information file is a convenient method safeguarding its integrity.

Parties typically have requested that electronically stored information be produced in an image format, e.g., TIFF or PDF, because of convenience. That trend has begun to change, and parties are increasingly requesting production of electronically stored information in its native format because native files retain metadata, unless it is deliberately stripped out. In fact, a handful of courts have promoted this trend by finding a preference for native-file production in the amended civil rules. n4.4 Native file production, however, has its drawbacks and may be difficult to work with in a given case. Moreover, many lawyers have a flawed understanding of how metadata can be used and are unaware of alternative means to use metadata outside the native file format, which may be more attractive and should be carefully considered before making a final format selection.

The advantages of native electronically stored information production include: (1) eliminating image conversion costs; n4.5 (2) increasing efficiency by eliminating the need to convert files to image; (3) providing for both system-file and application metadata; (4) displaying all information in spreadsheets and databases; and (5) enhancing searchability. The disadvantages of native production include: (1) difficulty in searching and organizing files created by separate applications; (2) difficulty in applying Bates numbers; (3) difficulty in redacting confidential matter; (4) increased risk of altering files; (5) inadvertent disclosure of hidden metadata; and (6) burdens and costs in obtaining licenses to operate specific native software applications, including the use of proprietary software.

In addition to concerns about inadvertently disclosing confidential information, producing electronically stored information in its native file format raises practical and evidentiary problems. Opening or searching an electronic file in its native file format usually requires access to the software program that created the file. Popular software programs that generate word-processed documents are readily available, *e.g.*, WordPerfect and Microsoft Word. In large-scale discovery, however, electronically stored information may be generated by many different software applications, some of which may be proprietary, subject to trade secret protection. If an electronic file was created by a customized software application, moreover, opening or searching it may be subject to a separate licensing agreement and expensive license user fees. n4.6

Native file production may raise authentication issues. Unless proper precautions are promptly taken to assure authenticity, detecting subsequent changes made to electronically stored information produced in native file format can be difficult. n4.7 Unlike "static image" documents, like TIFF or PDF images that cannot be altered and that can be stamped with the common "Bates" numbering system to assure reliability, electronically stored information produced in native file formats requires some other method of identification to ensure its authenticity and reliability. n4.8

Native file production typically includes metadata, unless it is stripped out and placed in a separate load file. Some jurisdictions impose an ethical duty on lawyers to review documents for metadata that contain privileged information, and others prohibit an attorney from searching or "mining" metadata in electronically stored information inadvertently disclosed in discovery. n4.9 Reviewing metadata for privilege purposes can be burdensome. The Committee Note to Rule 26(f) recognizes the burden, reminding lawyers to review metadata "to ensure that no privileged information is included, further complicating the task of privilege review." n4.10

Notwithstanding the drawbacks of native file format, it can be efficient if the volume of electronically stored information is small and if a single or a handful of off-the-shelf software applications generated the electronically stored information. Native file format may be necessary, moreover, in certain cases to read spreadsheets, which are not entirely reproduced when converted to an image. n4.10.1 Review of electronically stored information in native file format can be accomplished effectively under these circumstances, but several work-around techniques must first be employed.

Instead of reviewing electronically stored information in native file format using the same applications that generated it, which may incur added licensing expenses and increase inefficiency caused by constant switching from one application to another, a party may use a generic or universal viewer. One disadvantage of this approach is that such viewers may not be able to view all metadata. Though not susceptible to Bates numbering, different work-arounds have also been

used to designate native files with unique identifying marks, including renaming each file by incorporating a unique number. The work-around requires a separate load file of the original metadata containing file names and a cross reference index. Another work-around is necessary to redact information in native file format. Because a native file cannot be redacted without altering the document, the file must be converted into an image first and then the confidential matter is redacted. Software improvements in the redaction of native file formats continue to emerge, however, that may provide a defensible method to redact information in native file format. n4.11

When faced with a request to produce electronically stored information in its native file format, the producing party should be prepared to make a showing of the cost and burden in reviewing metadata for privilege purposes and extracting privileged or protected metadata that would offset the benefit of producing metadata. In addition, the requesting party should ensure that it has access to the software programs that generated the electronically stored information in native file format, taking into account any applicable licensing agreements or customized software. Moreover, the party should take prompt steps to ensure that electronically stored information in its native file format is authenticated for future evidentiary purposes.

[2] Producing Electronically Stored Information in Near-Native or Quasi-Native Format

Emails and databases are typically produced in near-native or quasi-native format. These types of electronically stored information typically are converted into formats that are very similar, but not identical, to the native file format. Producing electronically stored information in near-native format eliminates costs incurred in converting electronically stored information into images and enhances searchability functions. Drawbacks include the following: (1) the inability to insert Bates numbers; (2) the inability to redact confidential matter; and (3) the added risk of altering the electronically stored information.

Emails contained in servers and in workstation computers are stored in single databases. Extracting individual non-privileged and responsive emails from a large mass of emails can only be done by first converting the emails into separate files using html, xml, or plain text format. n4.12 One complication with extracting emails is that attachments are retained in their native file format and are not searchable using the software application that produced the emails in the near-native format.

Emails can be extracted individually in an MSG format, i.e., file extension. msg. Collections of entire sets of emails, often stored in networked servers, can be extracted in a PST or NSF format, i.e., file extensions.pst or.nsf. Any extraction should ensure that the email file folder structure is retained, which can offer insights into the user's understanding of the email. For example, folders captioned as "priority" or "confidential" may provide ready access to relevant files. Because the number of individual emails in such collections can be enormous, the software program must be able to track and cross reference related files, including parent-child emails and attachments.

Producing large databases presents issues similar to the ones affecting emails. Typically such databases are produced in a near-native format as text delimited files. For example, large databases may be produced in ASCII (American Standard Code for Information Interchange) in a Comma Separated Variable file, in which each record is a single line and each field is separated by a comma.

If a special or customized software program generated the information, reading and using the information might be difficult without access to the software program. Providing direct access to the software program, however, might raise a host of issues. n5 It may implicate proprietary information and reveal trade secrets in the development of the software program. n6 It may also reveal privileged or protected matter. n7 Without access to the software program, redacting privileged, protected, and confidential matter is cumbersome, adding to the burden and expense in producing electronically stored information in its native format. n8

[3] Producing Electronically Stored Information in Near-Paper Format (TIFF or PDF Image)

Absent a request that electronically stored information be produced in a specific form or if the responding party decides not to produce the electronically stored information in its native form, the responding party must produce the information in a reasonably usable form. n9 The most common alternative to native file format production is near-paper production of electronically stored information as a "TIFF" (Tagged Image File Format) or "PDF" (Portable Document Format) image. Though similar, there are significant differences between the image formats. TIFF images often are not searchable, while PDF images typically are searchable. n10 The file size of PDF files is smaller than a TIFF's file size so that the PDF conversion process is faster. In addition, loading PDF files into a software application is faster than loading TIFF images.

Electronically stored information in a TIFF or PDF format has several advantages over production of electronically stored information in native file format. Electronically stored information in a TIFF or PDF format facilitates Bates numbering, internal controls, and redaction of confidential matter. In addition, new technologies have improved on manual Bates numbering by offering automated electronic stamping, which can be used as a more convenient and efficient alternative to manual Bates numbering. A number is burned into the TIFF image, which has been slightly shrunk from its original size. The stamped number is permanent. The risk of alteration once electronically stored information is produced in a near-paper format is also reduced. The drawbacks associated with producing electronically stored information in TIFF or PDF formats include the following: (1) the costs in converting the data from native file; (2) reduction in efficiency caused by the added time to convert the electronically stored information; (3) risk of altering or missing electronically stored information during the printing process; and (4) inability to display the full contents of spreadsheets and databases. In addition, electronically stored information in a TIFF format must undergo an additional OCR process in order for the requesting party to search it electronically, unless a separate load file containing searchable text and metadata accompanies it. Electronically stored information converted into PDF format usually is searchable.

A TIFF or PDF image of a document faithfully copies the document, but it might not contain all metadata or embedded data, and residual-deleted data cannot be recovered from it. For example, system-file metadata in MS Word or WordPerfect files indicating the electronically stored information's creation dates may be altered to reflect the date the electronically stored information was converted to image, comments inserted in the electronically stored information text may not be displayed, and track changes may be unavailable. Hidden cells and formulas in MS Excel spreadsheets may not be displayed and speaker notes in power point presentations may be omitted in MS PowerPoint files. This feature, especially in TIFF images, reduces the responding party's risk of exposing confidential matter, but may increase the requesting party's burdens in searching or sorting the electronically stored information.

PDF also is an exact copy of electronically stored information and can be searched electronically. n11 Producing electronically stored information in a PDF format is a common practice. The convenience of the PDF format prompted the Federal Trade Commission to issue regulations rejecting the acceptance of native file formats and recommending instead that data be transmitted in a standard PDF format. n12 But a party should recognize that PDF copies can contain substantial metadata, including a list of authors, creation date, modification dates, title, subject, and many others. "As numerous people have learned to their chagrin, merely converting a Microsoft Word document to PDF does not remove all metadata automatically." n13 Despite the risk that some metadata may be revealed, the convenience in producing electronically stored information in PDF may offset the risk in many situations. In other instances, however, greater scrutiny may be required. In these cases, the practitioner should consider producing the least revealing electronic file, which can be produced by printing the file to paper and then scanning it into PDF. n14

[4] Producing Electronically Stored Information in Paper-Format

A party may request that paper documents and electronically stored information be produced in paper format. Paper production provides a convenient format for Bates numbering and redacting confidential matter. Paper production may make sense in cases involving less than 5,000 pages. n15 The disadvantages of paper production include: (1) the lack of

a database to search the information electronically; (2) added costs in converting and printing electronically stored information into paper; (3) less efficient processing and reviewing of information; (4) difficulties in printing certain information in databases and spreadsheets; and (5) increased risk of altering or deleting data during the printing process. Depending on the native software application, producing electronically stored information in paper will not reveal track changes or inserted comments (MS Word); hidden cells, rows, and columns, and formulas generating spreadsheets (MS Excel); speaker notes (MS PowerPoint); and embedded images in other applications. Production of electronically stored information in paper form in large discovery cases may not comply with Rule 34's reasonably-usable-form requirement because it degrades the searchability functions. n16

Parties who agree on production of electronically stored information in hard copy should also agree on protocols governing its conversion, including: (1) keeping together multiple-page documents as a unit; (2) identifying the custodian of the document and creating some type of index that cross references the paper documents and the electronically stored information. n17 A party may request production in more than one form, particularly when electronically stored information is maintained by different software applications, although the responding party need not produce the *same* electronically stored information in more than one form. n18 Production in both hard-copy and electronic forms is not required. n19

Production of a document in hard copy does not necessarily mean that no machine-readable format may later be required. n20 Under certain circumstances, a party who has already produced material in one form might not avoid production of the same material in another form even if such production would be cumulative, although there is a presumption against producing the information in more than one form. n21 Parties are directed to address these issues early in the litigation during Rule 26(f) conferences and pretrial conferences, so as to prevent such disputes. A responding party may offer options, including downloading documents to a diskette or providing on-site access to a computer, if the burden in printing hard copies is heavy. n22 Under special circumstances, a party may request that information be produced in a machine-readable format in addition to paper production. If the requesting party offers to pay the costs of producing materials in the additional form, a court may deny the request or agree to the shifting of the costs for such "supplemental" production. n23

A district court in the Tenth Circuit held that a party did not fulfill its duty to produce documents in a "reasonably usable form" when it converted emails to PDF files and produced the PDF documents in paper format. The court noted the advisory committee note for the 2006 amendments to Rule 34, which observed that a party's option to produce in a reasonably usable form does not mean it is free to convert electronically stored information from the form in which it is ordinarily maintained to a different form that makes it more difficult to use the information efficiently in the litigation. The court found that the plaintiff was entitled to have the emails in question produced in their native format because the metadata was critical to determining whether the documents said what they now say at the time they were produced. n24

Downloading an electronic document from a computer to a printer and furnishing a paper hard-copy in response to a discovery request remains a common discovery practice. However, that practice may be changing because information transferred in an electronic medium has advantages for both the requesting and responding party. n25

As the bar becomes more accustomed to electronically stored information, discovery practices will inevitably change, and likely will result in an increasing number of requests for information to be produced in electronic form.

FOOTNOTES:

(n1)Footnote 1-3. [Reserved]

(n2)Footnote 4. *Fed. R. Civ. P. 34(b)(2)(E)(ii)*; *see In re Priceline.com Inc. Securities Litigation, 233 F.R.D. 88, 91 (D. Conn. Dec. 8, 2005)* (native format may be read only with software program that created it).

(n3)Footnote 4.1. **Native file format.** *See Autotech Tech. Lmt. v. Automationdirect.com, Inc., 2008 U.S. Dist. LEXIS 27962, at *3 (N.D. Ill. Apr. 2, 2008)* (electronically stored information is "stored and used in the normal course of business").

(n4)Footnote 4.2. **Request for native file format should be clear**. *See* District of Maryland, *Suggested Protocol for Discovery of Electronically Stored Information ("ESI")*, at 11(C) http://www.mdd.uscourts.gov/news/news/ESIProtocol.pdf (metadata should not routinely be produced, especially substantive-application metadata); *see also Cenveo Corp. v. Southern Graphic Sys., 2009 U.S. Dist. LEXIS 108623, at *3-6 (D. Minn. Nov. 18, 2009)* (court defines "native file" format and holds that plaintiff's production of ESI in.pdf format in response to request for ESI production in native file format was not valid).

(n5)Footnote 4.3. **Metadata susceptible to alteration in native file format.** *See Aguilar v. Immigration and Customs Enforcement Div. of the U.S. Dept. of Homeland Security, 2008 U.S. Dist. LEXIS 97018, at *20-21 (S.D.N.Y. Nov. 21, 2008)* (discussion of advantages and drawbacks of native file production).

(n6)Footnote 4.4. **Some courts note rules-based preference for native file format production.** *See Fed. R. Civ. P. 34(b)(2)(E)* (amended rule sets out default standard recognizing any reasonably usable form in the event that party fails to make request for specific production format); *see, e.g., Superior Prod. Partnership v. Gordon Auto Body Parts Co., Ltd., 2008 U.S. Dist. LEXIS 97535, at *3 (S.D. Ohio Dec. 2, 2008)* (" *Federal Rule of Civil Procedure 26*, as amended, expresses a preference for the production of electronically stored information in its native file format.").

(n7)Footnote 4.5. **Costs of imaging.** *See Spieker v. Quest Cherokee, LLC, 2008 U.S. Dist. LEXIS 88103, at *5 (D. Kan. Oct. 30, 2008)* (rendering nearly one-half million pages of documents into TIFF images costs about $38,500).

(n8)Footnote 4.6. *See Northern Natural Gas Co. v. Teksystems Global Applications, Outsourcing, L.L.C, 2006 U.S. Dist. LEXIS 64149, at *5 (D. Neb. Sept. 6, 2006)* (license for software cost $50,000).

(n9)Footnote 4.7. **Native file production subject to authentication challenges.** *See* Ball, *In Praise of Hash*, Law Technology News (Nov. 2006) ("As e-discovery gravitates to native production, concern about intentional or inadvertent alteration requires lawyers to have a fast, reliable method to authenticate electronic documents. Hashing neatly fits this bill. In practice, a producing party simply calculates and records the hash values for the items produced in native format.").

(n10)Footnote 4.8. **Electronically stored information in native file format requires means to authenticate**. *See Hagenbuch v. 3B6 Sistemi Elettronici Indus. S.R.L., 2006 U.S. Dist. LEXIS 10838, at *9-10 (N.D. Ill. Mar. 8, 2006)* (parties should agree on procedures to track documents using unique numbers).

(n11)Footnote 4.9. **Producing and reviewing metadata raise ethical questions.** *See* Opinion 2007-02, Alabama State Bar Association (March 14, 2007) and Formal Opinion 782, New York State Bar (2001) (requiring lawyers to exercise reasonable care to prevent disclosure of privileged metadata); New York State Bar Opinion 749 (concluding that it is unethical for an attorney to mine metadata); *but see* Formal Opinion 06-442 (Aug. 5, 2006) (American Bar Association states that the "Model Rules of Professional Conduct do not contain any specific prohibition against a lawyer's reviewing and using embedded information in electronic documents, whether received from opposing counsel, an adverse party, or an agent of an adverse party"); *Metadata Ethics Opinions Around the U.S.*, Legal Technology Resource Center, American Bar Association, at www.abanet/org/tech/ltrc/fyidocs/metadatachart.html (summarizes metadata state ethics opinions in convenient chart form); Coyle, *Where Do the Footprints of Metadata Lead*?, National Law Journal (Feb. 20, 2007); Payne, *Metadata--Are You Protected?* < http://www.payneconsulting.com/pub_books/articles/ >(2004) (includes list of other jurisdictions imposing ethical duties, including Texas, New Jersey, Arkansas, California, District of Columbia, Maryland, Pennsylvania, Florida, and Arizona).

(n12)Footnote 4.10. *Fed. R. Civ. P 26(f)* committee note (2006) (*reproduced verbatim at § 26App.11[2]*).

(n13)Footnote 4.10.1. **Production of spreadsheets in native file format is required**. *See* Covad Communications Co. v. Revonet, Inc., 260 F.R.D. 5, 9 (D.D.C. 2009) ("taking an electronic document such as a spreadsheet, printing it, cutting it up, and telling one's opponent to paste it back together again, when the electronic document can be produced with a keystroke is madness in the world in which we live.").

(n14)Footnote 4.11. **Redaction techniques improving.** *See* Ball, *Redaction Redux,* Law Technology News (Feb. 2008) ("Where once native redaction was daunting, now there are reliable, cost-effective techniques for Adobe Systems Inc. PDF and Microsoft Corp. Office documents, including spreadsheets. For example, Adobe Acrobat 8.0 supports data layer redaction, and the latest release of Microsoft's Office productivity suite stores documents in readily redactable XML formats.").

(n15)Footnote 4.12. **Extracting files**. *See* Ball, *Re-Burn of the Native*, Law Technology News (Sept. 2007) (reconstituted file fairly reflects metadata and content of original email).

(n16)Footnote 5. **Licensing agreement may prohibit providing access to native form created by software application.**

> *7th Circuit Peterson v. Union Pacific RR Co., 2007 U.S. Dist. LEXIS 80950, at *16 (C.D. Ill. Nov. 1, 2007)* (court denied request to require defendant to produce software program because it was subject to licensing agreement, but ordered production in a reasonably usable form, which might require defendant to compile and download information into alternative form that plaintiff could analyze).
>
> *8th Circuit See Northern Natural Gas Co. v. Teksystems Global Applications, Outsourcing, 2006 U.S. Dist. LEXIS 64149, at *10 (D. Neb. Sept. 6, 2006)* (party required to decide whether to purchase software license for opposing party, or to provide information in another reasonably usable form, including permitting on-site inspection of computer).

(n17)Footnote 6. **Providing software program may compromise proprietary interests.** *See Cornell Research Foundation, Inc. v. Hewlett Packard Co., 223 F.R.D. 55, 75 (N.D.N.Y. 2003)* (on-site inspection with appropriate confidentiality safeguards ordered in lieu of furnishing software program).

(n18)Footnote 7. **Difficult to redact material from information produced in native format.** *See CP Solutions, LTD. v. Gen. Elec. Co., 2006 U.S. Dist. LEXIS 27053, at *12-14 (D. Conn. Feb. 6, 2006)* (citing **Moore's**; court declined to order production of electronically stored information in native format because it was impossible to redact privileged or protected matter); *but see Gilliam v. Addicts Rehab. Ctr. Fund, 2006 U.S. Dist. LEXIS 3343, at *4-6 (S.D.N.Y. Jan. 26, 2006)* (despite inability to segregate and extract confidential matter, defendant ordered to produce CDs of electronically stored information containing privileged and protected data in native format, because cost of converting data into paper form and redacting confidential information was excessive).

(n19)Footnote 8. **Removing privileged matter from metadata is burdensome.** *See Wyeth v. Impax Laboratories, Inc., 2006 U.S. Dist. LEXIS 79761, at *4 (D. Del. Oct. 26, 2006)* (removing metadata usually requires converting file into image file).

(n20)Footnote 9. **Searchable electronic database is "reasonably usable."** *See* DE Techs., Inc. v. Dell, Inc., (W.D. Va. Jan. 12, 2007) (court held that production of electronic database in searchable form, instead of native format, complied with Rule 34's requirement that production be reasonably usable).

(n21)Footnote 10. **TIFF images might not be word searchable.** *See OKI America, Inc. v. Advanced Micro Devices, Inc., 2006 U.S. Dist. LEXIS 66441, at *13 (N.D. Cal. Aug. 31, 2006)* (court denied party's request to convert TIFF images produced by opponent even though not word searchable because party itself produced data in same

unsearchable format).

(n22)Footnote 11. **Some forms of PDF are not searchable.** *See L.H. v. Schwarzenegger, 2008 U.S. Dist. LEXIS 86829, at *12-13 (E.D. Ca. May 14, 2008)* (databases furnished in pdf format that were not searchable or sortable were not produced in a reasonably usable form).

(n23)Footnote 12. **Federal agency requires production in PDF.** *See* Statement of the Federal Trade Commission's Bureau of Competition Guidelines for Merger Investigations at www.ftc.gov/os/2002/12/bcguidelines021211,htm).

(n24)Footnote 13. **PDF copies can contain substantial amounts of metadata**. *See Redacting with Confidence: How to Safely Publish Sanitized Reports Converted from Word to PDF*, National Security Agency, at 2 (December 13, 2005).

(n25)Footnote 14. *See* In *Re Payment Interchange Fee and Merchant Discount Antitrust Litig., 2007 U.S. Dist. LEXIS 2650, at *7 (E.D.N.Y. Jan.12, 2007)* ; *see also* Payne, *Metadata--Are You Protected?* < http://www.payneconsulting.com/pub_books/articles/>(2004).

(n26)Footnote 15. *See* Ball, *Rules of Thumb for Forms of ESI Production*, Law Technology News (July 2006) (same limits apply to production of electronically stored information in near-paper if no separate load files are produced).

(n27)Footnote 16. **Conversion to paper format often degrades searchability of electronically stored information.** *See White v. The Graceland College Center for Professional Development & Lifelong Learning, Inc., 2008 U.S. Dist. LEXIS 63088, at *33 (D. Kan. Aug. 7, 2008)* (unless parties agree, producing electronically stored information in "paper format does not comply with the option to produce them in a reasonably usable form").

(n28)Footnote 17. **Parties can agree on protocols governing production form of electronically stored information**

2d Circuit See In re Honeywell Int'l, Inc. Secs. Litig., 230 F.R.D. 293, 297 (S.D.N.Y. 2003) (defendant's accountants were required to produce electronic version of their audit work papers and quarterly reviews of defendant's financial statements, because hard copies of these documents already produced were essentially incomprehensible, as it was impossible to determine which attachment belonged with a particular work paper, and accountants failed to provide plaintiffs with adequate means to decipher how documents are kept in usual course of business).

*10th Circuit See The Ponca Tribe of Indians of Oklahoma v. Continental Carbon Co., 2006 U.S. Dist. LEXIS 74225, at *7-8 (W.D. Okla. Oct. 11, 2006)* (electronically stored information produced "as single page documents with no consideration of the organization" was appropriate because it was produced in accordance with accepted industry practice and party was capable of manipulating information to make it usable); Bergersen v. Shelter Mutual Ins. Co., 2006 U.S. Dist. LEXIS 17452, at *5-6 (D. Kan. Feb. 14, 2006) (agreements governing production form of electronically stored documents becoming common).

(n29)Footnote 18. *Fed. R. Civ. P. 34(b)(2)(E)(iii).*

(n30)Footnote 19. **Production in both electronic and hard-copy formats is not required.** *Fed. R. Civ. P. 34(b)(2),* Committee Note of 2006 (*reproduced verbatim at § 34App.08[2]*) ("Rule 34(b) provides that the same electronically stored information ordinarily need be produced in only one form.").

1st Circuit See In re Puerto Rico Elec. Power Auth., 687 F.2d 501, 508-509 (1st Cir. 1982) (discussing

difference between foreign language translations and computer data translations).

2d Circuit *Jones v. Goord, 2002 U.S. Dist. LEXIS 8707, at *40-41, *46-47 (S.D.N.Y. May 15, 2002)* (court rejected plaintiff's request to produce documents in electronic format after defendant provided plaintiff paper copies because (1) request was untimely; and (2) plaintiff failed to show that providing documents in electronic format would be useful).

3d Circuit *See National Union Elec. Corp. v. Matsushita Elec. Indus. Co., 494 F. Supp. 1257, 1262 (E.D. Pa. 1980)* (after furnishing hard copy documents, production of documents in machine-readable format required in accordance with "reasonably usable form" provision in Rule 34).

7th Circuit Northern Crossarm Co. v. Chemical Specialities, Inc., 2004 U.S. Dist. LEXIS 5381, at *3-4 (W.D. Wis. Mar. 3, 2004) (party failed to request specific production format and was not entitled to documents produced in electronic format after defendant produced 65,000 pages of email in paper).

(n31)Footnote 20. **Electronic version of data required even after hard copies produced.** *See Cornell Research Found., Inc. v. Hewlett Packard Co., 223 F.R.D. 55, 74 (N.D.N.Y. 2003)* (mere fact that information, which as a matter of ordinary course of one's business is electronically stored, has been produced in hard copy does not in and of itself excuse party from producing requested information in electronic form); *see also In re Honeywell Int'l Inc., Sec. Litig., 2003 U.S. Dist. LEXIS 20602, at *4-5 (S.D.N.Y. Nov. 18, 2003)* (because it was impossible to align attachments properly with source documents for hard-copy documents produced by responding party, and consequently responding party was ordered to produce documents in electronic form in same manner as kept in ordinary course of business).

(n32)Footnote 21. **Both forms may be cumulative.** *See Cornell Research Found., Inc. v. Hewlett Packard Co., 223 F.R.D. 55, 74 (N.D.N.Y. 2003)* (producing party is entitled to argue that, because of production in hard copy form, it should be protected against electronic production, which would be cumulative of what has already been produced); *see also* Ayers v. SGS Control Serv., 2006 U.S. Dist. LEXIS 17591, at *5-8 (S.D.N.Y. Apr. 3, 2006) (court ordered party to produce payroll and timekeeping data in electronic form even though data had been provided earlier in hard-copy form).

(n33)Footnote 22. **Alternative methods of production is advisable when cost of particular method is high.** *See Fed. R. Civ. P. 26(b)(2)(C)(iii)*; *see also Sattar v. Motorola, Inc., 138 F.3d 1164, 1171 (7th Cir. 1998)* (court rejected plaintiff's request for hard copies of emails consisting of 210,000 pages and instructed defendant to produce emails in electronic format that was usable by plaintiff; alternatively, each party would bear half of copying costs).

(n34)Footnote 23. **Cost shifted when documents earlier produced in hard copy.**

3d Circuit *See In re Bristol-Myers Squibb Sec. Litig., 205 F.R.D. 437, 439-440, 443 (D.N.J. 2002)* (plaintiff was required to pay only nominal costs for copies of disks containing documents scanned by defendants, because defendants earlier had scanned documents for their own use in litigation but failed to disclose scanning as part of its Rule 26(a) initial disclosure and plaintiff already had paid substantial cost of paper copies).

4th Circuit *See Adams v. Dan River Mills, Inc., 54 F.R.D. 220, 222 (W.D. Va. 1972)* (court ordered defendant to produce computerized master payroll file instead of hard copy, but required plaintiff to pay costs in doing so).

(n35)Footnote 24. **Paper documents not a "reasonably usable form."** *See Fed. R. Civ. P. 34* committee note (2006) (*reproduced verbatim at § 34App.08[2]*.

*7th Circuit See Craig & Landreth, Inc. v. Motor of Am., Inc., 2009 U.S. Dist. LEXIS 66069, at *7-8 (S.D. Ind. July 27, 2009)* (ESI production in.pdf format without metadata is not reasonably usable, and defendant ordered to produce ESI in native file format).

10th Circuit See White v. Graceland College Ctr. for Professional Dev. & Lifelong Learning, Inc., 586 F. Supp. 2d 1250, 1264 (D. Kan. 2008) (although party is generally not required to produce documents in more than one format, court ordered re-production of emails, that had been produced in paper format, in native format with metadata intact).

(n36)Footnote 25. **Advantages of producing documents in hard copy or electronic format.**

10th Circuit See White v. Graceland College Ctr. For Professional Dev. & Lifelong Learning, Inc., 586 F. Supp. 2d 1250, 1264 (D. Kan. 2008) (plaintiff was entitled to have emails produced in native format with metadata intact, rather than in hard copy form defendant had already produced, because, without electronic copies, plaintiff could not be sure that, when prepared, documents said what they say now).

D.C. Circuit See Armstrong v. Executive Office of the President, Office of Admin., 1 F.3d 1274, 1280 (D.C. Cir. 1993) (hard copies of email messages might not include information contained in electronic version, which identifies, for example, who sent the message, who received it, and when it was received).

Moore's Federal Practice: Discovery of Electronically Stored Information

Volume 7: Analysis: Civil Rules 30-37A
Chapter 37A Discovery of Electronically Stored Information
E. FORM OF PRODUCTION OF ELECTRONICALLY STORED INFORMATION

1-37A Moore's Federal Practice: Electronic Discovery § 37A.44

AUTHOR: by John K. Rabiej

§ 37A.44 If Party Requests Specific Form of Production

[1] Request for Specific Production Form Must Be Reasonable

A party may request that electronically stored information be produced in a specific form or forms. The party's request should be discussed early in the case at the Rule 26(f) conference. The discovery plan required under Rule 26(f) "must state the parties' views and proposals on: ... any issues about disclosure or discovery of electronically stored information, including the form or forms in which it should be produced." n1 Parties should make clear their preferences on the specific form of electronically stored information production at the conference. Unless the responding party objects to the requested form or forms of electronically stored information, it must produce the information in the requested form. n2

Producing electronically stored information in the form requested is subject to the responding party's overarching duty to produce electronically stored information in a reasonably usable form. n3 If the responding party objects, it must identify the alternative form or forms in which it intends to produce the electronically stored information and provide the opposing party an opportunity to move under Rule 37 to compel production of the information in the form or forms originally requested. n4

If the requesting party objects to the counter production-format proposal, the parties must confer to resolve the issue before raising it with the court. n5 A responding party that produces electronically stored information in a format not agreed to by the opposing party risks a court ruling finding that the format is not reasonably usable, requiring the party to produce the electronically stored information again in a different format.

If a court is asked to resolve the issue when the parties cannot reach an agreement, the court may choose any reasonable form or forms of production after considering the competing interests. To assist the court in rendering its ruling, the parties should explain their reasons for requesting production in a specific form or for not complying with such a request. n6

A handful of courts and individual judges have adopted a bright-line default standard for discovery of electronically stored information, which applies when the parties cannot voluntarily reach such an agreement. The default standard requires the party to produce electronically stored information as image files, either TIFF or PDF, if the parties cannot agree on the production format themselves. Under this standard, however, the producing party must preserve the metadata. After production as an image file, the party may request that the electronically stored information also be produced in its native file format, presumably on a document-by-document basis. n7 In such jurisdictions, the court may require that the party pay the costs for reproducing the electronically stored information in a native file format. n8

[2] Metadata in Requested Production Formats

[a] Metadata Not Contained in Some Formats

In many cases, parties focus on metadata when making their decision to select an electronically stored information production format. Yet many practitioners do not fully understand the purposes and functions of metadata, nor do they fully appreciate the costs and burdens associated with producing or reviewing native files with metadata. Such misunderstandings can result in poor decisions, which can increase the expense of review and production.

Metadata can enhance electronically stored information discovery in one of three ways. First, system-file metadata is typically useful to sort electronically stored information by providing an easy means to search information based on a file's name, location, format or type, size, dates, and permissions (for example, who can read the data, who can write to it, who can run it). n9 Similar types of system-file metadata accompany emails, including information on author, recipients, date sent, and subject. This sorting capability can provide information on how, when, and by whom the electronically stored information was collected, created, accessed, or modified, and how it is formatted. Second, system-file metadata for spreadsheets and certain databases may contain information essential to the understanding of the electronically stored information. Third, substantive-application metadata may track all edits to a file and record comments inserted into the file.

Parties are increasingly requesting electronically stored information with metadata because of its useful searching attributes. n10

On the other hand, a responding party should be wary of producing electronically stored information without knowing exactly whether and what metadata is being disclosed when responding to a discovery request. In particular, substantive-application metadata may contain privileged or protected information, which requires a significant effort to review. Unlike system-file metadata, which usually gives only a historical account of a document, substantive-application metadata is more likely to expose privileged, confidential, or embarrassing information.

Unless certain computer functions have been turned off, substantive-application metadata revealing edits and changes to a file and other information typically accompany an electronically stored information file. Disclosing documents with its substantive metadata has resulted in some well publicized, unintended disclosures of confidential or embarrassing information. For example, metadata has revealed that the text of a supposed government report was actually based on a document drafted by a student. n11 Other examples of embarrassing, inadvertent disclosures of confidential information include: revelations of internal trade secrets, data linking a drug to heart failure, and information implicating high-ranking Syrian officials in the murder of a former Lebanese prime minister. n12

Unlike substantive-application metadata, however, system-file metadata likely does not contain confidential or privileged information, may be easy to produce, and may be valuable as a means for the opposing party to search and sort the electronically stored information. The rich variety of metadata complicates the production-format decision making. In fact, there are more than 80 accessible system-file and application metadata generated for each Microsoft Word and Excel document, common software programs. Understanding the different types of metadata and whether metadata will be useful in an individual case is essential in determining whether production of all the metadata is

necessary or appropriate.

[b] Request for Metadata Should be Explicit

Though metadata can present major issues in producing electronically stored information, the Civil Rules do not specify whether a party is obligated to produce electronically stored information with metadata intact. n13 Under Rule 34(b)(1)(C), the requesting party may specify the form or forms in which electronically stored information, including metadata, is to be produced. The request for metadata should be specific. n14 Courts are more likely to compel a party to produce metadata if the request is specific. n15 Making the party responsible for clearly and specifically requesting metadata is consistent with the weight of the case law, which places the burden on the requesting party to notify the responding party of its request. n15.1

[c] Disputes About Metadata in Certain Electronically Stored Information Formats

[i] Rule 34 Production Options Generate Litigation

Rule 34(b) provides a party with the opportunity to request that electronically stored information be produced in any specific form, including the form or forms it is ordinarily maintained or in a reasonably usable form or forms. The options have generated litigation over whether metadata must be included in a particular production format if the party also fails to expressly request metadata. Such disputes cause unnecessary litigation that can be easily averted if the issue is addressed early on.

[ii] Metadata in Electronically Stored Information Produced in Native File Format or in As It Is Ordinarily Maintained

The inference in cases and in the minutes of the Civil Rules Committee meetings indicate that a request for electronically stored information in its "native file format" also calls for the production of the original metadata intact. As noted, metadata is physically part of the native file format structure of an electronic file and can be eliminated only if steps are deliberately taken to remove it. n15.2 Accordingly, a request for electronically stored information in native file format should be interpreted to include metadata. (As a practical matter, most requests for electronically stored information in native file format also include explicit requests for metadata in the reported case law.) At least one prominent commentator disagrees and believes that metadata is not part of an electronic file produced in its native file format and need not be produced. n15.3

A responding party may elect to produce electronically stored information in a "form or forms in which it is ordinarily maintained," as that term is used in Rule 34(b)(1)(C). The Civil Rules Committee recognized that "technically adept lawyers and experts assume that production in the form ordinarily maintained includes embedded data and metadata." n15.4 The Committee, however, ultimately decided not to take a position on whether metadata must be included when electronically stored information is produced in the form that it is ordinarily maintained. The Committee concluded that it was not necessary to decide the issue, as a practical matter, because "issues as to embedded data and metadata arise only if the responding party opts to produce [electronically stored information] in the form ordinarily maintained." n15.5 The Committee recognized that parties would simply remove the metadata and produce the electronically stored information under the alternative "reasonably usable" option.

Whether metadata must be produced in response to a request for production of electronically stored information in the form that it is "ordinarily maintained" without also specifically requesting metadata is not clear. n15.6 Under a conservative reading of the present case law, a practitioner should interpret a request for electronically stored information as it is ordinarily maintained to include metadata.

[iii] Metadata in Electronically Stored Information Produced in Reasonably Usable Form

If the requesting party fails to specify the form of production or if the responding objects to the requested production form, the responding party may produce electronically stored information in a reasonably usable form or forms. Must the responding party produce electronically stored information with metadata intact in such cases?

If the requesting party fails to specify the form of electronically stored information production, the producing party can select a reasonably usable form, but it must first state the form or forms it intends to use, subject to objection from the requesting party. Depending on the circumstances, electronically stored information in TIFF image format may be found to be a reasonably usable form under Rule 34. The requesting party may, however, object to image production because it may be difficult to conduct electronic word searches or to link attachments to its original document. Recent cases have focused on the inability to electronically search TIFF images.

The emerging case law is not consistent on whether a responding party is obligated to produce metadata absent a showing of undue cost or burden or a showing that the metadata is needed by the requesting party. n15.7 Much of the case law inconsistency can be explained by the type of metadata requested and the time when the request for metadata is made. One line of cases maintains that the responding party must produce electronically stored information with its metadata intact, unless the party timely objects, the parties agree that the metadata should not be produced, or the producing party requests a protective order. n15.8 Many of these cases focus on system-file metadata that may be essential in understanding the application's output, e.g., statistical tables. n15.9

A growing number of cases, however, are beginning to focus on the value of system-file metadata to facilitate the searching and sorting of electronically stored information, e.g., by date created or author. These cases have found production of electronically stored information as a TIFF or PDF image inconsistent with Rule 34 because the conversion of the electronically stored information degrades its searchability, making the electronically stored information not reasonably usable. Without metadata, searching and sorting electronically stored information can become more difficult. n15.10 These court decisions are grounded on the guidance provided in the Committee Note to Rule 34. In determining whether a specific form of production is acceptable, the rulemakers concluded that a "reasonably usable form" could not remove or "significantly degrade" the ability to electronically search the file. n15.11

In cases in which the court requires production of metadata, the party's request for metadata was often made early, before the responding party had begun its collection, processing, and review of electronically stored information. n15.12 In addition, the burden on the responding party in producing system-file metadata is typically modest. Such metadata usually has little evidentiary value and need not be reviewed for privilege purposes, but may be very useful in searching and sorting electronically stored information. Courts are increasingly granting requests for such metadata production, particularly if the request is made before the responding party has collected and processed the electronically stored information. n15.13

Rule 34's protection of searchability does not mean that every production of electronically stored information must include metadata to comply with the prohibition against "degrading" the file. The rulemakers frequently acknowledged the use of TIFF and PDF images, which do not include metadata, as alternative, reasonably usable forms of production. In fact, the Civil Rules Committee expressly noted that an electronic file with its metadata stripped out might remain "reasonably usable" for purposes of Rule 34(b)(2)(E)(ii). n15.14

Case law is replete with examples of electronically stored information produced without metadata in TIFF and PDF images. In many cases, metadata is not essential to make the file searchable by electronic means and extracting metadata would not degrade its searchability, especially if separate load files containing searchable text and selected metadata accompany the electronically stored information. n15.15 In fact, the electronically stored information protocols of some courts expressly recognize a presumption favoring the production of electronically stored information in static images. n15.16 Moreover, though metadata may enhance searchability, that does not necessarily mean that providing electronically stored information in a searchable text without metadata degrades its functionality to an extent inconsistent with Rule 34. n15.17 Searches of relatively modest volumes of electronically stored information may be

performed equally well with or without metadata, if the text is otherwise searchable.

Another line of cases maintains that the responding party need not produce metadata unless the requesting party makes an appropriate showing of particularized need for the metadata. n15.18 These cases are more likely to focus on substantive-application metadata that may reveal confidential and privileged information or on tardy requests for metadata after the party has already produced the electronically stored information without metadata. n15.19

Application metadata is more likely to have evidentiary value, and much more likely to contain confidential matter that must be reviewed for privilege and work-product protection purposes. In these cases, the courts focus on the evidentiary value of metadata and the burden imposed on the responding party. They have ruled that the requesting party must show a particularized need for the metadata sufficient to offset the cost and burden in reviewing and producing it. n15.20

When a party objects to producing metadata, courts have considered whether the metadata is relevant, has evidentiary value, is required to facilitate searching and sorting, is not available from other sources, or imposes an unreasonable burden on the responding party. n15.21

There may be situations in which electronically stored information must be produced with metadata in order to run calculations, *e.g.*, spreadsheets. There are ways to extract metadata, retaining only the metadata necessary to run the calculations, instead of producing the electronically stored information in its native file format. Government agencies have provided practical guidance on how to scrub documents to remove metadata. n15.22 There are also special software programs designed to extract metadata. n15.23 In fact, both Microsoft for Word documents and Corel for WordPerfect documents offer guidance and on-line utilities to minimize and extract metadata. n15.24 Nevertheless, the burden and cost in extracting certain metadata of individual documents or data can be significant. The responding party should be prepared to make a showing to the court of the burdens in extracting metadata, requesting the court to limit the extraction of metadata to a specified number of documents or data. n15.25

[iv] Alternative Means to Provide Metadata--Separate Load Files

A technique has been developed that avoids many of the problems associated with producing electronically stored information and metadata. The technique provides the requesting party with the system-file metadata required to facilitate searches, while reserving other metadata. Because native, near-native, and near-paper electronically stored information formats are all electronically based, its metadata can be extracted and included in a separate load file that can accompany the text of the electronically stored information. n15.26 This technique can provide system-file metadata to the requesting party consistent with Rule 34's admonition against producing electronically stored information in a form that degrades its searchability. n15.26.1 At the same time, substantive-application metadata can be retained and not indiscriminately disclosed. Though this option requires an additional step of stripping out the metadata and loading it into a separate load file, it can prevent the inadvertent disclosure of confidential or privileged metadata. The load files can also include searchable text. (Paper documents can be scanned and converted into searchable text using Optical Character Recognition software.)

Under this process, the load files and extracted metadata are linked to the electronically stored information produced in native, near-native, or near-paper format, providing a searchable database that can be sorted using the metadata--replicating many of the same benefits as producing electronically stored information in a native file format. "Essentially a load file connects the different electronic components of a document [images, full text, metadata fields, native files] so all the components can be assessed and viewed together." Some of the more common load file formats include.dii (Summation),.lfp (IPRO), and.opt (Concordance/Opticon). Many of the disadvantages associated with near-paper production, especially production as TIFF images, can be significantly mitigated. Load files containing searchable text and metadata can be generated to link the images, facilitating searches of text and sorting by metadata.

Despite the advantages of producing electronically stored information in static images accompanied by load files,

production of some forms of electronically stored information, especially very large databases, in native file format may be more useful for searching purposes. n15.27 Best practices strongly recommend that the parties clearly agree on the production format of electronically stored information consistent with Rule 34 procedures.

[3] Party May Request Modification of Software Program to Produce Specific Form of Electronically Stored Information

[a] Necessary Modifications

Computer software programs manage, sort, and retrieve data and create reports from a computerized database. The programs are discoverable and a party may request the machine-readable program that runs a computer's database instead of a hard-copy printout that was produced by a responding party. n16 A software application operating an electronic database may categorize data in a specific way to fit a party's particular business needs. A discovery request, however, may ask for the data to be presented in a report form different from that generated by the software application. In such a case, modifying the responding party's software or creating a special software program may be needed to retrieve the data in the form it is requested, which requires direct access to the computer software program and the computer's database.

A computer program can be modified to retrieve, sort, or manage information from the computerized database in ways different from the original software program. For example, the number of commercial transactions involving a certain range of commodities may be relevant in a particular case. Although the original computer program might not have been developed to retrieve this data, the program may be modified to extract it.

The original preliminary draft rule proposal published for comment by the advisory committee in 1967 required production of "data compilations from which intelligence can be perceived, with or without the use of detection devices." Concerns were raised that a technical reading of the published proposal would permit a party to merely produce electronic data that could not be read without a printout. At that time, most software applications were custom-built and required special equipment to read (*see § 37A.41[2]*). The provision was clarified to make sure that "a party may secure production of the information contained in the compilation in a form usable by him" by means of a printer (detection device) when necessary. n17

Relying on Rule 34's requirement to provide information in a reasonably usable form, courts, starting with *Matsushita*, have compelled a responding party to modify or develop a software program to retrieve relevant evidence. n18 *Matsushita* recognized that the Rule 34 requirement to produce electronic information in a "reasonably usable form" was primarily intended to require a printout when necessary. However, *Matsushita* noted that the language of the rule would not preclude producing the information in an electronic medium by slightly modifying the software program to merely print results on a magnetic tape instead of on paper. n19 *Matsushita* relied on the Manual for Complex Litigation, which recommended producing computer data at that time in machine-readable form as the preferred method in complex cases. n20 Currently, the Fourth edition of the Manual for Complex Litigation recommends only that the parties reach early agreement on the form of production, stating that "[t]he relatively inexpensive production of computer-readable images may suffice for the vast majority of requested data" while other types of "dynamic" data may need to be produced in "native format, or in a modified format in which the integrity of the data can be maintained while the data can be manipulated for analysis." n21 Nonetheless, the progeny of *Matsushita* have created case law that extends Rule 34's requirement to produce electronic documents in a reasonably usable form to reach far beyond the minor intrusiveness approved in *Matsushita.* n22

In line with the general rule that documents may be produced in the same form as used in the regular course of business, a party usually will not be required to produce or create something that does not already exist. For example, a party will not be required to compile emails or other documents in a certain way if the documents are not kept that way in the regular course of business. n23 If the responding party's burden and cost in producing information in a form other than

the one the information is kept in the ordinary course of business are out of line with the benefits to the requesting party, a court will apply the proportionality analysis to evaluate the reasonableness of the request (*see § 37A.34*). n24

The reasonableness of a request to modify or develop special software to retrieve relevant evidence is evaluated under the Rule 26(b)(2)(C)(iii) proportionality analysis. n25 If the costs are not substantial and the resources of the responding party are sizeable, a responding party may be required to develop necessary software retrieval programs. n26

For example, a requesting party may realize that a computer program that was originally furnished as a hard-copy printout requires in-depth probing that can only be achieved with the development of a new computer program or an electronic copy of the program. Whether a computer program must be developed in response to the discovery request is particularly fact driven under the Rule 26(b)(2)(C) proportionality analysis (*see § 37A.33*). n27

As a threshold matter, the requested matter must be determined relevant. n28 The relevancy of the requested matter can be reconsidered after production. Sanctions may be imposed, for example, when it becomes clear that the requesting party did not intend to use documents retrieved by new software programs developed at substantial expense in accordance with its demands. n29

A discovery request to develop or modify existing software program, which would lead only to marginally relevant evidence and that would impose not insignificant burdens on a financially sizeable party may be unwarranted. n30

If the responding party claims that the retrieval effort involves undue expense, a court may consider the extent of the burden and apportion the costs of its production. n31 However, an allegation that the retrieval of relevant records is burdensome because the indexing system adopted by the responding party precludes an efficient search does not support cost sharing. Providing access to a mass of documents with no discernible indexing or filing system does not comply with the discovery rules, even when the documents are retained in that state in the usual course of business. n32 In this situation, a showing should be made that a filing system was deliberately designed to be unwieldy to frustrate future litigation. n33

[b] Requesting Party Offers to Partially Pay Cost of Modifying Software Program

The expense involved in modifying or developing special software can make an otherwise reasonable discovery request unreasonable. However, if the requesting party voluntarily offers to pay for some of the programming cost, or itself develops the software program, production of the requested computer data is more likely to be required. n34 Nevertheless, if the request requires inputting new information into a computer, in addition to developing software programs to analyze the information, the request may be unduly burdensome.

A party responding to a discovery request ordinarily has the burden to pay costs incurred in producing relevant evidence. Whether the obligation extends to modifying existing, or creating new, computer software is evaluated under the Rule 26(b)(2)(C)(iii) proportionality analysis. If the responding party incurs additional expense in manufacturing a computer program, the cost may be shifted to the requesting party. n35 However, the practice is not uniform. Some courts have required production of computer programs in addition to hard copy documents at substantial expense and burden, excusing noncompliance only if the production of the computer program is "impossible" and not merely "time-consuming or laborious." n36

[4] Party May Request On-Site Inspection of Computer

[a] On-Site Computer Inspection on Party's Consent

In general, a party may, under Rule 34(a), request to inspect and copy any tangible thing that is discoverable under Rule 26(b). n37 A computer can be inspected on agreement of both parties. A limited on-site computer inspection can be

especially cost effective and convenient using word-search requests that are executed immediately in both parties' presence. However, the parties should agree on a protocol establishing inspection procedures. n38 Under this arrangement, pertinent documents can be marked and later delivered after the responding party has had an opportunity to review them for privilege purposes (*see § 37A.32[5]*). The parties should agree on the specific form that the designated documents should be produced after the inspection, addressing whether the selected form of production should include metadata. n39

[b] On-Site Computer Inspection and Mirror Image Copying

The on-site inspection of a computer is intrusive and raises serious concerns for a responding party. As a practical matter, a responding party ordinarily will object to a request for permission to inspect its computer, because a computer's files often contain information that is not relevant to the claims and defenses pleaded in a complaint, or that is subject to a claim of privilege, such as attorney-client, work product, trademark, or copyright privileges (*see § 37A.32[5]*; *see also §§ 26.49* (attorney-client privilege), *26.70* (work-product protection). n40 Courts are reluctant to order on-site inspections, unless a showing is made that documents are being unlawfully withheld or that there has been other systematic abuse of the discovery process by the responding party in connection with the discovery request. n41 A few courts, however, have expressed a greater willingness to grant motions ordering forensic imaging not for purposes of preserving electronically stored information but for providing a more efficient means of discovery. n41.01 Though the requesting party may offer to pay costs incurred in imaging electronically stored information, mitigating the responding party's burden, the requesting party is not entitled to image a computer hard drive absent a showing that the responding party is not fulfilling its production obligations. n41.1

On-site computer inspections have nevertheless been ordered when: (1) a showing was made that an inspection is required to uncover electronically stored information that allegedly was concealed or destroyed; or (2) an inspection proved to be more cost effective and convenient than copying individual documents. n42 The actual seizure of a computer is not permitted unless the moving party can demonstrate that the documents they seek do, in fact, exist, and are being improperly withheld (*see § 37A.26*). n43 No matter the justification, specific safeguards are prudent to prevent disclosure of confidential information learned during an on-site inspection (*see § 37A.32[5][d][iii]*). n44

A mirror image of a computer's hard drive can be performed during an on-site inspection. A mirror-image copy represents a snapshot of the computer's records. It contains all the information in the computer, including embedded, residual, and deleted data (*see § 37A.03[1] -[3]*). It preserves all information in the computer files for review at a later date. n44.1 The mirror-imaging copying process can be time consuming, and the affected computer may be unavailable to the user for a few hours or days. n45 However, technological advances continue to accelerate the process, reducing the time needed to make a mirror image. Conversely, technology is also increasing the storage capacity of computers, offsetting advances in the acceleration of the mirror imaging process. Portable mirror-imaging equipment is available to perform the process at the computer's location. Nevertheless, the disruption to an ongoing business can be significant, particularly if many computers are involved or if computers are located in different places, which may in some circumstances outweigh the benefit of discovery. n46 The process requires the attention of a professional computer technician. n47 A forensic expert may recover matter deleted from a computer's active files, which continues to exist on a computer's hard drive after deletion, unless overwritten by later data (*see § 37A.03[3]*). Although mirror imaging ensures an accurate record for preservation purposes of all electronically stored information on a hard drive, the burdens associated with imaging weigh against routine court-ordered usage. n48

Residual-deleted information may be relevant evidence in a particular case and is subject to discovery (*see § 37A.03[3]*). n49 If a party is concealing or destroying electronically stored information, an on-site inspection may be necessary to access a computer physically, mirror image, and expose the deleted files over a party's objections. An on-site inspection of computers to mirror image the hard drives is the preferred method to locate deleted files. n50 The mirror image eliminates any potential inadvertent destruction of evidence, including the creation dates of the files that had overwritten the deleted files. n51

[c] Benefit Must Outweigh Significant Burden

Intrusive discovery involving on-site inspections or mirror imaging can be undertaken only if the likely benefits of recovering relevant evidence outweigh its significant burdens under the Rule 26(b)(2)(C)(iii) proportionality analysis (*see § 37A.35[3][a], [b]*). n52 A request to mirror image hard drives or inspect computers must be timely. A party may not wait until the eve of trial and request mirror imaging to verify the authenticity of disputed documents. n53

The Eleventh Circuit has found that Rule 34(a) does not allow unrestricted direct access to a respondent's database compilations. Instead, the requesting party is ordinarily permitted to inspect and copy only the product resulting from the respondent's translation of the data into a reasonably usable form. This may be a document, disk, or other device, but it may not be direct access to the database. n54 The court acknowledged that there may be circumstances under which a requesting party may be given permission to check the data compilation itself. This usually occurs due to improper conduct by the responding party. Even in such cases, however, the district court must protect the respondent with respect to preservation of its records, confidentiality, and costs. n55

[d] Safeguards to Protect Against Disclosure of Privileged or Confidential Documents

An inspection of a computer and mirror imaging of a hard drive can reveal significant privileged or confidential information that is not subject to discovery. To ensure confidentiality, the parties should agree on protocols governing on-site computer inspection to prevent disclosure of privileged documents (*see § 37A.32[5][c]*). However, these agreements are limited and ordinarily do not bind persons outside the litigation (*see § 37A.32[5][d]*).

A protocol requiring the presence of the responding party's counsel when the requesting party's counsel or representative searches a seized computer is often essential to ensure confidentiality of otherwise privileged documents. n56 Parties may also agree to inspection by a third party selected by both parties who has signed a confidentiality contract agreeing not to disclose the information to unauthorized individuals (*see § 37A.32[5]*). n57

If the parties do not mutually agree on a confidentiality protocol, a responding party may seek a protective order under Rule 26(c) to prevent disclosure of any privileged document that may be revealed during an inspection. n58 A court may also appoint an expert to review the electronic data during an inspection. n59 As an officer of the court, the expert can be bound to maintain confidentiality.

Confidentiality safeguards are especially prudent when a mirror image or an exact duplicate of a computer's hard drive is undertaken during an on-site inspection. n60 Not only does a mirror image contain all the computer's files, but it also will capture residual-deleted files and embedded data generated with each file. Thus, earlier drafts of documents can be located, and the identity of authors, creation dates, and modification dates all will be available to the requesting party. Adequate safeguards must be adopted to ensure that privileged documents contained in a mirror-image copy are not disclosed (*see § 37A.32[5]*).

If a mirror image copy of a hard drive is ordered, a protocol should be established to ensure the confidentiality of its information, including provisions preventing waiver of privilege, limiting the presence of persons during the mirror imaging process, and providing a custodian for the mirror image copy (*see § 37A.32[5][d][iv]*). n61

FOOTNOTES:

(n1)Footnote 1. **Party's production-form request must be made early in litigation.** *See* Kentucky Speedway, LLC v. Nat. Assoc. Stock Car Auto Racing, Inc., 2006 U.S. Dist. LEXIS 92028, at *23 (E.D. Ky. Dec. 18, 2006) .

(n2)Footnote 2. **Objection necessary**. *Fed. R. Civ. P. 34(b)(1)(C)*; *Fed. R. Civ. P. 34(b)(2)(D)*.

2d Circuit See Treppel v. Biovail, Corp., 233 F.R.D. 363, 374 n.6 (S.D.N.Y. 2006) (documents must be

produced in requested native form because party failed to object).

*7th Circuit See Lawson v. Sun Microsystems, Inc., 2007 U.S. Dist. LEXIS 65530, at *13-14 (S.D. Ind. Sept. 4, 2007)* (party failed to object to requested format before proceeding to produce electronically stored information in format contrary to that requested; court ordered party to produce electronically stored information again in format originally requested).

9th Circuit See Williams v. Owens-Illinois, Inc., 665 F.2d 918, 932-933 (9th Cir. 1982) (court required defendant to process whatever computer runs plaintiff desired, but did not require defendant to produce computer program).

D.C. Circuit See United States v. Madeoy, 652 F. Supp. 371, 376 (D.D.C. 1987) , aff'd on other grounds, 912 F.2d 1486 (D.D.C. 1990) (defendant's request to discover computer disks under former *Fed. R. Crim. P. 16(a)(1)(C)* in RICO prosecution denied because information earlier produced in different form).

(n3)Footnote 3. **Requested form of production must be reasonably usable.** *See Residential Constr. v. Ace Prop. and Casualty Ins. Co., 2006 U.S. Dist. LEXIS 36943, at *4-8 (D. Nev. June 5, 2006)* (parties agree to produce documents in searchable electronic images; however, court required index to be provided as well).

*2d Circuit But see Zakre v. Norddeutsche Landesbank Girozentrale, 2004 U.S. Dist. LEXIS 6026, at *1-3 (S.D.N.Y. Apr. 9, 2004)* (no index of 200,000 emails required because emails provided in text-searchable format).

*9th Circuit See Residential Constr. v. Ace Prop. and Casualty Ins. Co., 2006 U.S. Dist. LEXIS 36943, at *4-8 (D. Nev. June 5, 2006)* (parties agree to produce documents in searchable electronic images; however, court required index to be provided as well).

(n4)Footnote 4. *Fed. R. Civ. P. 34(b)(2)(D)*.

(n5)Footnote 5. *Fed. R. Civ. P. 37(a)(1)*; *see also Fed. R. Civ. P. 34(b)* committee note (2006) (reproduced verbatim at *§ 34App.08[2]*).

(n6)Footnote 6. **Responding party must give reasons for failing to produce electronically stored information in requested native file format**. *See Nova Measuring Instruments, Ltd. v. Nanometrics, Inc., 417 F. Supp. 2d 1121, 1122 (N.D. Cal. 2006)* (court ordered defendant to produce electronically stored information in native format as requested by plaintiff because defendant failed to offer any reasons against such production).

(n7)Footnote 7. *See Default Standard for Discovery of Electronically Stored Information ("E-Discovery)*, N.D. Ohio, LR-Appendix K; D. Del.; Administrative Order 174, M.D. Tenn; *Order Governing Electronic Discovery*, Judge Timothy Savage, E.D. Pa.; *Judge McMahon's Rules Governing Electronic Discovery*, Judge Colleen McMahon, S.D.N.Y.; *see also* District of Maryland, *Suggested Protocol for Discovery of Electronically Stored Information ("ESI")*, at 8(A)(1) http://www.mdd.uscourts.gov/news/news/ESIProtocol.pdf (if no agreement on production format, then electronically stored information should be produced as static images and responding party must maintain files in native file format for later production on a showing of "particularized need").

(n8)Footnote 8. **Local default production standards.** *See* In re ClassicStar Mare Lease Litigation, 2009 U.S. Dist. LEXIS 9750, at *27 (E.D. Ky. Feb. 2, 2009) (court shifted costs of making second production of large electronically stored information database in native file format after responding party had initially produced it as static images

accompanied by load files).

(n9)Footnote 9. **Nature of metadata**.

10th Circuit See Williams v. Sprint/United Mgmt. Co., 230 F.R.D. 640, 646, 652 (D. Kan. 2005) (some metadata, such as file dates and sizes, can easily be seen by users, but much metadata is hidden or embedded and unavailable to computer users who are not technically adept).

11th Circuit See In re Seroquel Prod. Liability Litig., 2007 U.S. Dist. LEXIS 5877, at *11-12 (M.D. Fla. Jan. 26, 2007) (parties agree to protocol, listing types of metadata to be produced and under what conditions).

(n10)Footnote 10. **Metadata requested because of its useful searchability attributes.** *See Aguilar v. Immigration and Customs Enforcement Div. of the U.S. Dept. of Homeland Security, 2008 U.S. Dist. LEXIS 97018, at *30-31 (S.D.N.Y. Nov. 21, 2008)* ("Metadata has become 'the new black,' with parties increasingly seeking its production in every case, regardless of size or complexity.").

(n11)Footnote 11. **Metadata can reveal embarrassing and confidential information**. *See Intelligence? The British Dossier on Iraq's Security Infrastructure (Feb. 5, 2003), at* http://tinyurl.com/frqt (metadata in British dossier on Iraq's security infrastructure revealed that document was prepared by post-graduate student attending Monterey Institute of International Studies).

(n12)Footnote 12. **Instances of confidential information contained in metadata**. *See* Kopytoff, *Google's Gaffe Reveals Internal Secrets: Notes Inadvertently Offer a Look at Financial Plans, Future Product*, S.F. Chron. (Mar. 8, 2006), at http://www.sfgate.com/cgi-bin/article.cgi?f/c/a/2006/03/08/GOOGLE.TMP ; *see also* Ewalt, *When Words Come Back From the Dead*, Forbes.com, (Dec. 13, 2005), at http://forbes.com/2005/12/13/microsoft-word-merck_cx_de_1214word.html ; *see also* Bone & Blanford, *UN Office Doctored Report on Murder of Hariri*, Times (London) (Oct. 22, 2005), at http://www.timesonline.co.uk/tol/news/world/middle_east/article581486.ece .

(n13)Footnote 13. **Federal rules do not specifically address production of metadata.** *See Williams v. Sprint/United Management, 230 F.R.D. 640, 649 (D. Kan. 2005)* ; *see also Guidelines for State Trial Courts Regarding Discovery of Electronically-Stored Information*, Conference of Chief Justices (Aug. 2006) (Guideline 6, Comment, states: "Whether the production of metadata and other forms of hidden information, are discoverable should be determined based upon the particular circumstances of the case.").

(n14)Footnote 14. **Court encourages parties to make specific requests for metadata.**

6th Circuit See Kentucky Speedway, LLC v. Nat. Assoc. Stock Car Auto Racing, Inc., 2006 U.S. Dist. LEXIS 92028, at *24-24 (E.D. Ky. Dec. 18, 2006) (court encourages party to limit number of documents on which it requests metadata).

*7th Circuit See Pace v. Int'l Mill Service, Inc., 2007 U.S. Dist. LEXIS 34104, at *6-7 (N.D. Ind. May 7, 2007)* .

D.C. Circuit See D'Onofrio v. SFX Sports Group, Inc., 247 F.R.D. 43, 48 (D.D.C. 2008) .

(n15)Footnote 15. **If request for metadata is explicit, courts likely to require metadata production**. *See The Ponca Tribe of Indians of Oklahoma v. Continental Carbon Co., 2006 U.S. Dist. LEXIS 74225, at *6-7 (W.D. Okla. Oct.*

11, 2006) (metadata not required to be produced in response to original discovery request, which failed to specify manner of electronically stored information production).

(n16)Footnote 15.1. **Burden to ask explicitly for metadata on requesting party**.

6th Circuit See Kentucky Speedway, LLC v. Nat. Assoc. Stock Car Auto Racing, Inc., 2006 U.S. Dist. LEXIS 92028, at *23 (E.D. Ky. Dec. 18, 2006) .

*7th Circuit See Autotech Tech. Lmt. v. Automationdirect.com, Inc., 2008 U.S. Dist LEXIS 27962, at *12-14 (N.D. Ill. Apr. 2, 2008)* (*quoting The Sedona Principles*).

(n17)Footnote 15.2. **Metadata part of physical file.** *See* Minutes of April 14-15, 2005, Civil Rules Committee meeting, at 17, available at http://www.uscourts.gov/rules/Minutes/CRAC0405.pdf ; *see also* District of Maryland, *Suggested Protocol for Discovery of Electronically Stored Information ("ESI")*, at 8(A)(3) http://www.mdd.uscourts.gov/news/news/ESIProtocol.pdf (production of electronically stored information in native file format includes the "contents of the file, the Meta-Data (including System Meta-Data, Substantive Meta-Data, and Embedded Meta-data, ... related to the file").

(n18)Footnote 15.3. *See* Allman, *The Impact of the Proposed Federal E-Discovery Rules*, 12 Rich. J.L. & Tech. 13, 15 (2006) ("Neither default form is intended to mandate production of metadata or embedded data. The Advisory Committee discussed the competing concerns at some length but ultimately decided that the best course of action was to remain silent and leave the issue to individual case law development.").

(n19)Footnote 15.4. *See In re Verisign, Inc. Sec. Litig., 2004 U.S. Dist. LEXIS 22467, at *8-12 (N.D. Cal. Mar. 10, 2004)* (request for electronically stored information in "original format, as it was kept in the usual course of business" meant production in native file format.

(n20)Footnote 15.5. *See* Minutes, April 14-15, 2005, Civil Rules Committee meeting, at 19, available at <http://www.uscourts.gov/rules/Minutes/CRAC0405.pdf>; *see also* Minutes, April 15-16, 2004, Civil Rules Committee meeting, at 15, available at <http://www.uscourts.gov/rules/Minutes/CRAC0404.pdf.

(n21)Footnote 15.6. **Producing metadata in response to imprecisely worded request may not be required.**

*2d Circuit See In re Payment Interchange Fee and Merchant Discount Antitrust Litig., 2007 U.S. Dist. LEXIS 2650, at *14-17 (E.D.N.Y. Jan.12, 2007)* (metadata must be produced in response to request for electronically stored information in form ordinarily maintained).

10th Circuit See Bray & Gillespie Management LLC v. Lexington Ins. Co., 259 F.R.D. 568, 587 (M.D. Fla. 2009) (responding party was required to produce metadata because requesting party specifically asked for information in "native format" with metadata included and responding party never objected to form of production, but simply produced TIFF images); *Williams v. Sprint/United Management Co., 230 F.R.D. 640, 652, n.69 (D. Kan. 2005)* ("Court holds that when a party is ordered to produce electronic documents as they are maintained in the ordinary course of business, the producing party should produce the electronic documents with their metadata intact, unless the party timely objects").

*D.C. Circuit Compare Covad Communications Co. v. Revonet, Inc., 2008 U.S. Dist. LEXIS 104204, at *8 (D.D.C. Dec. 24, 2008)* (court declines to engage in "metaphysical exercise" to determine what format responding party must produce emails in response to discovery request for emails "maintained in the ordinary course of business," and requires parties to share production costs because neither party had earlier raised issue).

(n22)Footnote 15.7. **Emerging case law on party's obligations to produce metadata.** *See The Sedona Principles, Second Edition: Best Practices Recommendations & Principles for Addressing Electronic Document Production*, The Sedona Conference, Principle 12 (2007) (earlier guidance provided in 2005, which contained "modest legal presumption" against production of metadata, modified to require responding party to take into "account the need to produce reasonably accessible metadata that will enable the receiving party to have the same ability to access, search, and display the information as the producing party where appropriate or necessary in light of the nature of the information and the needs of the case"); *compare The Sedona Principles: Best Practices Recommendations & Principles for Addressing Electronic Document Production*, The Sedona Conference 46 (July 2005) ("Although there are exceptions to every rule, especially in an evolving area of the law, there should be a modest legal presumption in most cases that the producing party need not take special efforts to preserve or produce metadata.").

(n23)Footnote 15.8. **Cases presuming that responding party is obligated to produce metadata.**

*2d Circuit See In re Payment Card Interchange Fee and Merchant Discount Antitrust Litig., 2007 U.S. Dist. LEXIS 2650, at *14 (E.D.N.Y. Jan. 12, 2007)* (court found that stripping of metadata from electronically stored document is contrary to Rule 34).

10th Circuit See Williams v. Sprint/United Mgmt. Co., 230 F.R.D. 640, 652 (D. Kan. 2005) (metadata must be produced unless parties agree otherwise or responding party moves for protective order).

(n24)Footnote 15.9. **Metadata may be crucial to understanding underlying document**. *See Williams v. Sprint/United Management Co., 230 F.R.D. 640, 647 (D. Kan. 2005)* (tables in database may have little meaning without metadata).

(n25)Footnote 15.10. **Metadata facilitates searching.**

*6th Circuit See In re: NVMS, LLC, Debtor, 2008 Bankr. LEXIS 2674, at *8 (M.D. Tenn. Mar. 21, 2008)* (production of electronically stored information in electronic format was of no value because electronic fields were missing).

*11th Circuit See Goodbys Creek, LLC v. Arch Ins. Co., 2008 U.S. Dist. LEXIS 79660, at *10 (M.D. Fla. Sept. 15, 2008)* (defendants "compelled to provide any documents previously supplied as TIFF images in their native format, provide the documents in another comparably searchable format, or supply Goodbys with software for searching the TIFF images").

(n26)Footnote 15.11. **Reasonably usable form cannot significantly degrade electronic searching capability.** *See Fed. R. Civ. P. 34(b)* committee note (2006) (reproduced verbatim at *§ 34App.08[2]*).

*7th Circuit See Craig & Landreth, Inc. v. Motor of Am., Inc., 2009 U.S. Dist. LEXIS 66069, at *6-7 (S.D. Ind. July 27, 2009)* (ESI production in.pdf format without metadata significantly degraded searchability of information, and defendant ordered to produce ESI in native file format).

*11th Circuit See In re Netbank, Inc. Sec. Litig., 2009 U.S. Dist. LEXIS 69031, at *71-75 (N.D. Ga. Aug. 7, 2009)* (ESI production in TIFF images without metadata was not reasonably usable, and defendant's hypothetical problems with native file format production insufficient to justify TIFF production).

(n27)Footnote 15.12. **Time of request for metadata often decisive in court's ruling**.

*2d Circuit See Aguilar v. Immigration and Customs Enforcement Div. of the U.S. Dept. of Homeland Security, 2008 U.S. Dist. LEXIS 97018, at *22 (S.D.N.Y. Nov. 21, 2008)* ("On the other hand, if metadata is not sought in the initial document request, and particularly if the producing party already has produced the documents in another form, courts tend to deny later requests, often concluding that the metadata is not relevant.").

7th Circuit See Autotech Tech. Ltd. Partnership v. Automationdirect.com, Inc., 248 F.R.D. 556 (N.D. Ill. 2008) ("Ordinarily, courts will not compel the production of metadata when a party did not make that a part of its request.").

(n28)Footnote 15.13. **Courts frequently grant request for system-file metadata timely made.** *See Aguilar v. Immigration and Customs Enforcement Div. of the U.S. Dept. of Homeland Security, 2008 U.S. Dist. LEXIS 97018, at *22 (S.D.N.Y. Nov. 21, 2008)* (system-file metadata is often easy to provide, is useful to requesting party, and should be produced unless responding party can demonstrate some reason otherwise); *see also The Sedona Principles: Best Practices Recommendations and Principles for Addressing Electronic Document Production*, Sedona Conference Working Group Series, 2d. ed. (2007) ("Absent party agreement or court order specifying the form or forms of production, production should be made in the form or forms in which the information is ordinarily maintained or in a reasonably usable form, taking into account the need to produce reasonably accessible metadata that will enable the receiving party to have the same ability to access, search, and display the information as the producing party where appropriate or necessary in light of the nature of the information and the needs of the case.").

(n29)Footnote 15.14. **Production of electronically stored information without metadata may comply with rules.** *See* Minutes of April 14-15, 2005, Civil Rules Committee meeting, at 17, available at http://www.uscourts.gov/rules/Minutes/CRAC0405.pdf ; Rosenthal, *A Few Thoughts on Electronic Discovery After December 1, 2006, 116 Yale L.J. Pocket Part 167, 187 (Dec. 2006)* ("The second option is a form that is reasonably usable for the litigation, which may, but need not, include metadata.").

(n30)Footnote 15.15. **Metadata not always required.** *See Wyeth v. Impax Labor., Inc., 2006 U.S. Dist. LEXIS 79761, at *4 (D. Del. Oct. 26, 2006)* (metadata often of limited evidentiary value and reviewing it can be wasteful).

*2d Circuit But see In re Payment Interchange Fee and Merchant Discount Antitrust Litig., 2007 U.S. Dist. LEXIS 2650, at *14 (E.D.N.Y. Jan.12, 2007)* (deleting metadata from electronically stored information significantly degrades searchability of documents).]

*3d Circuit See Wyeth v. Impax Labor., Inc., 2006 U.S. Dist. LEXIS 79761, at *4 (D. Del. Oct. 26, 2006)* (metadata is often of limited evidentiary value and reviewing it can be wasteful).

(n31)Footnote 15.16. **Local default standards allow production without metadata.** *See* District of Maryland, *Suggested Protocol for Discovery of Electronically Stored Information ("ESI")*, at 11(C) http://www.mdd.uscourts.gov/news/news/ESIProtocol.pdf ("Meta-data, especially substantive Meta-Data, need not be routinely produced, except upon agreement of the requesting and producing litigants, or upon a showing of good cause in a motion filed by the Requesting Party... . Consideration should be given to the production of System Meta-Data and its production is encouraged in instances where it will not unnecessarily or unreasonably increase costs or burdens.").

(n32)Footnote 15.17. **Removing metadata does not necessarily degrade searchability function in all cases.** *See Aguilar v. Immigration and Customs Enforcement Div. of the U.S. Dep't of Homeland Security, 2008 U.S. Dist. LEXIS 97018, at *36-37 (S.D.N.Y. Nov. 21, 2008)* ("Although it undoubtedly is true that Word and PowerPoint documents

could be searched more easily with metadata, the Plaintiffs have been provided with text-searchable PDF's...[T]he plaintiffs should not encounter significant difficulty sorting and searching the word processing and PowerPoint files they have received.").

(n33)Footnote 15.18. **Cases presuming that responding party is not obligated to produce metadata.**

*3d Circuit See Wyeth v. Impax Labratories, Inc., 2006 U.S. Dist. LEXIS 79761, at *4-5 (D. Del. Oct. 26, 2006)* (local rules of court require particularized need for production of metadata).

*4th Circuit See O'Bar v. Lowe's Home Centers, 2007 U.S. Dist. LEXIS 32497, at *12 (W.D. N.C. May 2, 2007)* (court ordered parties in preparing discovery plan to consider District of Maryland's electronic discovery guidelines, which state that metadata need not be routinely produced unless good cause is shown).

6th Circuit See Kentucky Speedway, LLC v. National Assoc. of Stock Car Auto Racing, Inc., 2006 U.S. Dist. LEXIS 92028, at *21-25 (E.D. Ky. Dec. 18, 2006) (production of metadata not warranted unless requesting party makes particularized showing of need, identifying individual documents; court refers favorably to *The Sedona Principles for Electronic Document Production*, which concluded that in this evolving area of law, "there should be a modest legal presumption in most cases that the producing party need not take special efforts to preserve or produce metadata").

(n34)Footnote 15.19. **Tardy metadata request.**

3d Circuit See Ford Motor Co. v. Edgewood Props., 257 F.R.D. 418, 426 (D. N.J. 2009) (eight-month delay in objecting to ESI production in TIFF images was "patently unreasonable," and court denied tardy request to produce ESI in native file format).

*6th Circuit See Michigan First Credit Union v. Cumis Ins. Soc., 2007 U.S. Dist. LEXIS 84842, at *5-6 (E.D. Mich. Nov. 16, 2007)* (production of metadata "would be extremely burdensome, with no countervailing discovery or evidentiary benefit").

(n35)Footnote 15.20. **Particularized need required for production of substantive application metadata**.

2d Circuit See CP Solution PTE, Ltd. v. Gen. Elec. Co., 2006 U.S. Dist. LEXIS 27053, at *14 (D. Conn. Feb. 6, 2006) (party must show need for metadata).

*3d Circuit See Wyeth v. Impax Labor., Inc., 2006 U.S. Dist. LEXIS 79761, at *4-5 (D. Del. Oct. 26, 2006)* (metadata not required when party failed to show particularized need for native file format).

4th Circuit See O'Bar v. Lowe's Home Ctr., 2007 U.S. Dist. LEXIS 32497, at *13-14 (W.D.N.C. May 2, 2007) (pretrial order requiring showing of particularized need).

*6th Circuit See Kentucky Speedway, LLC v. Nat. Assoc. Stock Car Auto Racing, Inc., 2006 U.S. Dist. LEXIS 92028, at *23 (E.D. Ky. Dec. 18, 2006)* (party failed to make showing of particularized need for metadata).

(n36)Footnote 15.21. **Court considers several factors in determining whether to require metadata production.** *See* Rothstein, Hedges, and Wiggins, *Managing Discovery of Electronic Information: A Pocket Guide for*

Judges, Federal Judicial Center, 14 (2007) ("[C]onsiderations for the court include the following: If the requesting party disputes that the proposed form of production is reasonably usable, what limits its use? Has the responding party stripped features, such as searchability, or metadata or embedded data that may be important? If so, what is the justification?"); *see also* Rosenthal, *A Few Thoughts on Electronic Discovery After December 1, 2006, 116 Yale L.J. Pocket Part 167, 188 (Dec. 2006)* ("Resolving disputes over producing metadata will require judges to decide whether the metadata is relevant; whether the information it supplies can be obtained more easily elsewhere; whether the information it supplies is cumulative; whether the metadata may enable the use of technology tools to search or sort the information being produced; and whether the costs and burdens in producing the metadata outweigh the benefits it provides.").

(n37)Footnote 15.22. **Proper redaction techniques.** *See Redacting with Confidence: How to Safely Publish Sanitized Reports Converted from Word to PDF*, National Security Agency, at 4-5 (December 13, 2005).

(n38)Footnote 15.23. **Software applications redacting metadata**. *See Williams v. Sprint/United Management Co., 230 F.R.D. 640, 644 (D. Kan. 2005)* (defendant used software to scrub spreadsheets to remove metadata).

(n39)Footnote 15.24. **On-line utilities provide redaction applications**. *See How to Minimize Metadata in Word 2002*, <http://support.microsoft.com.downloads/details.aspx?scid=kb;en-us;290945> (Mar. 3, 2005); Payne, *Metadata: the Good, the Bad, and the Ugly*, http://www.payneconsulting.com/pub_books/articles/ .

(n40)Footnote 15.25. *See Redacting with Confidence: How to Safely Publish Sanitized Reports Converted from Word to PDF*, National Security Agency, at 4-5 (December 13, 2005); *see also* Kentucky Speedway, LLC v. Nat. Assoc. Stock Car Auto Racing, Inc., 2006 U.S. Dist. LEXIS 92028, at *24-24 (E.D. Ky. Dec. 18, 2006) (request for metadata should be limited to specified documents).

(n41)Footnote 15.26. **Extracting metadata and placing it in separate load file.** *See Aguilar v. Immigration and Customs Enforcement Div. of the U.S. Dept. of Homeland Security, 2008 U.S. Dist. LEXIS 97018, at *9 (S.D.N.Y. Nov. 21, 2008)* ("A load file is a 'file that relates to a set of scanned images or electronically processed files, and indicates where individual pages or files belong together as documents, to include attachments, and where each document begins and ends,' and may also include 'data relevant to the individual; documents, such as metadata, coded data, and the like." *quoting The Sedona Conference Glossary* 31 (2d ed. 2007)).

(n42)Footnote 15.26.1. **Separate load files containing selected metadata makes ESI production in.pdf format reasonably usable**. *See FSP Stallion 1, LLC v. Luce, 2009 U.S. Dist. LEXIS 68460, at *8-17 (D. Nev. July 21, 2009)* (court adopts plaintiff's compromise solution to produce ESI in TIFF image with separate load file containing selected system-file metadata).

(n43)Footnote 15.27. **Native file production may be more efficient in some cases.** *See In re ClassicStar Mare Lease Litigation, 2009 U.S. Dist. LEXIS 9750, at *22-23 (E.D. Ky. Feb. 2, 2009)* (producing financial database in native file format allowed party to "query various search reports and extract the desired information in a fraction of the time," which could not be done with electronically stored information produced in.tiff images with load files for either Concordance or Summation platforms).

(n44)Footnote 16. **Request for computer program to verify hard-copy documents reasonable.** *See Dunn v. Midwestern Indem., 88 F.R.D. 191, 195 (S.D. Ohio 1980)* (court ordered production of computer program to verify accuracy of reports produced in hard copy).

(n45)Footnote 17. Letter from Albert Sacks, assistant reporter to the Advisory Committee on Civil Rules to John P. Frank (July 2, 1969), Records of the U.S. Judicial Conference: Committees on Rules of Practice and Procedure 1935-1988, Congressional Information Service, microformed on Fiche (CIS) ST-121 (009-012).

(n46)Footnote 18. **Party required to modify computer program.** *See National Union Elec. Corp. v. Matsushita*

Elec. Indus. Co., 494 F. Supp. 1257, 1260-1262 (E.D. Pa. 1980) (plaintiff required to rerun and slightly modify computer program by substituting new instruction to print results on magnetic tape instead of on paper; requesting party agreed to pay costs).

(n47)Footnote 19. **Minor modification of computer program ordered.**

3d Circuit See National Union Elec. Corp. v. Matsushita Elec. Indus. Co., 494 F. Supp. 1257, 1258 (E.D. Pa. 1980) (defendants asserted that it would be simple matter for plaintiff to slightly modify and rerun software program).

4th Circuit See Adams v. Dan River Mills, Inc., 54 F.R.D. 220, 222 (W.D. Va. 1972) ("While it appears to this court that the above language [Committee Note to Rule 34] only directly covers the situation where the respondent can be required to prepare the information in a usable form, such as a print-out, it does not appear to preclude the production of computer in-put information such as computer cards or tapes.").

(n48)Footnote 20. ***Matsushita* relied on earlier *Manual for Complex Litigation.*** *National Union Elec. Corp. v. Matsushita Elec. Indus. Co., 494 F. Supp. 1257, 1258 (E.D. Pa. 1980)* (citing *Manual for Complex Litigation § 2.715*).

(n49)Footnote 21. *Manual for Complex Litigation § 11.446 (4th ed. 2004)*.

(n50)Footnote 22. **Significant modification of computer programs ordered.** *See In re Brand Name Prescription Drugs Antitrust Litig., 1995 U.S. Dist. LEXIS 8281, at *2-4 (N.D. Ill. June 13, 1995)* (in class action suit, defendant required to create special software to retrieve email data from about 30 million pages stored in backup tape, but parties instructed to consult with each other and agree on meaningful limitations on scope of discovery).

(n51)Footnote 23. **"Creation" of documents not required.** *See Hagemeyer N. Am., Inc. v. Gateway Data Sciences Corp., 222 F.R.D. 594, 598 (E.D. Wis. 2004)* (defendant would not be compelled to produce "full backup" of defendant's emails because there was no showing that such a tape existed and a party is not required to produce documents or tangible things that are not in existence or within its control); *see also* Mon River Towing, Inc. v. Industry Terminal and Salvage Co., 2008 U.S. Dist. LEXIS 45369, at *3-5 (W.D. Pa. June 10, 2008) ("Court finds that Rule 34 does not require a responding party to create or generate responsive materials in a specific form requested by the moving party").

(n52)Footnote 24. *Fed. R. Civ. P. 26(b)(2)(C)(iii)*.

(n53)Footnote 25. **Proportionality test applied to discovery request to modify software program.** *See Jones v. Goord, 2002 U.S. Dist. LEXIS 8707, at *27-47 (S.D.N.Y. May 15, 2002)* (proportionality analysis applied to request to modify software program).

(n54)Footnote 26. **Costs of search not substantial.** *See Fed. R. Civ. P. 26(b)(2)(C)(iii)*; *see also Mackey v. IBP, Inc., 167 F.R.D. 186, 199 (D. Kan. 1996)* (30 hours of computer programming at total cost of $1500 not unduly expensive or burdensome for large corporation).

(n55)Footnote 27. **Proportionality analysis fact-driven.** *Fed. R. Civ. P. 26(b)(2)(C)*; *see EEOC v. Gen. Dynamics Corp., 999 F.2d 113, 115-116 (5th Cir. 1993)* (request for computer program to check veracity of data denied as untimely on eve of trial when party should have made request earlier).

(n56)Footnote 28. **Requested matter must be relevant.** *See Fed. R. Civ. P. 26(b)(2)(C)(iii)*.

*2d Circuit See Anti-Monopoly, Inc. v. Hasbro, Inc., 1995 U.S. Dist. LEXIS 16355, at *2-4 (S.D.N.Y.*

Nov. 3, 1995) (plaintiff failed to make showing of need for computer data, which required new software program to extract data, although court gave party another opportunity to resolve issue among themselves).

*7th Circuit See Haroco, Inc. v. American Nat'l Bank & Trust Co., 1987 U.S. Dist. LEXIS 9549, at *7 (N.D. Ill. 1987)* (to determine relevancy, plaintiff granted access to computer data under appropriate confidentiality restrictions).

(n57)Footnote 29. **Sanctions if requesting party did not intend to use documents.** *See Danis v. USN Communs., Inc., 2000 U.S. Dist. LEXIS 16900, at *21-22 (N.D. Ill. Oct. 20, 2000)* (court sanctioned requesting party for not using documents extracted from computer after court ordered special software developed at cost of $159,000).

(n58)Footnote 30. **Likely benefits minimal.** *See Oppenheimer Fund, Inc. v. Sanders, 437 U.S. 340, 358-360, 98 S. Ct. 2380, 57 L. Ed. 2d 253 (1978)* (Court did not compel defendant corporation to develop software at cost of $16,000 to retrieve data in its computer system needed to provide notice to class members because it found cost "substantial" under Rule 23(d) rather than "undue" under Rule 26(c)); *see also Marker v. Union Fidelity Life Ins. Co., 125 F.R.D. 121, 124-125 (M.D.N.C. 1989)* (expenditure of 100 man hours at cost of $6,000 to create software program to retrieve marginally relevant documents is unduly burdensome).

(n59)Footnote 31. **Substantial costs of search apportioned between parties.** *See Oppenheimer Fund, Inc. v. Sanders, 437 U.S. 340, 98 S. Ct. 2380, 57 L. Ed. 2d 253 (1978)* (Court found that lower court abused its discretion in failing to require requesting party to pay for costs in creating new computer software program to identify putative class members, basing its ruling on Rule 23 notification to class members, not on Rule 34); *see also Williams v. E.I. Du Pont de Nemours & Co., 119 F.R.D. 648, 651 (W.D. Ky. 1987)* (court required responding party to produce computerized database, but ordered requesting party to pay fair portion of cost when data originally in hands of requesting party).

(n60)Footnote 32. **Haphazard filing system cannot defeat discovery request.**

1st Circuit See Kozlowski v. Sears, Roebuck & Co., 73 F.R.D. 73, 76 (D. Mass. 1976) (business could not defeat purpose of discovery rules by retaining unwieldy filing system).

*2d Circuit See CP Solutions, LTD v. Gen. Elec. Co., 2006 U.S. Dist. LEXIS 27053, at *14-15 (D. Conn. Feb. 6, 2006)* (defendant ordered to provide plaintiff "with the information data, or software needed to accomplish" conversion of data into usable form).

8th Circuit See Northern Natural Gas Co. v. Teksystems Global Applications, Outsourcing, 2006 U.S. Dist. LEXIS 64149, at *87-88 (D. Neb. Sept. 6, 2006) (unwieldy filing system does not excuse party's duty to produce requested information in usable form).

(n61)Footnote 33. **Probable showing that system deliberately designed to frustrate litigation.** *In re Brand Name Prescription Drugs Antitrust Litig., 1995 U.S. Dist. LEXIS 8281, at *7-8 (N.D. Ill. June 13, 1995)* (defendant must retrieve emails stored on backup tape despite substantial retrieval costs).

6th Circuit But see Baxter Travenol Lab., Inc. v. Le May, 93 F.R.D. 379, 383 (S.D. Ohio 1981) (burden imposed by request requiring search of 2.8 million invoices on microfiche at cost of $80,000 does not demonstrate "extreme showing of burdensomeness" sufficient to deny production).

*7th Circuit See In re Brand Name Prescription Drugs Antitrust Litig., 1995 U.S. Dist. LEXIS 8281, at *7-8 (N.D. Ill. June 13, 1995)* (defendant must retrieve emails stored on backup tape despite substantial

retrieval costs).

(n62)Footnote 34. **Offer to pay costs incurred in developing software eliminates major objection.**

*2d Circuit See Anti-Monopoly, Inc. v. Hasbro, Inc., 1995 U.S. Dist. LEXIS 16355, at *2-4 (S.D.N.Y. Nov. 3, 1995)* (court instructed parties to discuss creating program to retrieve data and strongly suggested that its rulings would depend on plaintiff's willingness to pay costs).

3d Circuit See National Union Elec. Corp. v. Matsushita Elec. Indus. Co., 494 F. Supp. 1257, 1262 (E.D. Pa. 1980) (party volunteered to pay for costs in modifying software to retrieve data and relieved court of need to evaluate allocation of costs).

10th Circuit See Mackey v. IBP, Inc., 167 F.R.D. 186, 199 (D. Kan. 1996) (requesting party volunteered to undertake analysis of 3,000 termination reports).

(n63)Footnote 35. **Cost shifted to other party.** *See In re Air Disaster at Detroit Metro. Airport, 130 F.R.D. 634, 635 (E.D. Mich. 1989)* (machine-readable computer program required instead of hard copy print, but requesting party directed to pay additional costs incurred in manufacturing program).

(n64)Footnote 36. **Responding party responsible for costs.** *See Dunn v. Midwestern Indem., 88 F.R.D. 191, 195 (S.D. Ohio 1980)* (court stressed that impracticality does not equate to impossibility; production of computer program estimated at $500,000 would not be excused).

(n65)Footnote 37. *Fed. R. Civ. P. 34(a).*

(n66)Footnote 38. **Parties should establish protocol governing inspection.**

*2d Circuit See Calyon v. Mizuho Sec. USA Inc., 2007 U.S. Dist. LEXIS 36961, at *19-20 (S.D.N.Y. May 18, 2007)* (when parties could not agree on whether plaintiff's or defendant's expert should inspect mirror image of defendant's hard drive, court ordered defendant's forensic expert to inspect mirror image and produce information in accordance with protocol agreed to between parties).

*3d Circuit Compare Cenveo Corp. v. Slater, 2007 U.S. Dist. LEXIS 8281, at *4-5 (E.D. Pa. Jan. 31, 2007)* (court ordered defendant to provide mirror image of hard drive to plaintiff's forensic expert to review in accordance with review protocol agreed to by parties).

11th Circuit See Strasser v. Bose Yalamanchi, M.D., P.A., 669 So. 2d 1142, 1144-1145 (Fla. 4th DCA 1996) (court suggested option of plaintiff sending representative to access and inspect computer in presence of defendant's representative under agreed set of procedures).

(n67)Footnote 39. **Metadata should be addressed.** *See* Hagenbuch v. 3BG Hagenbuch, (N.D. Ill. Mar. 8, 2006) (TIFF images of documents produced after voluntary on-site inspection of computer hard drive inadequate because they did not contain metadata).

(n68)Footnote 40. **Inspection of hard drives by third party.**

6th Circuit John B. v. Goetz, 531 F.3d 448, 459 (6th Cir. 2008) (compelled forensic imaging and production of computer hard drives should be ordered only "in a very limited set of circumstances").

*9th Circuit See OKI America, Inc. v. Advanced Micro Devices, Inc., 2006 U.S. Dist. LEXIS 66441, at *11 (N.D. Cal. Aug. 31, 2006)* (court denies request for on-site computer inspection because computer contained "highly confidential proprietary material").

*10th Circuit See McCurdy Group, LLC v. American Biomedical Group, Inc., 2001 U.S. App. LEXIS 10570, at *20-23 (10th Cir. May 21, 2001)* (court denied defendant's request for direct hard-drive inspection, noting, among other things, that defendant earlier rejected plaintiff's offer to designate third party to inspect hard drive to ensure that all relevant electronic documents had been produced).

(n69)Footnote 41. **Improper conduct by respondent required.**

1st Circuit See Williams v. Mass. Mut. Life Ins. Co., 226 F.R.D. 144, 146 (D. Mass. 2005) (absent any credible evidence that responding party failed to produce requested email, court declined to order inspection of computer hard drive).

2d Circuit See Convolve, Inc. v. Compaq Computer Corp., 223 F.R.D. 162, 169 (S.D.N.Y. 2004) (defendant was not required to provide direct access to its hard drives, servers, and databases because, although defendant failed to produce some documents, there was no widespread destruction or withholding of relevant information or other systematic abuse of discovery process so as to warrant such a severe sanction).

*4th Circuit See Orrell v. Motorcarparts of Amer., Inc., 2007 U.S. Dist. LEXIS 89524, at *18-19 (W.D.N.C. Dec. 5, 2007)* (forensic examination of personal computers ordered to resolve evidence inconsistencies when plaintiff asserted that electronically stored information was lost because computer malfunctioned and crashed).

*5th Circuit See Butler v. Kmart Corp., 2007 U.S. Dist. LEXIS 61141, at *9 (N.D. Miss. Aug. 20, 2007)* (court declined to order on-site inspection of computers because plaintiff failed to show that responding party acted improperly).

6th Circuit John B. v. Goetz, 531 F.3d 448, 460-461 (6th Cir. 2008) (court granted defendant's petition for mandamus and set aside district court's order requiring forensic imaging of computers because of privacy and confidentiality considerations and the failure of a showing that defendants were unwilling to preserve or produce relevant evidence).

*8th Circuit See Ameriwood Indus., Inc. v. Liberman, 2006 U.S. Dist. LEXIS 93380, at *13 (E.D. Mo. Dec. 27, 2006)* ("discrepancies or inconsistencies in the responding party's discovery responses may justify a party's request to allow [its] expert to create and examine a mirror image of a hard drive").

*9th Circuit See Daimler Truck N. Am. LLC v. Younessi, 2008 U.S. Dist. LEXIS 86022, at. *5-8 (W.D. Wash. June 20, 2008)* (court quashed subpoena requesting mirror image of third party's hard drives because production would disclose confidential trade secrets, and third party should be permitted to conduct its own search in absence of allegation that documents are being improperly destroyed or that third party is unwilling to cooperate with reasonable discovery requests).

11th Circuit See U & I Corp. v. Advanced Medical Design, Inc., 251 F.R.D. 667, 674 (M.D. Fla. 2008) (to gain direct access to opposing party's electronically stored information, court must find evidence of non-compliance with discovery rules or other discovery misconduct).

(n70)Footnote 41.01. **Some courts are more willing to order forensic imaging to improve efficiency of searches.**

6th Circuit See John B. v. Goetz, 531 F.3d 448, 460 (6th Cir. 2008) ("forensic imaging is not uncommon in the course of civil discovery" and parties can choose to preserve information through forensic imaging).

10th Circuit See White v. Graceland College Ctr. for Prof'l Dev. & Lifelong Learning, Inc., 2009 U.S. Dist. LEXIS 22068, at *23-24 (D. Kan. Mar. 18, 2009) ("While still cautious, many courts now consider requests for inspection or requests for forensic or mirror imaging of computers to be neither routine nor extraordinary.").

D.C. Circuit See Covad Communs. Co. v. Revonet, Inc., 258 F.R.D. 5 (D.D.C. 2009) (court orders mirror imaging of database primarily because it is most efficient to conduct search).

(n71)Footnote 41.1. **Offer to pay costs incurred in imaging does not entitle requesting party to compel imaging.** *See The Scotts Co. LLC v. Liberty Mutual Ins. Co., 2007 U.S. Dist. LEXIS 43005, at *5-9 (S.D. Ohio June 12, 2007)* ("without a qualifying reason, plaintiff is no more entitled to access to defendant's electronic information storage systems than to defendant's warehouses storing paper documents); *cf.* Thielen v. Buongiorno USA, Inc., (W.D. Mich. Feb. 8, 2007) (court granted defendant's motion to mirror image plaintiff's single computer under confidential review protocol on minimal showing that requested information was relevant).

(n72)Footnote 42. **On-site inspection warranted.**

2d Circuit See Cornell Research Found., Inc. v. Hewlett Packard Co., 223 F.R.D. 55, 75 (N.D.N.Y. 2003) (on-site inspection of computer hard drive less expensive and burdensome than pursuing litigation).

*6th Circuit See Ferron v. Search Cactus, L.L.C., 2008 U.S. Dist. LEXIS 34599, at *8-10 (S.D. Ohio Apr. 28, 2008)* (citing **Moore's**) (on-site inspection of computers ordered because defendant apparently failed to fulfill preservation obligation and did not disclose relevant electronically stored information).

*10th Circuit See Balboa Threadworks, Inc. v. Stucky, 2006 U.S. Dist. LEXIS 29265, at *14-16 (D. Kan. Mar. 24, 2006)* (court ordered parties to develop search protocol to prevent disclosure of protected and privileged matter during mirror-imaging process.

(n73)Footnote 43. **Burden on party seeking inspection.** *Bethea v. Comcast, 218 F.R.D. 328, 329-330 (D.D.C. 2003)* (plaintiff's mere belief that defendant had failed to respond fully and that defendant's computer still contained "appropriate discovery information" did not meet stringent standard for permitting on-site inspection of computer system); *see Equity Analytics, LLC v. Lundin, 248 F.R.D. 331, 334 (D.D.C. 2008)* (no need to retain hard drive if mirror image made because mirror image "is a perfect duplication of the hard drive and ... it is physically impossible for the mirror image to contain anything the hard drive does not and for there to be anything on the mirror image that is not on the hard drive").

(n74)Footnote 44. **Safeguards required before permitting inspection of computer.**

2d Circuit See Cornell Research Found. Inc. v. Hewlett Packard Co., 223 F.R.D. 55, 75 (N.D.N.Y.

2003) (court orders inspection of computer hard drive subject to terms and conditions to be negotiated by parties); *Quotron Sys., Inc. v. Automatic Data Processing, Inc., 141 F.R.D. 37, 39-40 (S.D.N.Y. 1992)* (party's suggested inspection by three employees and counsel, all signing confidentiality agreements, rejected because court was concerned with employees' access to proprietary programming; inspection was limited to counsel and experts).

6th Circuit See Thielen v. Buongiorno USA, Inc., (W.D. Mich. Feb. 8, 2007) (court ordered defendant to select forensic expert to mirror image and review plaintiff's computer hard drive and report findings under confidence to plaintiff's counsel prior to forwarding it to defendant's counsel).

*9th Circuit See Ukiah Automotive Invest. v. Mitsubishi Motors of N. Am. Inc., 2006 U.S. Dist. LEXIS 33352, at *11-12 (N.D. Cal. May 17, 2006)* (on-site computer inspection ordered to be conducted by neutral inspector chosen by the parties).

(n75)Footnote 44.1. **Mirror imaging involves forensic examination and recording hash value of each file to ensure integrity of data.** *See U.S. v. Crist, 2008 U.S. Dist. LEXIS 84980, at *6-7 (M.D. Pa. Oct. 22, 2008)* (mirror imaging involves forensic examination that ensures that nothing can be written to hard drive and recording MD5 hash value of each file, which is a unique alphanumeric representation of the data, a sort of "fingerprint" or "digital DNA").

(n76)Footnote 45. **Computer may be unavailable for a few hours during mirror imaging.** *See Playboy Enters. v. Welles, 60 F. Supp. 2d 1050, 1054 (S.D. Cal. 1999)* (mirror imaging process took approximately 4 to 8 hours for each computer).

(n77)Footnote 46. **Mirror imaging copying can be burdensome.** *See* Diepenhorst v. City of Battle Creek, 2006 U.S. Dist. LEXIS 48551, at *5-6 (W.D. Mich. June 30, 2006) ("imaging of computer hard drive is an expensive process, and adds to the burden of litigation for both parties" especially because both parties must retain experts).

(n78)Footnote 47. **Mirror imaging requires attention of expert technician.**

8th Circuit See LEXIS-NEXIS v. Beer, 41 F. Supp. 2d 950, 953 (D. Minn. 1999) (counsel conceded that they inadvertently overwrote remnants of deleted files in mirror imaging files).

10th Circuit See Gates Rubber Co. v. Bando Chem. Indus., 167 F.R.D. 90, 112 (D. Colo. 1996) (use of off-the-shelf software to unerase deleted files required downloading program onto hard drive, overwriting space allocated to deleted files, and destroying deleted files).

(n79)Footnote 48. **Mirror imaging should not be routinely ordered by court to satisfy preservation duty.** *See Kemper Mortgage Inc. v. Russell, 2006 U.S. Dist. LEXIS 20729, at *4-6 (S.D. Ohio Apr. 18, 2006)* (court declined to take position on whether mirror imaging of hard drives was necessary to satisfy preservation duty or to shift that cost to requesting party).

(n80)Footnote 49. **Relevant residual-deleted information is subject to discovery.**

8th Circuit See LEXIS-NEXIS v. Beer, 41 F. Supp. 2d 950, 953-954 (D. Minn. 1999) (court required production of laptop computer for analysis by forensics experts to determine whether deleted files included documents protected by earlier preservation order).

*10th Circuit See Balboa Threadworks, Inc. v. Stucky, 2006 U.S. Dist. LEXIS 29265, at *11-13 (D. Kan. Mar. 24, 2006)* (mirror image of computer hard drive ordered on suspicion that relevant electronically

stored information was being destroyed).

(n81)Footnote 50. **Mirror imaging of computer to protect evidence against suspected destruction.** *See Gates Rubber Co. v. Bando Chem. Indus., 167 F.R.D. 90, 99-100 (D. Colo. 1996)* (on-site inspection ordered to prevent irreparable harm caused by deletion of electronic records).

(n82)Footnote 51. **Mirror imaging of computer preserves all information on hard drives, including creation dates of files.**

9th Circuit See Comm. Center, Inc. v. Hewitt, 2005 U.S. Dist. LEXIS 10891, at *3-4 (E.D. Cal. Apr. 5, 2005) (mirror image is "forensic duplicate, which replicates bit for bit, sector for sector, all allocated and unallocated space, including slack space, on a computer hard drive").

10th Circuit See Gates Rubber Co. v. Bando Chem. Indus., 167 F.R.D. 90, 103 (D. Colo. 1996) (creation dates may be useful in determining when files were deleted).

(n83)Footnote 52. **Proportionality analysis applies to discovery request for on-site computer inspection.** *See Fennell v. First Step Designs, Ltd., 83 F.3d 526, 532 (1st Cir. 1996)* ("In determining whether material is 'discoverable,' the court should consider not only whether the material actually exists, but the burdens and expenses entailed in obtaining the material.").

1st Circuit See Fennell v. First Step Designs, Ltd., 83 F.3d 526, 532 (1st Cir. 1996) ("In determining whether material is 'discoverable,' the court should consider not only whether the material actually exists, but the burdens and expenses entailed in obtaining the material.").

*7th Circuit Stallings-Daniel v. Northern Trust Co., 2002 U.S. Dist. LEXIS 4024, at *1-3 (N.D. Ill. Mar. 11, 2002)* (court rejected plaintiff's motion to conduct intrusive "electronic discovery" of defendant's email system because it was based on "wholly speculative" investigation of defendant's email files).

*8th Circuit Ameriwood Indus., Inc. v. Liberman, 2006 U.S. Dist. LEXIS 93380, at *15 (E.D. Mo. Dec. 27, 2006)* (court applied proportionality analysis to determine whether inaccessible deleted data could be recovered and found that imaging of hard drive was appropriate, especially because plaintiff did not object to incurring costs for requested procedures).

*10th Circuit See The Ponca Tribe of Indians of Oklahoma v. Continental Carbon Co., 2006 U.S. Dist. LEXIS 74225, at *4-5 (W.D. Okla. Oct. 11, 2006)* (court denied mirror imaging of database because requesting party failed to show any need, whereas opposing party presented evidence substantiating significant costs and burdens).

11th Circuit See U & I Corp. v. Advanced Medical Design, Inc., 251 F.R.D. 667, 676 (M.D. Fla. 2008) (court found that burden and expense of independent inspection of respondent's hard drives was outweighed by benefits of proposed limited inspection of respondent's computer hard drives used by certain employees because respondent failed to show substantial justification for its unwillingness to abide by discovery rules and court's prior orders).

D.C. Circuit See Peskoff v. Faber, 251 F.R.D. 59, 62-63 (D.D.C. 2008) (requiring forensic examination was not "undue burden" under Rule 26(b)(2) because defendant failed to take steps to preserve accessible electronically stored information).

(n84)Footnote 53. **Request for mirror imaging of computer must be timely.** *See Symantec Corp. v. Mcafee Assocs., Inc., 1998 U.S. Dist. LEXIS 22591, at *10 (N.D. Cal. Aug. 13, 1998)* (unpublished opinion) (party possessed disputed document for several months before requesting to mirror image computer hard drives to verify its authenticity; request was denied as too late, burdensome, and prejudicial to opposing party on eve of trial).

(n85)Footnote 54. **No direct access to opponent's database.** *In re Ford Motor Co., 345 F.3d 1315, 1317 (11th Cir. 2003)* (court emphasized that Rule 34(a) does not give requesting party the right to conduct actual search).

(n86)Footnote 55. **When direct access is warranted because of responding party's misconduct, protocols must be established.** *In re Ford Motor Co., 345 F.3d 1315, 1317 (11th Cir. 2003)* (district court erred in permitting plaintiff unlimited, direct access to defendant's databases, without finding of misconduct to warrant direct access and without establishing protocols for search).

(n87)Footnote 56. **Counsel should attend inspection of computer.**

*9th Circuit See Advante Int'l Corp. v. Mintel Learning Tech., 2006 U.S. Dist. LEXIS 45859, at *4 (N.D. Cal. June 29, 2006)* ("protocol would have to be established to protect legitimate privacy, privilege, and safety concerns, and to minimize disruption").

10th Circuit See Religious Tech. Ctr. v. F.A.C.T.NET, Inc., 901 F. Supp. 1519, 1522 (D. Colo. 1995) (original seizure order permitted opposing counsel to search computer in opposing counsel's absence).

(n88)Footnote 57. **Third party technician inspecting computer subject to confidentiality agreement.** *See Simon Prop. Group, L.P. v. MySimon, Inc., 194 F.R.D. 639, 643 (S.D. Ind. 2000)* (technician provided mirror image copy of computer to responding party for review of privileged matter and reported to court in general terms volume and types of records provided to responding party).

(n89)Footnote 58. *Fed. R. Civ. P. 26(c)(1).*

(n90)Footnote 59. **Court may appoint expert to inspect computer.** *See Cerruti 1881 S.A. v. Cerruti, Inc., 169 F.R.D. 573, 582 (S.D.N.Y. 1996)* (court appointed expert under *Fed. R. Evid. 706* to examine computer and determine whether files were fabricated).

(n91)Footnote 60. **Safeguards especially needed during computer mirror imaging.** *See Gates Rubber Co. v. Bando Chem. Indus., 167 F.R.D. 90, 100 (D. Colo. 1996)* (special master supervised on-site inspection and required all copied records to be placed in escrow in vacant room to protect rights of responding party); *see also Am. Family Mut. Ins. Co. v. Gustafson, 2009 U.S. Dist. LEXIS 22685, at *6-9 (D. Colo. Mar. 10, 2009)* (example of court order setting out extensive protocol safeguarding confidentiality of information contained in mirror image of computer files).

(n92)Footnote 61. **Protocol governing mirror imaging of computer necessary.** *See Playboy Enters. v. Welles, 60 F. Supp. 2d 1050, 1055 (S.D. Cal. 1999)* (detailed protocol established by court restricting presence solely to responding party and counsel during mirror imaging process).

7th Circuit See Simon Prop. Group, L.P. v. MySimon, Inc., 194 F.R.D. 639, 640 (S.D. Ind. 2000) (court followed Ninth Circuit approach in *Playboy Enters.*, but did not adopt all aspects of court's protocol).

8th Circuit See Antioch Co. v. Scrapbook Borders, Inc., 210 F.R.D. 645, 652-653 (D. Minn. 2002) (protocol governing "mirror imaging" of defendant's computer, including procedures ensuring confidentiality).

9th Circuit See Playboy Enters. v. Welles, 60 F. Supp. 2d 1050, 1055 (S.D. Cal. 1999) (detailed protocol established by court restricting presence solely to responding party and counsel during mirror imaging process).

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Moore's Federal Practice: Discovery of Electronically Stored Information

Volume 7: Analysis: Civil Rules 30-37A
Chapter 37A Discovery of Electronically Stored Information
E. FORM OF PRODUCTION OF ELECTRONICALLY STORED INFORMATION

7-37A Moore's Federal Practice: Electronic Discovery §§ 37A.43-37A.49

AUTHOR: by John K. Rabiej

[Reserved]

§§ 37A.43[Reserved]

Moore's Federal Practice: Discovery of Electronically Stored Information

Volume 7: Analysis: Civil Rules 30-37A
Chapter 37A Discovery of Electronically Stored Information
F. SANCTIONS

7-37A Moore's Federal Practice: Electronic Discovery § 37A.50

AUTHOR: by John K. Rabiej

§ 37A.50 Broad Range of Sanctions

A party who fails to produce relevant, nonprivileged evidence in response to a discovery request may be sanctioned under the court's inherent authority or Rule 37, unless the failure was substantially justified. n1 Rule 37 is limited and literally applies only to actions committed after the initiation of litigation. Thus, Rule 37 does not apply to pre-litigation misconduct (*see § 37A.10[3]*). n2 If a party fails to produce relevant evidence because the evidence was destroyed before litigation commenced, a court may sanction the party only under its inherent authority. n3 The analysis of the standards governing the sanctioning of a party under the court's inherent authority or under Rule 37 is the same. n4 Both sources of authority have been relied on when sanctioning a party. n5

A court may impose wide-ranging sanctions under Rule 37 n6 or under its inherent authority n7 for failing to produce relevant evidence. The sanction must be proportionate to the circumstances surrounding the failure to comply with a proper discovery request. n8

If the discovery violation is serious, a court may impose severe sanctions when warranted. An adverse inference instruction is one of the harshest sanctions that a court may impose on a responding party for failing to preserve a document requested in discovery or producing the requested document on the eve of trial or at trial. n9 If an adverse instruction sanction is imposed, the jury is instructed to assume that the destroyed document, if produced, would have been adverse to the party that destroyed it. n10 An adverse inference may be outcome determinative, particularly if it is the sole ground for resolving a motion for summary judgment. n11 An adverse inference may be drawn from destroyed evidence when a party displays willfulness, bad faith, or fault. n12 The relevancy of missing or destroyed information to the requesting party's claims or defenses is presumed if a party acts in bad faith or with gross negligence in discharging its discovery obligations "even if the destruction or unavailability of the evidence was not caused by the acts constituting bad faith or gross negligence." n13 If, however, the responding party destroyed the electronically stored information negligently (a lower degree of culpability), extrinsic evidence demonstrating that the information is relevant and favorable to the requesting party is required before an adverse inference sanction can be imposed. n13.1

A default judgment can be entered as an ultimate sanction if relevant evidence is destroyed willfully and in bad faith,

the requesting party is prejudiced by the destruction of the evidence, and alternative sanctions are ineffective. n14

An attorney's signature accompanying a discovery response certifies that the response is consistent with the Federal Rules of Civil Procedure to the best of the counsel's knowledge, information, and belief, formed after reasonable inquiry. n15 A court may assess attorney's fees and other costs associated in making a motion to compel as a sanction. n16 However, if a party unreasonably delays seeking a remedy for a discovery violation, sanctions may be inappropriate. n17

Legal Topics:

For related research and practice materials, see the following legal topics:
Civil ProcedureDiscoveryElectronic DiscoveryGeneral OverviewCivil ProcedureDiscoveryMisconductCivil ProcedureSanctionsMisconduct & Unethical BehaviorGeneral OverviewComputer & Internet LawGeneral OverviewLegal EthicsSanctionsGeneral Overview

FOOTNOTES:
(n1)Footnote 1. *Fed. R. Civ. P. 37(a)(5).*

(n2)Footnote 2. **Rule 37 does not apply to pre-litigation conduct.**

2d Circuit See Turner v. Hudson Transit Lines, Inc., 142 F.R.D. 68, 72 (S.D.N.Y. 1991) (*Fed. R. Civ. P. 37* does not deal with spoliation issues before discovery request; courts may sanction under inherent authority).

8th Circuit See Capellupo v. FMC Corp., 126 F.R.D. 545, 550-551 (D. Minn. 1989) (systematic destruction of evidence, done before issuance of court order when defendant became aware of imminent litigation, lies beyond scope of Rule 37).

11th Circuit See ABC Home Health Servs., Inc. v. IBM Corp., 158 F.R.D. 180, 182 (S.D. Ga. 1994) (*Fed. R. Civ. P. 37* does not directly apply because alleged destruction of documents took place before action was filed and discovery began; court may only sanction under inherent authority.).

(n3)Footnote 3. **Inherent authority permits sanctions for pre-litigation conduct.** *See Turner v. Hudson Transit Lines, Inc., 142 F.R.D. 68, 72 (S.D.N.Y. 1991)* (*Fed. R. Civ. P. 37* does not deal with spoliation issues before discovery request; courts may sanction under inherent authority).

(n4)Footnote 4. **Sanctioning under Rule 37 or court's inherent authority is the same.**

*7th Circuit Danis v. USN Communs., Inc., 2000 U.S. Dist. LEXIS 16900, at *92 (N.D. Ill. Oct. 20, 2000)* (analysis of applicable legal standards governing sanctions imposed under *Fed. R. Civ. P. 37* and court's inherent authority).

10th Circuit Gates Rubber Co. v. Bando Chem. Indus., 167 F.R.D. 90, 107 (D. Colo. 1996) (analysis of applicable legal standards governing sanctions imposed under *Fed. R. Civ. P. 37* and court's inherent authority).

11th Circuit See Telectron, Inc. v. Overhead Door Corp., 116 F.R.D. 107, 128 (S.D. Fla. 1987) (sanctions power of court delineated in more detail under Rule 37 than under inherent authority, but analysis governing imposition of sanctions under either source is same).

D.C. Circuit Cobell v. Babbitt, 37 F. Supp. 2d 6, 18 (D.D.C. 1999) (whether proceeding under *Fed. R. Civ. P. 37* or under court's inherent powers, analysis is essentially same).

(n5)Footnote 5. **Both Rule 37 and court's inherent authority are sources for sanctions.**

2d Circuit See Metropolitan Opera Assoc., Inc. v. Local 100, 212 F.R.D. 178, 221-231 (S.D.N.Y. 2003) (defendant sanctioned under Rules 26(g) and 37 and court's inherent power for pattern of discovery violations, including failing to ensure that record retention policy was implemented to prevent destruction of electronic information).

*7th Circuit See Danis v. USN Communs., Inc., 2000 U.S. Dist. LEXIS 16900, at *92 (N.D. Ill. Oct. 20, 2000)* (court's authority to sanction party is both inherent and statutory).

10th Circuit Gates Rubber Co. v. Bando Chem. Indus., 167 F.R.D. 90, 107 (D. Colo. 1996) .

11th Circuit See Telectron, Inc. v. Overhead Door Corp., 116 F.R.D. 107, 128 (S.D. Fla. 1987) (sanctions power of court delineated in more detail under Rule 37 than under inherent authority, but analysis governing imposition of sanctions under either source is same).

(n6)Footnote 6. *Fed. R. Civ. P. 37(b)*.

(n7)Footnote 7. **Wide range of sanctions under inherent court authority.** *Chambers v. NASCO, Inc., 501 U.S. 32, 45, 49-50, 111 S. Ct. 2123, 115 L. Ed. 2d 27 (1991)* (outright dismissal of case potential sanction under appropriate circumstances; less severe sanction of assessing costs and fees certainly valid).

*7th Circuit See Danis v. USN Communs., Inc., 2000 U.S. Dist. LEXIS 16900, at *92 (N.D. Ill. Oct. 20, 2000)* (court authority to sanction party for failure to preserve and/or produce documents is both inherent and statutory).

10th Circuit See Gates Rubber Co. v. Bando Chem. Indus., 167 F.R.D. 90, 107 (D. Colo. 1996) (analysis of applicable legal standards governing sanctions imposed under *Fed. R. Civ. P. 37* and court's inherent authority).

11th Circuit See Telectron, Inc. v. Overhead Door Corp., 116 F.R.D. 107, 128 (S.D. Fla. 1987) (sanctions power of court delineated in more detail under Rule 37 than under inherent authority, but analysis governing imposition of sanctions under either source is same).

D.C. Circuit Cobell v. Babbitt, 37 F. Supp. 2d 6, 18 (D.D.C. 1999) (whether proceeding under *Fed. R. Civ. P. 37* or under court's inherent powers, analysis is essentially same).

(n8)Footnote 8. **Sanction proportionate to circumstances.**

1st Circuit Anderson v. Beatrice Foods Co., 900 F.2d 388, 395 (1st Cir. 1990) (judges should "take pains neither to use an elephant gun to slay a mouse nor to wield a cardboard sword if a dragon looms").

*7th Circuit See Danis v. USN Communs., Inc., 2000 U.S. Dist. LEXIS 16900, at *94-95 (N.D. Ill. Oct. 20, 2000)* (courts have broad discretion in selecting appropriate punishment based on circumstances of case); *see also Second Chance Body Armor, Inc. v. American Body Armor, Inc., 177 F.R.D. 633, 637*

(N.D. Ill. 1998) (failure of party to produce computer tapes in timely manner did not warrant sanction striking defendant's affirmative defenses, citing *Crown Life Ins. Co. v. Craig, 995 F.2d 1376, 1382 (7th Cir. 1993))* .

10th Circuit See Black & Veatch Int'l Co. v. Foster Wheeler Energy Corp., 211 F.R.D. 641, 649-650 (D. Kan. 2002) (dismissal was too harsh a sanction for plaintiff's misrepresentations that it had produced all input files plaintiff had used to make design calculations, but court did award costs and fees incurred by defendant as a result of plaintiff's failure to cooperate).

(n9)Footnote 9. **Adverse inference may be drawn if evidence not produced.** *Residential Funding Corp. v. DeGeorge Fin. Corp., 306 F.3d 99, 106-107 (2d Cir. 2002)* ("Where, as here, the nature of the alleged breach of discovery obligation is the non-production of evidence, a district court has broad discretion in fashioning an appropriate sanction, including ... to proceed with a trial and give an adverse inference instruction."); *see* Gregory P. Joseph, *Electronic Spoliation*, Nat'l L.J., Dec. 9, 2002 (" *Residential Funding* holds that negligent delay--not destruction, merely delay--in producing electronic data is sanctionable").

(n10)Footnote 10. **Adverse inference instruction to jury.**

8th Circuit See Alexander v. National Farmers Org., 687 F.2d 1173, 1205-1206 (8th Cir. 1982) (adverse inference must be drawn when party's conduct in destroying evidence was outrageous).

10th Circuit See Aramburu v. Boeing Co., 112 F.3d 1398, 1407 (10th Cir. 1997) (mere negligence in losing or destroying relevant evidence insufficient to warrant adverse inference).

(n11)Footnote 11. **Adverse inference may be outcome determinative.**

5th Circuit See Williams v. CSX Transp., Inc., 925 F. Supp. 447, 452 (S.D. Miss. 1996) , aff'd without op., 139 F.3d 899 (5th Cir. 1998) (defendant's unintentional loss of train-speed computer records in train-car collision accident did not warrant adverse inference and summary judgment entered against plaintiff).

7th Circuit See Thomas v. Bombardier-Rotax Motorenfabrick, GmbH, 909 F. Supp. 585, 589 (N.D. Ill. 1996) (plaintiff's destruction of essential evidence sufficient to draw adverse inference that led to summary judgment).

10th Circuit See Aramburu v. Boeing Co., 112 F.3d 1398, 1413 (10th Cir. 1997) (summary judgment granted because plaintiff failed to present sufficient evidence to show defendant's destruction of relevant evidence was done in bad faith).

(n12)Footnote 12. **Bad faith sufficient to draw adverse inference from destruction.**

7th Circuit See Second Chance Body Armor, Inc. v. American Body Armor, Inc., 177 F.R.D. 633, 637 (N.D. Ill. 1998) ("fault ... describe[s] the reasonableness of the conduct--or lack thereof--which eventually culminated in the violation").

10th Circuit See Procter & Gamble Co. v. Haugen, 179 F.R.D. 622, 631 (D. Utah 1998) (bad faith showing required to draw adverse inference at trial for sanction under court's inherent authority).

11th Circuit See ABC Home Health Servs., Inc. v. IBM Corp., 158 F.R.D. 180, 182-183 (S.D. Ga. 1994) (level of bad faith insufficient for default judgment for destroying computer tapes before litigation, but might warrant lesser sanction of adverse inference instruction).

(n13)Footnote 13. **Legal standard for adverse inference instruction when requested discovery is not produced.** *See* Gregory P. Joseph, *Electronic Spoliation*, Nat'l L.J., Dec. 9, 2002.

2d Circuit See Residential Funding Corp. v. DeGeorge Fin. Corp., 306 F.3d 99, 113 (2d Cir. 2002) (three criteria for adverse inference instruction for delayed production: (1) party has obligation to produce evidence; (2) party fails to produce evidence with culpable state of mind, including ordinary negligence; and (3) missing or destroyed evidence is relevant and would support claim or defense of requesting party).

*5th Circuit See Gateway Senior Housing, Ltd. v. MMA Fin., Inc., 2008 U.S. Dist. LEXIS 109947, at *40 (E.D. Tex. Dec. 4, 2008)* (defendant's failure to comply with court order and produce computer hard drives constituted willful destruction of evidence and bad faith and resulted in adverse inference that missing hard drives contained evidence unfavorable to defendant).

(n14)Footnote 13.1. **Extrinsic evidence required when only negligence involved in destruction of evidence.** *See* Reino de Espana v. Am. Bureau of Shipping, (S.D.N.Y. June 6, 2007) (no adverse instruction was appropriate when party failed to present extrinsic evidence showing that electronically stored information negligently destroyed was relevant); *see also Doe v. Norwalk Comm. College, Bd. of Trustees, Conn. Comm. Colleges, 2007 U.S. Dist. LEXIS 51084, at *23-26 (D. Conn. July 16, 2007)* (no extrinsic evidence needed to show relevance of missing evidence because defendant's failure to preserve evidence was grossly negligent).

(n15)Footnote 14. **Default judgment entered if evidence destroyed in bad faith.**

5th Circuit See Emerick v. Fenick Indus., Inc., 539 F.2d 1379, 1380 (5th Cir. 1976) (appellant failed to produce computerized summary despite court's several orders).

*6th Circuit See PML North America, LLC v. Hartford Underwriters Ins. Co., 2006 U.S. Dist. LEXIS 94456, at *12-15 (E.D. Mich. Dec. 20, 2006)* (court entered default judgment against defendant for overwriting computer operating system that may have destroyed critical information).

9th Circuit See William T. Thompson Co. v. General Nutrition Corp., 593 F. Supp. 1443, 1451 (C.D. Cal. 1984) (defendant's destruction of electronic records was willful and deprived plaintiff of opportunity to present critical evidence); *see also Cabnetware, Inc. v. Sullivan, 1991 U.S. Dist. LEXIS 20329, at *10-12 (E.D. Cal. July 15, 1991)* (default judgment for destroying computer source code essential to proving plaintiff's copyright infringement case).

10th Circuit See Computer Assocs. Int'l, Inc. v. American Fundware, Inc., 133 F.R.D. 166, 170 (D. Colo. 1990) (defendant destroyed computer source code essential to proving plaintiff's case alleging copyright infringement).

11th Circuit See Telectron, Inc. v. Overhead Door Corp., 116 F.R.D. 107, 109-110 (S.D. Fla. 1987) (default judgment entered when relevant documents were destroyed shortly before commencement of litigation).

D.C. Circuit See Shepherd v. ABC, 151 F.R.D. 179, 193 (D.D.C. 1992) , rev'd in part and vacated in part, 62 F.3d 1469 (1995) (default judgment entered when defendant destroyed and altered crucial relevant documents).

(n16)Footnote 15. **Attorney's signature signifies reasonable inquiry.** *See Fed. R. Civ. P. 26(g).*

3d Circuit See Grider v. Keystone Health Plan Cent., Inc., 580 F.3d 119 (3d Cir. 2009) failure to comply with Rule 26(g)'s certification requirements may be excused if "substantial justification" is shown).

9th Circuit See National Ass'n of Radiation Survivors v. Turnage, 115 F.R.D. 543, 555 (N.D. Cal. 1987) (failure to produce requested documents in response to discovery request sanctionable under *Fed. R. Civ. P. 26(g)*); *see also R & R Sails Inc. v. Ins. Co. of the State of PA., 251 F.R.D. 520, 528 (S.D. Cal. 2008)* (court found defendant and defendant's counsel jointly liable for attorney's fees caused by failure to search for and timely produce electronically stored information in violation of Rule 26(g)).

D.C. Circuit See Jankins v. TDC Mgmt. Corp., 131 F.R.D. 629, 633-634 (D.D.C. 1989) (provisions governing sanctions imposed under *Fed. R. Civ. P. 26(g)* parallel those in *Fed. R. Civ. P. 11*).

(n17)Footnote 16. **Costs associated with motion to compel as sanction**. *Fed. R. Civ. P. 37(a)(5).*

5th Circuit Compare Kellogg Brown & Root Int'l v. Altanmia Commer. Mktg. Co., 2009 U.S. Dist. LEXIS 44137, at *12-15 (S.D. Tex. May 26, 2009) (costs for scanning and extracting data not recoverable under *28 U.S.C. § 1920(4)* as taxable costs).

*8th Circuit See Little Rock Cardiology Clinic PA v. Baptist Health, 2009 U.S. App. LEXIS 28498, at *27 (8th Cir. Dec. 29, 2009)* ("numerous district courts within Eighth Circuit have refused to tax discovery-related copying costs [including scanning]").

*11th Circuit But see CBT Flint Partners, LLC v. Return Path, Inc., 2008 U.S. Dist. LEXIS 84189, at *10 (N.D. Ga. Aug. 7, 2008)* (court ordered defendant to review its documents for privilege only on condition that plaintiff pay $300,000 for review costs).

(n18)Footnote 17. **Remedy or sanctions for discovery violation must be sought within reasonable time.**

7th Circuit See Aero Prod. Int'l, Inc. v. Intex Recreation Corp., 2004 U.S. Dist. LEXIS 1283, at *9-12 (N.D. Ill. Jan. 30, 2004) (party unreasonably delayed seeking remedy after five months).

10th Circuit See Marcin Engineering LLC v. The Founders at Grizzly Ranch, LLC, 219 F.R.D. 516, 523 (D. Colo. 2003) (opposing party's lack of diligence in seeking remedy for discovery violation was factor in party avoiding sanctions).

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F. SANCTIONS

7-37A Moore's Federal Practice: Electronic Discovery § 37A.51

AUTHOR: by John K. Rabiej

§ 37A.51 Failure to Produce Electronic Document May Be Sanctioned

A party failing to comply with a specific Rule 34 request to produce an electronic document may be sanctioned under Rule 37(a)(5). n1 Sanctions may be avoided if the failure to produce relevant evidence is "substantially justified." n2 Simply relying on the statement of an expert (either in-house or outside) that electronically stored information cannot be retrieved from a computer may not be sufficient justification to avoid sanctions without investigating whether another expert should be engaged or whether the source of the information should be furnished to the opposing party for inspection. n3 The extent of a party's unsuccessful effort to recover relevant evidence in response to a discovery order may be considered in determining its culpability and the severity of the sanction imposed. n4 If the responding party asserts that production is complete and the requested evidence does not exist, the mere suspicion that the party failed to produce relevant evidence is insufficient to impose sanctions. n5

Legal Topics:

For related research and practice materials, see the following legal topics:
Civil ProcedureDiscoveryElectronic DiscoveryGeneral OverviewCivil ProcedureDiscoveryMethodsRequests for Production & InspectionCivil ProcedureDiscoveryMisconductCivil ProcedureSanctionsMisconduct & Unethical BehaviorGeneral OverviewLegal EthicsSanctionsGeneral Overview

FOOTNOTES:
(n1)Footnote 1. **Sanction for failing to produce document in electronic format.** *Fed. R. Civ. P. 34, 37(a)(5).*

> *6th Circuit See Grange Mutual Casualty Co. v. Allstate Ins. Co., 2008 U.S. App. LEXIS 6113, at *9-10 (6th Cir. Mar. 17, 2008)* (court upheld entry of default judgment by lower court against defendant in amount of $5.4 million for failing to comply with discovery orders, including order to identify all computers used in business).
>
> *7th Circuit See Fautek v. Montgomery Ward & Co., 96 F.R.D. 141, 145 (N.D. Ill. 1982)* ("Once a

failure to comply with the discovery rules is established, sanctions are appropriate," citing *Societe Internationale Pour Participations Industrielles Commerciales, S.A. v. Rogers, 357 U.S. 197, 207-208, 78 S. Ct. 1087, 2 L. Ed. 2d 1255 (1958))* .

(n2)Footnote 2. *Fed. R. Civ. P. 37(a)(5)(A)(ii).*

(n3)Footnote 3. **Reliance on expert statement that electronic data cannot be retrieved might not avoid sanctions.**

2d Circuit See Residential Funding Corp. v. DeGeorge Fin. Corp., 306 F.3d 99, 110-113 (2d Cir. 2002) (reliance on outside vendor who failed to retrieve data on many occasions may have been unreasonable).

*5th Circuit See Butler v. Kmart Corp., 2007 U.S. Dist. LEXIS 61141, at *8 (N.D. Miss. Aug. 20, 2007)* (court ordered defendant to conduct thorough search to produce relevant ESI after defendant failed to provide affidavits describing its efforts to locate relevant evidence).

(n4)Footnote 4. **Party's effort in producing evidence factor in determining severity of sanction imposed.**

2d Circuit See Reina de Espona v. Amer. Bureau of Shipping, 2006 U.S. Dist. LEXIS 81415, at *16 (S.D.N.Y. Nov. 3, 2006) (party made no showing of searching electronic records stored in different agencies and was sanctioned).

5th Circuit See EEOC v. General Dynamics Corp., 999 F.2d 113, 115-116 (5th Cir. 1993) (failure to produce computer tapes in response to court order to produce all "tangible things" relied on by expert was excused when paper printout was provided and opposing party raised objections for first time on eve of trial).

7th Circuit See Second Chance Body Armor, Inc. v. American Body Armor, Inc., 177 F.R.D. 633, 637 (N.D. Ill. 1998) (although not exemplary, party attempted to produce requested information and eventually produced computer disks and computer backup tapes from 1987-1994).

*11th Circuit See U & I Corp. v. Advanced Med. Design, Inc., 2008 U.S. Dist. LEXIS 27931, at *26-27 (M.D. Fla. Mar. 26, 2008)* (plaintiff's failure to "submit an affidavit from an knowledgeable individual verifying the scope of the search, the efforts taken to locate documents, the inability to identify and produce such documents and the date when these documents were deleted or removed from the personal computers" was a factor in court's decision to sanction plaintiff).

(n5)Footnote 5. **Party's good-faith averment that production is complete and no relevant evidence exists is sufficient.**

2d Circuit See Margel v. E.G.L. Gem Lab Ltd., 2008 U.S. Dist. LEXIS 41754, at *8-9 (S.D.N.Y. May 29, 2008) ("Litigants commonly suspect that they are not getting all the documents they have requested and that an adversary is holding something back," but a party's assertion that no such evidence exists ordinarily should suffice to resolve the issue).

D.C. Circuit See Hubbard v. Potter, Postmaster General, U.S. Postal Serv., 247 F.R.D. 27, 30 (D.D.C. 2008) (mere speculation that additional ESI must exist is insufficient to justify additional discovery).

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7-37A Moore's Federal Practice: Electronic Discovery § 37A.52

AUTHOR: by John K. Rabiej

§ 37A.52 Failure to Produce Electronically Stored Information in Usable Format May Be Sanctioned

If electronically stored information is produced in a format unusable by the requesting party, information necessary to make it reasonably usable must also be produced. For example, providing a custom-developed computer program without a source code, which is needed to decipher the material, does not reasonably comply with a discovery request and may be sanctioned. n1 Some courts have required a responding party to develop programs to extract the required information and to assist the requesting party in reading and interpreting information stored on a computer tape (*see § 37A.44[2]*). n2 When exchanging electronically stored documents, parties should discuss which supplementary materials, such as software applications or user's manuals, will be needed to use them effectively. A standard of common-sense reasonableness should govern the exchange of electronic documents. n3

For further discussion of the creation of special programs to retrieve requested electronically stored information, *see § 37A.44[2]*.

Legal Topics:

For related research and practice materials, see the following legal topics:
Civil ProcedureDiscoveryElectronic DiscoveryGeneral OverviewCivil ProcedureDiscoveryMisconductCivil ProcedureSanctionsMisconduct & Unethical BehaviorGeneral OverviewLegal EthicsSanctionsGeneral Overview

FOOTNOTES:
(n1)Footnote 1. **Explanatory material must accompany computer records that are not readable by machine.** *See Fautek v. Montgomery Ward & Co., 96 F.R.D. 141, 145-146 (N.D. Ill. 1982)* (party sanctioned for tardily producing computer records and source code to read records).

(n2)Footnote 2. **Extraction programs may be required.**

3d Circuit See National Union Elec. Corp. v. Matsushita Elec. Indus. Co., Ltd., 494 F. Supp. 1257, 1258, 1262-1263 (E.D. Pa. 1980) (plaintiff ordered to produce data on tape that can be read by

computer).

10th Circuit See Bills v. Kennecott Corp., 108 F.R.D. 459, 461 (D. Utah 1985) (it is axiomatic that electronically stored information is discoverable if otherwise relevant; issues arise as to form of what may be produced).

(n3)Footnote 3. *See, e.g., Fed. R. Civ. P. 34(a).*

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7-37A Moore's Federal Practice: Electronic Discovery § 37A.53

AUTHOR: by John K. Rabiej

§ 37A.53 Failure to Produce Electronically Stored Information in Timely Manner May Be Sanctioned

A responding party that fails to produce requested evidence in a timely manner is subject to a wide array of sanctions depending on the circumstances of the discovery conduct. If the evidence is not produced until the eve of or during trial, leaving the requesting party little time to consider it fully, severe sanctions can be imposed, including a mistrial or an adverse inference instruction. n1 However, sanctions may be avoided for late production if the party can show substantial justification for the delay, or the court finds the violation harmless. n2

A party may be sanctioned for delayed production of evidence on a showing of ordinary negligence. An adverse inference may not be drawn, however, unless a showing is also made that the evidence is relevant to the requesting party's claim or defense. n3

A party who produces evidence only after the opposing party files a Rule 37(a) motion compelling discovery might not escape sanctions and may be required to pay the fees and expenses incurred by the party in making the motion. n4

Legal Topics:

For related research and practice materials, see the following legal topics:
Civil ProcedureDiscoveryElectronic DiscoveryGeneral OverviewCivil ProcedureDiscoveryMisconductCivil ProcedureSanctionsMisconduct & Unethical BehaviorGeneral OverviewLegal EthicsSanctionsGeneral Overview

FOOTNOTES:
(n1)Footnote 1. **Untimely production of evidence subject to wide array of sanctions.** *Residential Funding Corp. v. DeGeorge Fin. Corp., 306 F.3d 99, 101 (2d Cir. 2002)* (potential sanctions include delay of trial, declaration of mistrial, adverse inference instruction, and discovery sanctions).

> *2d Circuit Residential Funding Corp. v. DeGeorge Fin. Corp., 306 F.3d 99, 101 (2d Cir. 2002)*
> (potential sanctions include delay of trial, declaration of mistrial, adverse inference instruction, and

discovery sanctions).

4th Circuit See Thompson v. United States Dep't of Hous. & Urban Dev., 219 F.R.D. 93, 104-105 (D. Md. 2003) (sanctions for tardy production of 80,000 emails included: responding party forbidden to rely on emails in preparing witnesses or to introduce emails at trial as evidence, requesting party allowed to use emails at trial, and costs and attorney's fees may be shifted to responding party on showing that additional expenses were incurred).

9th Circuit See Green v. Baca, 225 F.R.D. 612, 614-616 (C.D. Cal. 2005) (substantial attorney fee awarded as sanction for failing to "ascertain the existence of readily-accessible computer-based information" for a period of months).

11th Circuit See In re Seroquel Prod. Liab. Litig., 244 F.R.D. 650, 664-665 (M.D. Fla. Aug. 21, 2007) (court finds party's "purposefully sluggishness" in making effective production of ESI sanctionable, though it defers imposing specific sanctions until showing of prejudice).

*D.C. Circuit See Walls v. Paulson, Jr., 2008 U.S. Dist. LEXIS 41119, at *24 (D.D.C. May 27, 2008)* (party ordered to pay attorney fees and costs incurred in filing motion to compel production for failing to timely produce requested materials, including emails; party also prohibited from introducing certain evidence related to documents that were not produced).

(n2)Footnote 2. **Substantial justification for late production may avoid sanctions.** *See Tracy v. Financial Ins. Management Corp., 2005 U.S. Dist. LEXIS 38323, at *5-6 (S.D. Ind. Aug. 22, 2005)* (cyclical upgrade of computer system equipment revealed undisclosed relevant emails that were then produced immediately, mitigating failure to produce information promptly).

(n3)Footnote 3. **Monetary sanctions often appropriate and sufficient for late discovery production.**

*2d Circuit See Phoenix Four, Inc. v. Strategic Resources Corp., 2006 U.S. Dist. LEXIS 32211, at *28-29 (S.D.N.Y. May 23, 2006)* (court sanctioned gross negligence in producing electronically stored information late with monetary penalties instead of adverse inference).

*10th Circuit See Cardenas v. Dorel Juvenile Group, Inc., 2006 U.S. Dist. LEXIS 37465, at *24-25 (D. Kan. June 1, 2006)* (tardy production of electronically stored information subject to reimbursement of reasonable expenses and attorney fees).

(n4)Footnote 4. **Untimely production sanctionable.** *See Fed. R. Civ. P. 37(a)(5)(A).*

*4th Circuit See Acker v. Workhorse Sales Corp., 2008 U.S. Dist. LEXIS 34398, at *8-11 (E.D. Mich. Apr. 28, 2008)* (court sanctioned party for costs and attorney fees incurred in filing motion to compel production of ESI, which had been delayed for one month).

7th Circuit See Illinois Tool Works v. Metro Mark Prods., Ltd., 43 F. Supp. 2d 951, 961-962 (N.D. Ill. 1999) (requested computer, which ultimately revealed no relevant evidence, was allegedly dropped several times--despite a court order to preserve its integrity--forcing plaintiff to incur special expense in retrieving data); *Second Chance Body Armor, Inc. v. American Body Armor, Inc., 177 F.R.D. 633, 636-637 (N.D. Ill. 1998)* (untimely production of computer tapes and backup tapes sanctioned).

*10th Circuit Klein-Becker USA, LLC v. Englert, 2007 U.S. Dist. LEXIS 45197, at *9-10 (D. Utah June 20, 2007)* (party sanctioned for dilatory response to request for electronically stored information).

*11th Circuit See Omega Patents, LLC v. Fortin Auto Radio, Inc., 2006 U.S. Dist. LEXIS 49650, at *15-16 (M.D. Fla. July 19, 2006)* (court sanctioned party for failing to timely produce 2,000 documents from its email system).

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7-37A Moore's Federal Practice: Electronic Discovery § 37A.54

AUTHOR: by John K. Rabiej

§ 37A.54 Sanctions for Burdensome Discovery Request

A court may sanction a party for a discovery request that is unreasonable or oppressive. n1 If a motion to compel disclosure or discovery is denied, a party is entitled to reasonable expenses, including attorney's fees, incurred in opposing the motion. n2 For further discussion, *see* Ch. 37, *Failure to Make Disclosures or to Cooperate in Discovery; Sanctions* .

Legal Topics:

For related research and practice materials, see the following legal topics:
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FOOTNOTES:
(n1)Footnote 1. **Discovery request too burdensome.** *Fed. R. Civ. P. 26(b)(2).*

> *2d Circuit See In re Grand Jury Subpoena Duces Tecum Dated November 15, 1993, 846 F. Supp. 11, 12-13 (S.D.N.Y. 1994)* (court quashed subpoena duces tecum for copy of hard disk drives of company's officers and all floppy diskettes created by them as too broad).
>
> *6th Circuit See In re Air Disaster at Detroit Metro. Airport, 130 F.R.D. 634, 636 (E.D. Mich. 1989)* (court ordered requesting party to pay expenses incurred by responding party in producing nine-track flight simulation computer tape).
>
> *7th Circuit See Sattar v. Motorola, Inc., 138 F.3d 1164, 1171 (7th Cir. 1998)* (instead of requiring hard copies of 210,000 pages of emails, court instructed defendant to produce emails in electronic format on diskette and provide plaintiff with compatible computer equipment to read it; alternatively, each party

would bear half the cost of making hard copies).

Fed. Circuit See Torrington Co. v. United States, 786 F. Supp. 1027, 1028-1030 (Ct. Int'l Trade 1992) (party failed to articulate need for computer magnetic tapes, paper documents provided alternative source of information, and opposing party enumerated hardships if compelled to produce tapes).

(n2)Footnote 2. *Fed. R. Civ. P. 37(a)(5)(B).*

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7-37A Moore's Federal Practice: Electronic Discovery § 37A.55

AUTHOR: by John K. Rabiej

§ 37A.55 Spoliation--Destruction of Evidence

[1] General Conditions for Imposing Sanctions for Spoliation

Spoliation is the intentional destruction, mutilation, alteration, or concealment of evidence that may be used by another party in pending or future litigation. n1 Although a party is not required to retain every document in its possession once litigation has commenced (*see § 37A.10[3]*), n2 the party must preserve evidence that the party knows or should know is relevant to a claim or defense of any party, or that may lead to the discovery of relevant evidence. n3 The ease with which electronically stored information can be deleted and destroyed inevitably raises suspicions of spoliation whenever this evidence is at issue.

A party seeking sanctions based on alleged spoliation of evidence must establish the following three elements: (1) that the party having control over the evidence had an obligation to preserve it at the time it was destroyed; (2) that the records were destroyed with a "culpable state of mind"; and (3) that the destroyed evidence was relevant to the party's claim or defense such that a reasonable trier of fact could find that it would support that claim or defense. n4 Clear and convincing evidence is required to sanction a party for spoliation under Rule 37 or the court's inherent authority. n5 Courts should impose the most lenient sanction that still offers an adequate remedy. From most lenient to most severe, the range of sanctions includes further discovery, cost-shifting, fines, special jury instructions, preclusion, and default judgment or dismissal. n5.1 The most severe terminating sanctions, such as dismissal or a default judgment, should be reserved for the most egregious cases. n6 These harsh sanctions require significant culpability, and prejudice to the requesting party (*see* [2], *below*).

Judge Scheindlin of the United States District Court for the Southern District of New York, in *Pension Committee*, has devised a four-part analytical framework for determining whether to impose sanctions for failure to preserve evidence: n6.1

> 1. The party's level of culpability. Was the party's conduct of discovery acceptable or was it negligent, grossly negligent, or willful?

2. The interplay between the duty to preserve evidence and the spoliation of evidence.

3. The determination of which party should bear the burden of proving that evidence has been lost or destroyed and the consequences resulting from that loss.

4. The determination of the appropriate remedy for the harm caused by the spoliation.

The *Pension Committee* case highlights the importance of imposing a written litigation hold to preserve evidence and the potentially severe sanctions for failing to do so. n6.2 For further discussion, see Chapter 37, *Failure to Make Disclosures or to Cooperate in Discovery; Sanctions* , § 37.120, *Availability of Sanctions for Failure to Preserve Evidence*.

[2] Severity of Sanction Determined by Culpability and Degree of Prejudice

[a] Culpability and Prejudice Are Most Important Factors

In general, the responding party's culpability and the prejudicial harm caused by the destruction of relevant evidence are the most important factors in determining the severity of sanctions (*see* [b], [c], *below*). n7 Often both substantial prejudice and culpability must be present before imposing the severest sanctions. n8 When a party's misconduct is flagrant, courts have imposed the harshest sanctions to maintain the integrity of the judicial process. n9

[b] Culpability

The case law is unsettled as to the precise level of culpability (and prejudice) sufficient to impose sanctions (*see* [c], *below*). n10 In general, sanctions should be imposed based on a norm of proportionality, taking into account the totality of circumstances. n11

The extent of a party's knowledge that the document or thing being destroyed is relevant to pending or imminent litigation is an important factor in evaluating a party's culpability. n12 Generally, the more culpable a party's state of mind, the lower the level of relevance that must be shown about the lost evidence to warrant a severe sanction. n13 Intentional destruction of evidence affects the core of the judicial process and warrants the harshest sanctions, such as an adverse inference or a default judgment. However, the requisite degree of culpability sufficient to merit these harsh sanctions varies among the courts.

Some courts hold that only willful destruction of relevant evidence satisfies the threshold for imposing the severest sanctions. n14 Other courts retain discretion and sanction parties for less culpable conduct, for example, negligent destruction of evidence, to ensure that spoliators do not gain a windfall from their wrongdoing. n15 These courts do not require a finding of bad faith or intentional misconduct, but the lost evidence must cause significant prejudice to the requesting party (*see* [c], *below*). n16

For example, Judge Scheindlin of the Southern District in New York, in *Pension Committee*, held that an adverse inference instruction may be an appropriate sanction for grossly negligent destruction of evidence, under Second Circuit precedent. n16.1 Judge Rosenthal of the United States District Court for the Southern District of Texas, in *Rimkus Consulting Group, Inc. v. Cammarata*, concluded that intentional conduct or bad faith is required in the Fifth Circuit to impose an adverse inference instruction. n16.2

A uniform rule is needed, as the availability of so important a remedy should not be determined by the Circuit in which the litigation is ultimately venued.

The difference between the positions of the Second and Fifth Circuits, as illustrated by *Pension Committee* and *Rimkus*, highlights the importance of the state of mind of the offender in determining whether an adverse inference may be ordered. The more flexible Second Circuit approach would seem preferable. It is dubious that the availability of the adverse inference remedy should turn exclusively on the offender's state of mind. The impact of the loss of the evidence on the opposing party and the truth-finding process is at least equally important. Grossly negligent or reckless loss of highly relevant evidence may have a more devastating impact on the truth-finding process than intentional destruction of more marginal, but still relevant and discoverable, information. The primary rationale for requiring bad faith is that the party's intentional destruction of evidence constitutes an admission, by conduct, of the harmfulness to that party's position of the spoliated evidence. The primary rationale for focusing also on the impact of the destruction of evidence is that the harm caused by the destruction of evidence should not be visited on the innocent party but rather on the party at fault for the spoliation. It is also true that the more relevant the spoliated evidence and the more active (rather than passive) the conduct that led to the loss of evidence, the more reliable the inference that the destruction or loss of that evidence may have been intentional. All of these are intensely fact-driven determinations, and it is best left to the trial judge to ascertain the appropriate remedy in the totality of the circumstances without a categorical requirement of bad faith or intentional misconduct on the part of the offender before an adverse inference may be drawn.

[c] Prejudice

The requesting party must show prejudice and the unavailability of alternative sources of evidence before the most severe sanctions will be imposed for spoliation of evidence. n17 Mere speculation that destroyed electronic records might have been relevant evidence is insufficient to warrant a sanction. n17.1 Evidence must be proffered to show that the lost material would have been relevant and favorable to the requesting party (*see § 37A.57[2]*). n18 Circumstantial evidence may be sufficient to show that relevant evidence was deleted or withheld. n18.1 However, actual prejudice to the opposing party is not always a precondition for a severe sanction such as an adverse inference or default judgment when the party's conduct is so flagrant that it affects the integrity of the judicial process (*see* [b], *above*). n19

The timing of a discovery request may shed light on whether a party has been materially prejudiced by destruction of evidence. Requesting relevant computer records several years after a party first learned of its existence during the discovery process, for example, implies that the requested evidence was not too important. n20

Legal Topics:

For related research and practice materials, see the following legal topics:
Civil ProcedureDiscoveryElectronic DiscoveryGeneral OverviewCivil ProcedureDiscoveryMisconductCivil ProcedureSanctionsMisconduct & Unethical BehaviorGeneral OverviewEvidenceRelevanceSpoliationLegal EthicsSanctionsGeneral Overview

FOOTNOTES:

(n1)Footnote 1. **Spoliation is intentional destruction of evidence.** Black's Law Dictionary, Seventh Edition (1999).

*1st Circuit See Linnen v. A.H. Robins Co., 1999 Mass. Super. LEXIS 240, at *23-24 (June 15, 1999)* (party sought order to prevent spoliation when complaint filed).

2d Circuit Pension Comm. of the Univ. of Montreal Pension Plan v. Banc of Am. Sec., LLC, 685 F. Supp. 2d 456, 465 (S.D.N.Y. 2010) (spoliation includes failure to preserve evidence); *Zubulake v. UBS Warburg LLC, 229 F.R.D. 422, 430 (S.D.N.Y. 2004)* (determination of appropriate sanction for spoliation is left to sound discretion of trial judge, and assessed on case-by-case basis); *see West v. Goodyear Tire & Rubber Co., 167 F.3d 776, 779-780 (2d Cir. 1999)* (destruction of relevant evidence may be sanctioned by default judgment if bad faith shown).

3d Circuit *Bensel v. Allied Pilots Ass'n, 263 F.R.D. 150, 152 (D.N.J. 2009)* (when documents cannot be found or are destroyed, and are relevant, trier of fact generally may infer that party has prevented production out of fear that contents would be harmful to case).

4th Circuit *Sampson v. City of Cambridge, Md., 251 F.R.D. 172, 179 (D. Md. 2008)* (courts have two sources of authority to issue sanctions for spoliation: Rule 37 when party commits spoliation in violation of specific court order; and court's inherent authority).

5th Circuit *Rimkus Consulting Group, Inc. v. Cammarata, 688 F. Supp. 2d 598, 612 (S.D. Tex. 2010)* (spoliation is destruction or significant and meaningful alteration of evidence).

7th Circuit *Bryant v. Gardner, 587 F. Supp. 2d 951, 967 (N.D. Ill. 2008)* (spoliation occurs when one party destroys relevant evidence).

11th Circuit *Swofford v. Eslinger, 671 F. Supp. 2d 1274, 1279 (M.D. Fla. 2009)* (sanctions for spoliation are intended to prevent unfair prejudice to litigators and to ensure integrity of discovery process).

(n2)Footnote 2. **Not every document need be retained.**

1st Circuit *See* *McGuire v. Acufex Microsurgical, Inc., 175 F.R.D. 149, 156 (D. Mass. 1997)* (party need not retain every document edit or draft).

7th Circuit *See* *Danis v. USN Communs., Inc., 2000 U.S. Dist. LEXIS 16900, at *99 (N.D. Ill. Oct. 20, 2000)* (citing **Moore's**; duty to preserve does not require litigant to keep every scrap of paper in files).

9th Circuit *See* *William T. Thompson Co. v. General Nutrition Corp., 593 F. Supp. 1443, 1455 (C.D. Cal. 1984)* (duty to preserve extends only to documents in possession that a party knows or reasonably should know is relevant to litigation).

(n3)Footnote 3. *See Fed. R. Civ. P. 26.*

(n4)Footnote 4. **Elements of spoliation.**

2d Circuit *See* *Pension Comm. of the Univ. of Montreal Pension Plan v. Banc of Am. Sec., LLC, 685 F. Supp. 2d 456, 467 (S.D.N.Y. 2010)* ("Proof of relevance does not necessarily equal proof of prejudice."); *Zubulake v. UBS Warburg LLC, 229 F.R.D. 422, 430 (S.D.N.Y. 2004)* (authority to sanction litigants for spoliation arises under both Federal Rules of Civil Procedure and court's inherent powers).

4th Circuit *See* *Thompson v. U.S. Dept. of Housing and Urban Dev., 219 F.R.D. 93, 101 (D. Md. 2003)* (list of factors warranting severe sanction of adverse inference).

(n5)Footnote 5. **Clear and convincing evidence required for sanction.** *See Fed. R. Civ. P. 37.*

7th Circuit *See* *Danis v. USN Communs., Inc., 2000 U.S. Dist. LEXIS 16900, at *103 (N.D. Ill. Oct. 20, 2000)* (clear and convincing evidence standard applies to sanctions imposed under Rule 37 or court's inherent authority).

*11th Circuit See Belize Telecom Ltd. v. The Gov't of Belize, 2005 U.S. Dist. LEXIS 18578, at *2 (S.D. Fla. May 4, 2005)* (court denied motion for sanctions for destroying electronic documents because plaintiff failed to make showing that defendant destroyed documents).

(n6)Footnote 5.1. **Range of spoliation sanctions.** *Pension Comm. of the Univ. of Montreal Pension Plan v. Banc of Am. Sec., LLC, 685 F. Supp. 2d 456, 469 (S.D.N.Y. 2010)* ("The selection of the appropriate remedy is a delicate matter requiring a great deal of time and attention by a court.").

(n7)Footnote 6. **Terminating sanctions for most egregious cases.**

2d Circuit Pension Comm. of the Univ. of Montreal Pension Plan v. Banc of Am. Sec., LLC, 685 F. Supp. 2d 456, 469-470 (S.D.N.Y. 2010) (terminating sanction is justified only for egregious actions, such as perjury, evidence tampering, or intentionally destroying evidence by burning, shredding, or wiping out computer hard drives).

7th Circuit See Krumwiede v. Brighton Assoc., L.L.C., 2006 U.S. Dist. LEXIS 31669, at *8 (N.D. Ill. May 8, 2006) (default judgment "should only be employed in extreme situations where there is clear and convincing evidence of willfulness, bad faith or fault" as there was in instant case for destroying information on laptop computer).

(n8)Footnote 6.1. **Four-part framework.** *Pension Comm. of the Univ. of Montreal Pension Plan v. Banc of Am. Sec., LLC, 685 F. Supp. 2d 456, 463 (S.D.N.Y. 2010)* (determining whether sanctions should be awarded is inherently fact intensive and must be reviewed case by case).

(n9)Footnote 6.2. **Importance of written litigation hold.** *Pension Comm. of the Univ. of Montreal Pension Plan v. Banc of Am. Sec., LLC, 685 F. Supp. 2d 456, 465 (S.D.N.Y. 2010)* ("failure to issue a *written* litigation hold constitutes gross negligence").

(n10)Footnote 7. **Culpability and prejudice two main factors in determining sanctions.**

1st Circuit See Vazques-Corales v. Sea-Land Serv., Inc., 172 F.R.D. 10, 13-14 (D.P.R. 1997) (list of factors considered by circuits in sanctioning spoliation of evidence).

2d Circuit See Shaffer v. RWP Group, Inc., 169 F.R.D. 19, 26 (E.D.N.Y. 1996) (discussion of authorities on level of culpability required to draw adverse inference for destroying relevant evidence).

7th Circuit See Bryant v. Gardner, 587 F. Supp. 2d 951, 968 (N.D. Ill. 2008) (any sanction imposed must be proportionate to the circumstances); *Danis v. USN Communs., Inc., 2000 U.S. Dist. LEXIS 16900, at *101, *104 (N.D. Ill. Oct. 20, 2000)* (party's culpability and prejudice caused from destroyed evidence must be substantial to impose ultimate sanction of default judgment).

(n11)Footnote 8. **Both substantial prejudice and culpability required to impose severe sanction.** *See Danis v. USN Communs., Inc., 2000 U.S. Dist. LEXIS 16900, at *103-105 (N.D. Ill. Oct. 20, 2000)* (although Seventh Circuit does not limit federal courts' ability to sanction to prejudice, dismissal or judgment is such serious sanction that it should not be invoked without first considering effect challenged conduct had on course of litigation); *see also Second Chance Body Armor, Inc. v. American Body Armor, Inc., 177 F.R.D. 633, 637 (N.D. Ill. 1998)* (party suffered no injury because it eventually received requested information so striking defendant's affirmative defenses was not warranted).

(n12)Footnote 9. **Flagrant misconduct sufficient to impose severe sanction.** *See Emerick v. Fenick Indus., Inc., 539 F.2d 1379, 1380-1381 (5th Cir. 1976)* (appellate court did not disturb lower court's decision to strike pleadings and enter judgment for "unbelievably flagrant" conduct in disobeying several court orders despite party's excuse that it mistakenly concluded that its computer record was not relevant).

5th Circuit See Emerick v. Fenick Indus., Inc., 539 F.2d 1379, 1380-1381 (5th Cir. 1976) (appellate court did not disturb lower court's decision to strike pleadings and enter judgment for "unbelievably flagrant" conduct in disobeying several court orders despite party's excuse that it mistakenly concluded that its computer record was not relevant).

*7th Circuit See Kucala Enters. v. Auto Wax Co., 2003 U.S. Dist. LEXIS 8833, at *24 (N.D. Ill. May 23, 2003)* (magistrate judge recommended dismissal of lawsuit based on plaintiff's use of computer software program, "Evidence Eliminator," to delete documents from computer).

*8th Circuit Anderson v. Crossroads Capital Partners, L.L.C., 2004 U.S. Dist. LEXIS 1867, at *7-8, *25-26 (D. Minn. Feb. 10, 2004)* (court ordered adverse jury instruction after plaintiff intentionally used CyberScrub software to destroy electronic information).

9th Circuit Leon v. IDX Systems Corp., 464 F.3d 951, 959 (9th Cir. 2006) (dismissal with prejudice was not too harsh a sanction for willful spoliation when plaintiff knew he had duty to preserve all data on his employer-issued laptop, but he intentionally deleted more than 2,200 files and then implemented program to write over deleted documents).

*10th Circuit See In re Krause, 2007 Bankr. LEXIS 1937, at *25 (D. Kan. June 4, 2007)* (party sanctioned for spoliation of electronically stored information deleted by means of "Tracks Cleaner," advertised to delete "files away to Dept. of Defense standards for data destruction").

(n13)Footnote 10. **Level of culpability varies among jurisdictions.**

2d Circuit Reilly v. Natwest Mkts. Group, Inc., 181 F.3d 253, 268 (2d Cir. 1999) (finding of bad faith or intentional misconduct is not sine qua non to sanctioning spoliator with adverse inference instruction).

4th Circuit Sampson v. City of Cambridge, Md., 251 F.R.D. 172, 179 (D. Md. 2008) (although some court require showing of bad faith before imposing sanctions, Fourth Circuit requires only showing of fault, with degree of fault impacting severity of sanctions).

7th Circuit Second Chance Body Armor, Inc. v. American Body Armor, Inc., 177 F.R.D. 633, 637 (N.D. Ill. 1998) (party must display willfulness, bad faith, or fault to warrant sanctions under *Fed. R. Civ. P. 37(b)*); *Murlas v. Mobil Oil, 1995 U.S. Dist. LEXIS 3489, at *17-18 (N.D. Ill. Mar. 16, 1995)* (*Fed. R. Civ. P. 37* is flexible and permits courts broad discretion; pettiness and lack of civility do not equal bad faith).

*Fed. Circuit See United Medical Supply Co. v. United States, 2007 U.S. Claims LEXIS 207, at *33-37 (Ct. of Claims June 27, 2007)* (court discussed split in views among circuits and found that injured party need not demonstrate bad faith in order to impose spoliation sanction).

(n14)Footnote 11. **Sanctions should be proportionate under all circumstances.**

*7th Circuit See Danis v. USN Communs., Inc., 2000 U.S. Dist. LEXIS 16900, at *94 (N.D. Ill. Oct. 20, 2000)* (determining severity of sanction involves consideration of all circumstances in case); *see also Crown Life Ins. Co. v. Craig, 995 F.2d 1376, 1381-1382 (7th Cir. 1993)* (sanctions amounting to default judgment were proportional to plaintiff's willful failure to comply with discovery orders).

10th Circuit See Gates Rubber Co. v. Bando Chem. Indus., 167 F.R.D. 90, 102 (D. Colo. 1996) (determining severity of sanctions cannot be based on rigid formula applied in all cases).

(n15)Footnote 12. **Destruction before initiation of litigation sanctionable only if it represented bad faith.**

8th Circuit See E*Trade Securities, LLC v. Deutsche Bank AG, 2005 U.S. Dist. LEXIS 3021, at *13 (D. Minn. 2005) (bad faith may be shown by party's behavior).

*11th Circuit See Optowave Co., Ltd. v. Nikitin, 2006 U.S. Dist. LEXIS 81345, at *29-32 (M.D. Fla. Nov. 7, 2006)* (party sanctioned for deleting emails after opposing party notified it to preserve the emails).

(n16)Footnote 13. **Sliding scale of culpability.**

2d Circuit See Pension Comm. of the Univ. of Montreal Pension Plan v. Banc of Am. Sec., LLC, 685 F. Supp. 2d 456, 470 (S.D.N.Y. 2010) ("harshness of [adverse inference] instruction should be determined based on the nature of the spoliating party's conduct--the more egregious the conduct [willful or bad faith, gross negligence, and negligence], the more harsh the instruction").

4th Circuit See Thompson v. United States HUD, 219 F.R.D. 93, 101 (D. Md. 2003) (adverse inference sanction based on sliding scale of culpability).

(n17)Footnote 14. **Some courts require willful destruction of evidence.**

3d Circuit See Struthers Patent Corp. v. Nestle Co., 558 F. Supp. 747, 756 (D.N.J. 1981) (party's destruction of relevant evidence knowing litigation imminent subject to sanctions under some circumstances, though not in this case); *see also* Liafail, Inc. v. Learning 2000 Inc., Nos. 01-599, 01-678, 2002 U.S. Dist. LEXIS 24803, at *9-13 (D. Del. Dec. 23, 2002) (destruction of laptop computers after commencement of litigation was subject to adverse inference jury instruction unless party produced documents from backup tapes).

5th Circuit See Rimkus Consulting Group, Inc. v. Cammarata, 688 F. Supp. 2d 598, 614 (S.D. Tex. 2010) (severe sanction of giving adverse inference instruction may not be imposed without evidence of bad faith); *see also Vick v. Texas Employment Comm'n, 514 F.2d 734, 737 (5th Cir. 1975)* (adverse inference can be drawn only when documents destroyed in bad faith; mere negligence in destroying them is insufficient).

7th Circuit See Coates v. Johnson & Johnson, 756 F.2d 524, 551 (7th Cir. 1985) (no sanction absent finding of bad faith).

9th Circuit See Seattle Audubon Soc'y v. Lyons, 871 F. Supp. 1291, 1308 (W.D. Wash. 1994), aff'd on other grounds, 80 F.3d 1401 (9th Cir. 1996) (party must have notice that documents and electronic communications that they destroyed were relevant).

10th Circuit See Procter & Gamble v. Haugen, 179 F.R.D. 622, 631 (D. Utah 1998) (no bad faith shown in destroying email communications even if responding party tenaciously asserted reciprocal right to preservation and discovery of opposing party's emails); *see also Aramburu v. Boeing Co., 112 F.3d 1398, 1407 (10th Cir. 1997)* (mere negligence of party destroying evidence insufficient; adverse inference must be predicated on bad faith).

(n18)Footnote 15. **Other courts will sanction for less culpable conduct.**

2d Circuit See Pension Comm. of the Univ. of Montreal Pension Plan v. Banc of Am. Sec., LLC, 685 F. Supp. 2d 456, 467-468 (S.D.N.Y. 2010) (proof of relevance and prejudice justifies imposition of severe sanction against merely negligent spoliating party).

3d Circuit See In re Prudential Ins. Co. of Am. Sales Practices Litig., 169 F.R.D. 598, 616 (D.N.J. 1997) (even though destruction of evidence was not willful, sanctions imposed because prejudice was substantial).

4th Circuit See Sampson v. City of Cambridge, Md., 251 F.R.D. 172, 181-182 (D. Md. 2008) (court found insufficient evidence from which to conclude that defendant acted willfully or in bad faith when it failed to preserve electronic evidence, and instead concluded that defendant's failure to preserve emails was negligent).

6th Circuit See The Clark Construc. Group Inc. v. City of Memphis, 229 F.R.D. 131, 141 (W.D. Tenn. 2005) (adverse inference sanction imposed on defendant for negligently failing to preserve documents).

*9th Circuit See Google Inc. v. Amer. Blind & Wallpaper Factory, 2007 U.S. Dist. LEXIS 48309, at *16 (N.D. Cal. June 27, 2007)* (court sanctioned party for "willful indifference" with respect to fulfilling its preservation obligations).

(n19)Footnote 16. **Substantial prejudice required.** *See Reilly v. NatWest Mkts. Group Inc., 181 F.3d 253, 267-268 (2d Cir. 1999)* (sanctioned for non-intentional but gross negligence in destroying evidence essential to opposing party).

(n20)Footnote 16.1. **Gross negligence sufficient for imposition of adverse inference instruction.** *Pension Comm. of the Univ. of Montreal Pension Plan v. Banc of Am. Sec., LLC, 685 F. Supp. 2d 456, 464-465 (S.D.N.Y. 2010)* ("failure to issue a *written* litigation hold constitutes gross negligence" and adverse inference instruction may be appropriate).

(n21)Footnote 16.2. **Intentional conduct required for imposition of adverse inference instruction.** *Rimkus Consulting Group, Inc. v. Cammarata, 688 F. Supp. 2d 598, 615 (S.D. Tex. 2010)* ("The circuit differences in the level of culpability necessary for an adverse inference instruction limit the applicability of the *Pension Committee* approach.").

(n22)Footnote 17. **Prejudice and unavailability of alternative sources of evidence.**

1st Circuit See Allen Pen Co. v. Springfield Photo Mount Co., 653 F.2d 17, 23-24 (1st Cir. 1981) (if alternative sources of information are available from third parties to develop evidence, severe sanctions of default judgment or adverse inferences may not be imposed); *McGuire v. Acufex Microsurgical, Inc., 175 F.R.D. 149, 154 (D. Mass. 1997)* (five elements for determining sanctions for destruction of relevant

evidence are: (1) act of destruction; (2) discoverability of evidence; (3) intent to destroy evidence; (4) destruction of evidence after action filed or at a time when filing fairly perceived as imminent; and (5) prejudice to opposing party).

*2d Circuit See Phoenix Four, Inc. v. Strategic Resources Corp., 2006 U.S. Dist. LEXIS 32211, at *15 (S.D.N.Y. May 23, 2006)* (requesting party must show that lost electronic information was relevant to its claims or defenses).

(n23)Footnote 17.1. **Negligent failure to impose litigation hold alone does not warrant sanctions absent showing that deleted information was relevant.** *See Phillips v. Potter, 2009 U.S. Dist. LEXIS 40550, at *16 (W.D. Pa. May, 14, 2009)* (court denied motion for sanctions absent showing that plaintiff was "harmed by lack of litigation hold").

(n24)Footnote 18. **Showing that lost material was relevant and favorable.**

2d Circuit See Shaffer v. RWP Group, Inc., 169 F.R.D. 19, 28 (E.D.N.Y. 1996) ("some extrinsic evidence of the content of the [destroyed electronically stored] evidence ... for the trier of fact to be able to determine in what respect and to what extent it would have been detrimental" is required to draw adverse inference, quoting *Turner v. Hudson Transit Lines, Inc., 142 F.R.D. 68, 77 (S.D.N.Y. 1991))* .

*3d Circuit See Wong v. Thomas, 2008 U.S. Dist. LEXIS 71246, at *6-7 (D. N.J. Sept. 10, 2008)* (although defendant inadvertently destroyed documents, plaintiff failed to identify with particularity what information "was, or may have been, contained in the [destroyed] electronic data" that was relevant; court denied sanctions motion).

4th Circuit See Pandora Jewelry, LLC v. Chamilia, LLC, 2008 U.S. Dist. LEXIS 79232, at *31 (D. Md. Sept. 30, 2008) (plaintiff failed to offer any concrete proof that "lost materials would have produced evidence favorable to the required showing of injury" and court declined to impose sanctions).

*5th Circuit See Escobar v. City of Houston, 2007 U.S. Dist. LEXIS 72706, at *54-56 (S.D. Tex. Sept. 29, 2007)* (mere speculation that defendant destroyed ESI in bad faith is insufficient to impose adverse-inference instruction).

7th Circuit See 3M v. Pribyl, 259 F.3d 587, 606 n.5 (7th Cir. 2001) (plaintiff failed to make any showing that deleted computerized records contained relevant information and, without any other evidence, could not prevail on asserted claim).

10th Circuit See Gates Rubber Co. v. Bando Chem. Indus., 167 F.R.D. 90, 104 (D. Colo. 1996) (burden on requesting party to introduce evidence tending to show that document actually destroyed or withheld would have produced evidence favorable to that party).

(n25)Footnote 18.1. **Circumstantial evidence may be sufficient.** *See Adams & Assoc., L.L.C. v. Dell, Inc., 2009 U.S. Dist. LEXIS 26964, at *43 (D. Utah Mar. 30, 2009)* (failure to produce records that were routinely maintained by other similarly situated companies in patent infringement case was sufficient evidence to show that requested evidence was deleted or withheld).

(n26)Footnote 19. **Severe sanction entered when misconduct flagrant.**

2d Circuit See Turner v. Hudson Transit Lines, Inc., 142 F.R.D. 68, 75 (S.D.N.Y. 1991) (to restore

evidentiary balance, adverse inference should arise even when spoliation was merely negligent, because prejudice to opponent is same regardless of despoiler's intent).

7th Circuit See Barnhill v. United States, 11 F.3d 1360, 1368 (7th Cir. 1993) (circuit refuses to adopt bad faith requirement in all cases for imposition of default judgment).

(n27)Footnote 20. **Belated request for evidence indicative that it lacks importance.**

1st Circuit See Allen Pen Co. v. Springfield Photo Mount Co., 653 F.2d 17, 23-24 (1st Cir. 1981) (request for computer records made three years after records identified in interrogatories relevant in determining severity of sanction for later destroying records).

4th Circuit See Goodman v. Praxair Servs., 632 F. Supp. 2d 494, 508 (D. Md. 2009) (spoliation motion should be filed "as soon as reasonably possible after discovery of the facts that underlie the motion").

*7th Circuit See Aero Prods. Int'l, Inc. v. Intex Recreation Corp., 2004 U.S. Dist. LEXIS 1283, at *11-12 (N.D. Ill. Jan. 29, 2004)* (sanctions for failing to produce electronic documents were not imposed because of seven-month delay in filing sanction motion).

*10th Circuit See Cherrington Asia Ltd. v. A & L Underground, Inc., 2010 U.S. Dist. LEXIS 1546, at *18-19 (D. Kan. Jan. 8, 2010)* (plaintiff's sanctions motion for "document dump" filed approximately 15 months after discovery "simply comes too late," and court declined to sanction defendant).

Moore's Federal Practice: Discovery of Electronically Stored Information

Volume 7: Analysis: Civil Rules 30-37A
Chapter 37A Discovery of Electronically Stored Information
F. SANCTIONS

7-37A Moore's Federal Practice: Electronic Discovery § 37A.56

AUTHOR: by John K. Rabiej

§ 37A.56 Destruction of Records in Accordance with Records Retention and Disposition Policy

[1] Record Retention and Disposition Policy Must Be Reasonable

Organizations and companies routinely maintain records disposition policies designed to retain only those records that are necessary for business purposes, periodically destroying nonessential records. n0.1 In general, the destruction of a document in accordance with a reasonable housekeeping records retention and disposition policy does not raise an adverse inference of spoliation if it is done without knowledge that the destroyed document is relevant to the claim or defense of any party in pending or imminent litigation. n1 Whether a record-retention policy is reasonable depends on all the circumstances involving the disputed destroyed document. Factors considered include the following: n2

- The length of time that documents are retained;
- Whether important documents are retained for longer periods than less important ones;
- Whether documents at issue in the instant litigation were involved in earlier litigation;
- Whether the retention policy was promulgated in bad faith; and
- Whether the policy was acted on in bad faith.

Other factors might include whether the plan classified different types of documents, setting out different retention periods depending on their importance. For example, destroying routine computer records after being retained for 12 months in accordance with federal regulations did not demonstrate bad faith. n3 Federal regulations can also impose specific record retention standards governing certain industries. n4 Several national organizations have developed model records retention plans, which provide useful standards on document retention and destruction. n4.1 However, rigid adherence to a record-disposition policy may not immunize a party from sanctions if the party knew or should have known that the particular documents being destroyed might become material in future litigation (*see § 37A.10[3]*).

n5

The 2006 amendment to Rule 37 added subdivision (f) (now subdivision (e) as restyled in 2007), a limited "safe harbor" provision protecting a party that fails to produce electronically stored information lost as a result of the routine, good-faith operation of an electronic information system. For further discussion of the safe harbor provision, see *§ 37A.57*.

[2] Destroying Records Before Commencement of Litigation

Destroying a relevant document before litigation is commenced in accordance with an established record-disposition schedule that was adopted in furtherance of legitimate business purposes may be reasonable and may not be subject to sanction. n6 Whether a party is subject to a spoliation charge when it destroys evidence consistent with its record-disposition policy depends primarily on the prejudice to the requesting party's case and the culpability of the responding party. n7

Culpability is premised on knowledge of imminent or pending litigation (*see* [1], *above*). A party's culpability encompasses the conduct of employees and cannot be shed by merely choosing to neglect informing employees of pending or imminent litigation (*see § 37A.10[5]*). A company is obligated to inform its employees of the commencement of litigation, and instruct them to preserve relevant materials (*see § 37A.10[5]*). n8 It is no defense if a party's employees destroy relevant materials in ignorance because the company's officers failed to alert them of the litigation. Destroying documents in a manner inconsistent with a record-disposition policy may be persuasive evidence that the destruction was not done in good faith. n9 Accordingly, a party's record-retention policy may itself be subject to discovery if relevant. n10

Rule 37 does not govern sanctioning a party for destroying documents in accordance with a record retention-disposition policy before litigation is commenced. n11 A court must rely on its inherent power to punish bad-faith destruction of documents before litigation is commenced. n12

[3] Destroying Records After Commencement of Litigation

The duty to preserve evidence arises when a party knows or should know that the evidence may be relevant to litigation that has been commenced or is imminent (*see § 37A.10[3]*). If litigation is imminent or has commenced, destruction of evidence can lead to severe sanctions--even if it is destroyed in accordance with an established record retention and disposition policy. n13 When litigation has commenced or is imminent, a party should either suspend its records destruction altogether or impose a selective litigation hold, preserving the records of all individuals (key players) who may have relevant information. n13.1 The steps taken by the party to preserve evidence that it knows or should know is relevant in the case is a key factor in determining its culpability. n14 Judge Scheindlin of the Southern District of New York has concluded that a failure to issue a written litigation hold to preserve evidence constitutes gross negligence. n14.1

[4] Notifying Opposing Party to Suspend Records Destruction in Accordance With Records Disposition Policy

A party's culpability in failing to adjust or suspend its record-disposition practices in light of pending litigation may be mitigated if the requesting party fails to timely notify the opposing party to take appropriate action to preserve the evidence. Courts have taken into account a party's failure to notify an opposing party in a timely manner of particular documents or types of documents that must be preserved and declined to sanction or imposed a light sanction on the party for destroying evidence pursuant to an otherwise reasonable record-disposition policy. n15 The rationale in these cases appears particularly persuasive if the responding party maintains a large number of electronically stored documents. It is unreasonable to require the party to freeze its disposition practices governing all its records for a

potentially long time without any showing that the records will be material or needed in litigation. The requesting party may be in a better position to identify relevant discoverable material. Under these circumstances, the requesting party should reasonably limit its request so that some record purging may continue in accordance with normal business operations (*see § 37A.10[4]*). Once the "key players" in the litigation are identified, the responding party can effectively impose a litigation hold on them, preserving relevant evidence without causing major disruptions to ongoing business operations. n15.1

[5] Ongoing Litigation

Large corporations involved in multiple lawsuits on an ongoing and constant basis are mired in an obvious quandary when administering a reasonable records disposition policy. Destruction of corporate records at any single point in time may involve evidence relevant to some ongoing litigation. The sanctions imposed on parties for destruction of relevant evidence can be severe, although some defenses, such as the opposing party's failure to notify the party to stop destroying records (*see* [4], *above*), may mitigate the severity of potential sanctions. Until the case law becomes more developed, the most prudent course is to identify the potential sources of relevant information, implement means to preserve that information, and advise the opposing party. The notification should be done early in the litigation (*see § 37A.24*). Alternatively, this information can be preserved by transferring it to another storage medium. n16

Legal Topics:

For related research and practice materials, see the following legal topics:
Civil ProcedureDiscoveryElectronic DiscoveryGeneral OverviewCivil ProcedureDiscoveryMisconductCivil ProcedureSanctionsMisconduct & Unethical BehaviorGeneral OverviewEvidenceRelevanceSpoliationLegal EthicsSanctionsGeneral Overview

FOOTNOTES:

(n1)Footnote 0.1. **Record retention policies and practices are subject to discovery.**

*8th Circuit See In re Zurn Pex Plumbing Liab. Litig., 2008 U.S. Dist. LEXIS 96356, at *5 (D. Minn. Nov. 26, 2008)* (court approved plaintiff's request to depose corporate witness to determine whether any relevant evidence had been deleted pursuant to company's record retention practices).

D.C. Circuit See Newman v. Borders, Inc., 257 F.R.D. 1, 3 (D.D.C. 2009) ("That a party's document retention policies, including its policies as to electronically stored information, may be a fit subject of discovery cannot be gainsaid.").

(n2)Footnote 1. **Destroying records in accordance with records retention policy not sanctionable.** *See Coates v. Johnson & Johnson, 756 F.2d 524, 551 (7th Cir. 1985)* (no sanction absent finding of bad faith; employee responsible for disposition of personnel records destroyed documents after consultation with union officials and under misguided belief that records were duplicates).

4th Circuit But see Rambus, Inc. v. Infineon Tech. AG, 220 F.R.D. 264, 283-288 (E.D. Va. 2004) (purging documents in accordance with valid records retention policy should be suspended when litigation imminent).

5th Circuit See Vick v. Texas Employment Comm'n, 514 F.2d 734, 737 (5th Cir. 1975) (no adverse inference when records destroyed under routine procedures without bad faith and before service of interrogatories).

7th Circuit See Coates v. Johnson & Johnson, 756 F.2d 524, 551 (7th Cir. 1985) (no sanction absent

finding of bad faith; employee responsible for disposition of personnel records destroyed documents after consultation with union officials and under misguided belief that records were duplicates).

(n3)Footnote 2. **Elements of a reasonable records retention policy.**

3d Circuit See Struthers Patent Corp. v. Nestle Co., 558 F. Supp. 747, 756 (D.N.J. 1981) (court set out following criteria for evaluating reasonableness of record retention policy: (1) identity of destroyed document; (2) relevance of destroyed document to issues in case; (3) availability of document from other sources; (4) probability that litigation was real possibility; and (5) reasonableness of sanctions and alternative punishments).

8th Circuit See Lewy v. Remington Arms Co., 836 F.2d 1104, 1112 (8th Cir. 1988) (on remand appellate court outlined several factors that should be considered in determining whether record-disposition policy is reasonable).

9th Circuit See William T. Thompson Co. v. General Nutrition Corp., 593 F. Supp. 1443, 1455 (C.D. Cal. 1984) (party sanctioned because failure to notify its employees to adjust record disposition practices in light of litigation caused substantial prejudice by depriving requesting party of essential evidence needed to build its case).

(n4)Footnote 3. **Retention of document for significant time is relevant.** *See Wright ex. rel. Wright v. Illinois Cent. R.R., 868 F. Supp. 183, 188 (S.D. Miss. 1994)* (employee unaware of pending litigation and documents were destroyed in accordance with routine procedures).

(n5)Footnote 4. **Federal regulations governing record retention schedules.** *See* Guide to Record Retention Requirements in the Code of Federal Regulations (Fed. Reg. Nat'l Archives & Rec. Admin. 1994).

*2d Circuit See Scalera v. Electrograph Systems, Inc., 2009 U.S. Dist. LEXIS 91572, at *30-35 (E.D.N.Y. Sept. 29, 2009)* (federal regulations implementing Americans with Disabilities Act required defendant to retain and preserve certain documents, which had been destroyed).

D.C. Circuit See Public Citizen v. Carlin, 2 F. Supp. 2d 1, 2-3 (D.D.C. 1997) , rev'd on other grounds, 184 F.3d 900, 902 (D.C. Cir. 1999) (collection of statutes known as Federal Records Act govern record retention practices of federal agencies).

(n6)Footnote 4.1. **Court refers to guidance on records management standards provided by national organizations in finding that defendant's record retention policy was unreasonable.** *See Adams and Assoc., L.L.C. v. Dell, Inc., 2009 U.S. Dist. LEXIS 26964, at *54-56 (D. Utah, Mar. 30, 2009)* ("Numerous authoritative organizations have long promulgated policy guidelines for document retention and destruction.").

(n7)Footnote 5. **Rigid adherence to records retention policy may not excuse destroying relevant evidence.**

8th Circuit See Lewy v. Remington Arms Co., 836 F.2d 1104, 1112 (8th Cir. 1988) ("if the corporation knew or should have known that the documents would become material at some point in the future then such documents should have been preserved").

Fed. Circuit See Renda Marine, Inc. v. United States, 58 Fed. Cl. 57, 61 & n.4 (Fed. Cl. 2003) (retention policy calling for deletion of all emails after being read was inconsistent with party's

obligation to preserve relevant evidence, but existence of policy may bear on degree of culpability).

(n8)Footnote 6. **Document destruction in accordance with reasonable records retention policy not sanctionable.** *See Stanton v. National R.R. Passenger Corp., 849 F. Supp. 1524, 1528 (M.D. Ala. 1994)* (no sanction for destruction of computer tape if done in accordance with established policy, but document destroyed in violation of retention policy).

(n9)Footnote 7. **Destroying records in accordance with records retention policy after notification is sanctionable if prejudice demonstrated.** *See Wiginton v. CB Richard Ellis, 2003 U.S. Dist. LEXIS 19128, at *23-24, *26 (N.D. Ill. Oct. 24, 2003)* (failure to change records retention policy after notification that relevant documents would be destroyed might be subject to sanctions if restoration of backup tapes reveals that relevant documents had been destroyed).

(n10)Footnote 8. **Employees must be notified of imminent or pending litigation.**

*1st Circuit See Linnen v. A.H. Robins Co., 1999 Mass. Super. LEXIS 240, at *23 (June 15, 1999)* (employees notified by email and voice mail of duty to preserve).

*2d Circuit See The Pension Comm. of the Univ. of Montreal Pension Plan v. Banc of Am. Sec., LLC, 2010 U.S. Dist. LEXIS 1839, at *10 (S.D.N.Y. Jan. 11, 2010)* ("failure to issue a written litigation hold constitutes gross negligence because the failure is likely to result in the destruction of relevant information").

*7th Circuit See Danis v. USN Communs., Inc., 2000 U.S. Dist. LEXIS 16900, at *112-113 (N.D. Ill. Oct. 20, 2000)* (responding party did not generally disseminate need to preserve documents and consequences of failure in writing to all employees and did not communicate any specific criteria regarding what should be saved related to lawsuit).

9th Circuit See National Ass'n of Radiation Survivors v. Turnage, 115 F.R.D. 543, 557-558 (N.D. Cal. 1987) (defendant employer has affirmative obligation to communicate preservation duty to employees).

(n11)Footnote 9. **Destroying records in manner inconsistent with record-disposition policy raises presumption of bad faith.**

*2d Circuit Zubulake v. UCB Warburg, LLC, 2003 U.S. Dist. LEXIS 18771, at *17 (S.D.N.Y. Oct. 22, 2003)* (party deleted recent computer backup tapes in violation of company's retention policy, which required retention for three years).

3d Circuit See In re Prudential Ins. Co. of Am. Sales Practices Litig., 169 F.R.D. 598, 615 (D.N.J. 1997) (adverse inference drawn from destruction of relevant computer records pursuant to haphazard and uncoordinated document retention policy).

8th Circuit See Capellupo v. FMC Corp., 126 F.R.D. 545, 549 (D. Minn. 1989) (party failed to list documents destroyed in accordance with established procedures).

(n12)Footnote 10. **Record-retention policy must be relevant to be discoverable.**

*7th Circuit See India Brewing, Inc. v. Miller Brewing Co., 2006 U.S. Dist. LEXIS 50550, at *3 (E.D.*

Wis. 2006) (court denied discovery request for record retention policy because it was not shown to be relevant to pleaded claims or defenses).

*9th Circuit See In re eBay Seller Antitrust Litig., 2007 U.S. Dist. LEXIS 75498, at *8 (N.D. Cal. Oct. 2, 2007)* (actual notices sent to employees to retain relevant litigation documents determined to be privileged and not subject to production, but information on facts of party's document retention and collection policy must be disclosed, including what kinds and categories of ESI employees were instructed to preserve).

(n13)Footnote 11. *Fed. R. Civ. P. 37.*

(n14)Footnote 12. **Inherent sanction authority relevant to pre-litigation conduct.** *See Turner v. Hudson Transit Lines, Inc., 142 F.R.D. 68, 72 (S.D.N.Y. 1991)* (*Fed. R. Civ. P. 37* does not deal with spoliation issues before discovery request; courts may sanction under inherent authority).

(n15)Footnote 13. **Severe sanctions for destroying evidence after litigation commenced.**

*1st Circuit See Linnen v. A.H. Robins Co., 1999 Mass. Super. LEXIS 240, at *22-24 (June 15, 1999)* (responding party responsible for costs of email retrieval because of lack of cooperation and requesting party's dogged pursuit of discovery).

4th Circuit See Samsung Elec. Co. v. Rambus Inc., 439 F. Supp. 2d 524 (E.D. Va. 2006), reversed on other grounds, 523 F.3d 1374 (Fed. Cir. 2008) (destruction of documents in accordance with records-retention policy may continue without sanctions, only if policy modified to ensure that relevant information is preserved).

5th Circuit See Tantivy Comm. Inc. v. Lucent Tech., Inc., 2005 U.S. Dist. LEXIS 29981 at *7 (E.D. Tex. Nov. 1, 2005) (routine document retention/destruction policy must be suspended and litigation hold established to preserve relevant evidence).

7th Circuit See Bryant v. Gardner, 587 F. Supp. 2d 951, 968 (N.D. Ill. 2008) (defendants failed in their obligation to preserve evidence by allowing employee to continue using laptop after litigation began without securing discoverable information on computer, but court found insufficient evidence of bad faith to warrant entry of default judgment).

9th Circuit See William T. Thompson Co. v. General Nutrition Corp., 593 F. Supp. 1443, 1447 (C.D. Cal. 1984) (party sanctioned for destruction of documents by employees who were not advised to change their document-destruction procedures in accordance with established record retention policy).

10th Circuit See Computer Assocs. Int'l, Inc. v. American Fundware, Inc., 133 F.R.D. 166, 168-169 (D. Colo. 1990) (older versions of computer source codes destroyed in accordance with industry customary practice when newer version adopted, but failure to preserve earlier version when party was aware of imminent litigation warranted sanction).

D.C. Circuit See Nucor Corp. v. Bell, 251 F.R.D. 191, 201 (D.D.C. 2008) (default judgment should be imposed only if lesser sanction will be ineffective to meet twin purposes of leveling evidentiary playing field and sanctioning improper conduct).

(n16)Footnote 13.1. **Failure to preserve electronically stored information of former key employees.**

*9th Circuit See In re Napster, Inc. Copyright Litig., 2006 U.S. Dist. LEXIS 79508, at *26-27 (N.D. Cal. Oct. 25, 2006)* (party had duty to put in place litigation hold and suspend long-standing policy of deleting emails once preservation duty arose).

*10th Circuit See Cache La Poudre Feeds, LLC v. Land O'Lakes, Inc., 2007 U.S. Dist. LEXIS 15277, at *51-53 (D. Colo. Mar. 2, 2007)* (failure to suspend routine purging of electronically stored information of former employees who were "key players" in accordance with litigation hold violated preservation duty).

(n17)Footnote 14. **Steps taken to preserve evidence factor in determining culpability.** *See Samsung Elec. Co. v. Rambus Inc., 439 F. Supp. 2d 524 (E.D. Va. 2006), reversed on other grounds, 523 F.3d 1374 (Fed. Cir. 2008)* (party that destroyed electronically stored information under a records retention policy, which was relevant to actual or anticipated litigation, may be sanctioned for spoliation, unless the retention policy is modified by informing company's officers and employees of the litigation and identifying types of information that are relevant and must be preserved).

(n18)Footnote 14.1. **Written litigation hold required.** *Pension Comm. of the Univ. of Montreal Pension Plan v. Banc of Am. Sec., LLC, 2010 U.S. Dist. LEXIS 1839, at *10 (S.D.N.Y. Jan. 11, 2010)* (failure to issue written litigation hold will likely result in destruction of relevant information).

(n19)Footnote 15. **Failing to notify party in timely manner to suspend record disposition may mitigate sanction.**

*1st Circuit See Linnen v. A.H. Robins Co., 1999 Mass. Super. LEXIS 240, at *22-24 (June 15, 1999)* (party sought order to prevent spoliation when complaint filed; responding party liable for costs of email retrieval).

*2d Circuit See New York State NOW v. Cuomo, 1998 U.S. Dist. LEXIS 10520, at *7-9 (S.D.N.Y. July 13, 1998)* (no sanctions warranted for destroying documents in accordance with record-disposition policy because requesting party failed to identify with any specificity what information they would likely find).

5th Circuit See Wright ex. rel. Wright v. Illinois Cent. R.R., 868 F. Supp. 183, 188 (S.D. Miss. 1994) (plaintiff notified defendant to stop destruction of documents pursuant to record-disposition policy more than one year after lawsuit filed and seven months before first production request).

7th Circuit But see Bryant v. Gardner, 587 F. Supp. 2d 951, 968 (N.D. Ill. 2008) (formal discovery request is not necessary to trigger duty to preserve evidence, and complaint itself may alert party that certain information is relevant and likely to be sought in discovery).

(n20)Footnote 15.1. **Key players.** *See Pension Comm. of the Univ. of Montreal Pension Plan v. Banc of Am. Sec., LLC, 2010 U.S. Dist. LEXIS 1839, at *12 (S.D.N.Y. Jan. 11, 2010)* ("failure to collect records--either paper or electronic--from key players constitutes gross negligence").

(n21)Footnote 16. **Prudent course is to store information on alternative medium.** *See Smith v. Texaco, 951 F. Supp. 109, 112 (E.D. Tex. 1997)* ("to mitigate the high cost associated with electronic document storage, the court will permit defendants to delete electronic records in the ordinary and usual course of business; provided, however, that hard copy records be made and kept ..."); *see also* In re Baycol Products Litig., MDL No. 1431 (Pretrial Order No. 6) (Mar. 4, 2002) ("routine erasures of computerized data pursuant to existing programs [permitted] but they shall ... preserve any printouts of such data").

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Moore's Federal Practice: Discovery of Electronically Stored Information

Volume 7: Analysis: Civil Rules 30-37A
Chapter 37A Discovery of Electronically Stored Information
F. SANCTIONS

7-37A Moore's Federal Practice: Electronic Discovery § 37A.57

AUTHOR: by John K. Rabiej

§ 37A.57 Electronically Stored Information Destroyed During Routine Operation of Electronic Information System

[1] Routine Operation of Electronic Information System: "Safe Harbor"

A party may be sanctioned for spoliation when it intentionally destroys any relevant evidence (*see § 37.120*). However, the destruction of relevant electronically stored evidence raises unique concerns (*see § 37A.10[1] -[3]*). Electronically stored information is routinely destroyed in the normal course of business without regard to pending or ongoing litigation when email messages are automatically deleted on a scheduled basis (*see § 37A.04*), residual-deleted data is overwritten as part of daily computer operations (*see § 37A.03*), n.01 and backup tapes are recycled (*see § 37A.05[2]*). Once initiated, these deletion operations run constantly and automatically without any deliberate or conscious "human" intervention. They are necessary to prevent overloading the system. Requiring an organization to suspend all such deletion operations would seriously disrupt its operations. n1

Under a provision added in 2006 and restyled in 2007, a party may not be sanctioned under the Federal Rules of Civil Procedure for destroying electronically stored information as a "result of the routine, good-faith operation of an electronic information system," absent exceptional circumstances. n2 Rule 37(e) provides a "safe harbor" only against sanctions imposed under the federal rules. However, the destruction of such information may also be subject to sanctions under a court's inherent authority, which is outside the ambit of the rule's "safe harbor." n2.1 Nonetheless, courts have traditionally honored the standards prescribed in the federal rules so that presumptively a court will not sanction a party under its inherent authority unless the sanction would be appropriate under the rule. Of course, such destruction of information remains subject to possible sanctions under other sources of the law and rules of professional responsibility. n3

The "safe harbor" operates under Rule 37 only when the deletions are made in good faith. n4 The good-faith condition significantly limits the protection of the rule afforded to a responding party. Whether a party may be sanctioned for failing to suspend deletion operations depends on whether it can justify its actions based on good faith. The "good faith" standard implies an intermediate culpability standard between "negligence" and "reckless or intentional" conduct. Thus,

so long as the routine computer operation is continued in good faith, and a party reasonably believes that the information being destroyed is not discoverable or is available from reasonably accessible sources, the party may not be sanctioned under the rules. n5 The key factor is whether the party knew or should have known that relevant electronically stored information stored in an accessible source had been deleted. If so, the party has the duty to preserve the information and may be sanctioned for failing to suspend the deletion process. n5.1

The steps a party takes to preserve discoverable electronically stored information are probative of its good faith in continuing its automatic deletion program. Instead of imposing a litigation hold on all employees and records in an organization, a party may impose a selective litigation hold to prevent destruction of discoverable information targeted against a limited number of persons and records. Its elements and implementation will be evaluated in determining a party's good faith. n6 Good faith may require a party to suspend or modify a deletion program concerning electronically stored information (e.g., recycling of backup tapes, purging of emails, and deletion of metadata and residual-deleted matter) because the information may be the only source of relevant evidence and is not otherwise available. n7 Accordingly, a litigation hold should at a minimum suspend the deletion program, which affects the "key players" who likely possess discoverable information, unless this information is otherwise preserved on another source, e.g., a document hold preserves the information on the key player's active database. n8 Parties should also consider whether to suspend the use of laptop computers of key players, at least until an imaging of the computer's contents can be made. n8.1

[2] Overwriting Residual-Deleted Electronically Stored Information

A computer's residual-deleted electronically stored information is overwritten and lost whenever a computer is processing data, including during the time when electronic commands are used to turn the computer on or new files are created (*see § 37A.03[3]*). n9 Residual-deleted information may be discoverable; the only way to prevent its destruction is to suspend further computer operations, or to make an mirror image copy of the hard drive preserving all files, both of which can involve substantial cost and burden. n10 Unless the party is aware that potential residual-deleted files exist that may contain relevant evidence not available from reasonably accessible sources, a party is not obligated to take extraordinary steps either to stop computer operations or make a mirror-image copy of computer files. If the destruction of residual-deleted electronically stored information is likely to be in issue, the better practice is to address potential problems as quickly as possible after commencement of litigation (*see § 37A.20*).

In most cases, neither party is aware of whether residual-deleted information that was lost during routine computer operations actually contained discoverable information. Often no record exists that identifies which electronically stored information is destroyed, and no method exists to determine whether the information was relevant to the litigation. In these cases, no sanction may be imposed absent some showing that the destroyed documents or files were indeed relevant and that the party failed to act in good faith. n11 The burden is on the requesting party to show that the lost residual-deleted information was relevant and not available from reasonably accessible sources. The burden is ordinarily difficult to meet; however, the party is not required to identify the exact contents of the destroyed electronic documents. A showing that the destroyed documents fell within a category of documents that was relevant and had some materiality to the litigation may be adequate to impose appropriate sanctions. n12

[3] Routine Purging of Emails

The number of email messages stored on a hard drive, particularly in large organizations, can overwhelm the available space within a brief period of time, significantly slowing a computer's operation speed. The heavy volume of electronic information generated and retained by large businesses can reduce efficiency and sometimes overwhelm the storage capacity of computers. Systematic purging of nonessential electronic information ensures that computer storage capacity is available for efficient ongoing business operations. Organizations take advantage of software applications that delete temporary files and email messages on a regular and routine basis in accordance with established policies governing records retention and disposition. n13 A party destroying emails as part of a regular good-faith functioning of

a software application may not be sanctioned absent exceptional circumstances. n14 If the routine operation of the computer system is likely to destroy electronically stored information that is relevant and not otherwise available on another source, a party must place a litigation hold, suspending the destruction. n15 A litigation hold need not be overly broad. It should target "key players" whose email records are most likely to be relevant and must be preserved. n16 In addition, if the responding party continues routine purging of emails under a records-retention policy, a mere statement that it searched the entire record for requested information may be insufficient. Under such circumstances, the responding party may be required to provide by affidavit some evidence demonstrating the scope of the search undertaken on the active databases to locate electronically stored information. n16.1

[4] Backup Tapes Destroyed

Many organizations routinely backup their electronically stored data, usually on large magnetic tape reels that are reused on a rotational basis every other month or so (*see § 37A.05[2][b]*). n17 If reused, earlier backed-up data is overwritten and replaced with newer backup data (*see § 37A.05[2]*). Searching and retrieving electronically stored information from backup systems can be burdensome and may not be required under the Rule 26(b)(2)(C)(iii) proportionality analysis (*see § 37A.34[2][d]*). n18

Generally, backup tapes used primarily for disaster recovery may be recycled in accordance with a reasonable records-retention policy. n19 A party must ensure that relevant electronic evidence contained in backup tapes is not destroyed only if it continues recycling the tapes in bad faith, knowing that the information is discoverable and not available on reasonably accessible sources. Thus, when a party fails to place a "document hold" on a "key player" who likely possesses discoverable information on an active database, the backup tapes may represent the only available source of the information. If the backup tapes are subject to a preservation order or the party knows or should know that relevant key information is stored in the backup tapes that is not otherwise available, the routine recycling of backup tapes should be immediately suspended. n20

Legal Topics:

For related research and practice materials, see the following legal topics:
Civil ProcedureDiscoveryElectronic DiscoveryGeneral OverviewCivil ProcedureDiscoveryMisconductCivil ProcedureSanctionsMisconduct & Unethical BehaviorGeneral OverviewEvidenceRelevanceSpoliationLegal EthicsSanctionsGeneral Overview

FOOTNOTES:
(n1)Footnote .01. **Spoliation through continued use.** *See Nucor Corp. v. Bell, 251 F.R.D. 191, 197 n.3 (D.D.C. 2008)* (data on defendant's computer was altered or destroyed when defendants continued to use computer while under duty to preserve evidence, for example, as when user "deletes" file, sending it to "unallocated space" giving computer permission to overwrite file with new data).

(n2)Footnote 1. **Suspension of disposition schedule for all documents might cripple large organizations.** *See* E*Trade Securities LLC v. Deutsche Bank AG, 2005 U.S. Dist. LEXIS 3021, at *25 (D. Minn. Feb. 17, 2005) (suspension of email purging for entire corporation unreasonable).

(n3)Footnote 2. *Fed. R. Civ. P. 37(e)*; *see Westcoat v. Bayer Cropscience, LP, 2006 U.S. Dist. LEXIS 79756, at *18 (E.D. Mo. Nov. 1, 2006)* (court issued preservation order directing parties not to seek sanctions "on a party for failing to provide electronically stored information lost as a result of the routine, good-faith operation of an electronic information system").

(n4)Footnote 2.1. **Sanctions still available under court's inherent power.** *See Nucor Corp. v. Bell, 251 F.R.D. 191, 196 n.3 (D.D.C. 2008)* (Rule 37(e)'s safe harbor provision only applies to sanctions imposed under federal rules, and is not applicable when court sanctions party pursuant to its inherent powers).

(n5)Footnote 3. *Fed. R. Civ. P. 37(b)*, Committee Note of 2006 (*reproduced verbatim at § 37App.09[2]*).

(n6)Footnote 4. *Fed. R. Civ. P. 37(e)*; *see also Sue v. Milyard, 2009 U.S. Dist. LEXIS 69199, at *3-7 (D. Colo. Aug. 6, 2009)* (failure to suspend routine overwriting of video surveillance footage before plaintiff made request to preserve it did not warrant sanction in accordance with Rule 37(e)).

(n7)Footnote 5. Former Fed. R. Civ. P. 37(f) (now see *Fed. R. Civ. P. 37(e)*, as restyled in 2007), Committee Note of 2006 (*reproduced verbatim at § 37App.09[2]*).

3d Circuit See MOSAID Techs. Inc. v. Samsung Elecs. Co., 348 F. Supp. 2d 332 (D.N.J. 2004) (court distinguished between "negligent" and "intentional" destruction of emails in connection with automatic computer deletion operation in determining whether spoliation adverse inference jury instruction was appropriate).

*9th Circuit See In re Napster, Inc. Copyright Litig., 2006 U.S. Dist. LEXIS 79508, at *37 (N.D. Cal. Oct. 25, 2006)* (party relying on backup procedures at a company over which it has no control to maintain relevant data does not justify responding party's failure to suspend automatic purging of emails on active database).

(n8)Footnote 5.1. **Sanction for failure to suspend routine operation.**

7th Circuit See Bryant v. Gardner, 587 F. Supp. 2d 951, 968 (N.D. Ill. 2008) (defendants failed in their obligation to preserve evidence when they permitted employee to continue to use his laptop for months after suit was filed, even though laptop likely contained pertinent evidence, and employee's continued use resulted in deleting tiles, and caused some deleted files to be overwritten and permanently unrecoverable).

11th Circuit See Southeastern Mech. Servs. v. Brody, 2009 U.S. Dist. LEXIS 69830, at *10 (M.D. Fla. July 24, 2009) (defendant had obligation to suspend routine overwriting of backup tapes, which contained emails of key player whose emails on the active database had been deleted earlier).

(n9)Footnote 6. Former Fed. R. Civ. P. 37(f) (now see *Fed. R. Civ. P. 37(e)*, as restyled in 2007), Committee Note of 2006 (*reproduced verbatim at § 37App.09[2]*).

3d Circuit See Wachtel v. Health Net, Inc., (D.N.J. 2006) (party sanctioned for failing to advise opponent and suspend automatic purging of emails).

*5th Circuit See Consolidated Aluminum Corp. v. Alcoa, Inc., 2006 U.S. Dist. LEXIS 66642, at *15-19 (M.D. La. July 19, 2006)* (litigation hold placed on only four "key players" inadequate when responding party identified 100 other individuals during initial disclosure as potentially having discoverable information).

(n10)Footnote 7. Former Fed. R. Civ. P. 37(f) (now see *Fed. R. Civ. P. 37(e)*, as restyled in 2007), Committee Note of 2006 (*reproduced verbatim at § 37App.09[2]*).

*2d Circuit See Doe v. Norwalk Comm. College, Bd. of Trustees, Conn. Comm. Colleges, 2007 U.S. Dist. LEXIS 51084, at *14-15 (D. Conn. July 16, 2007)* ("in order to take advantage of the good faith exception, a party needs to act affirmatively to prevent the system from destroying or altering

information, even if such destruction would occur in the regular course of business").

*8th Circuit See E*Trade Securities LLC v. Deutsche Bank AG, 230 F.R.D. 582, 2005 U.S. Dist. LEXIS 3021, at *28 (D. Minn. Feb. 17, 2005)* (reliance on backup tapes to retain emails, in lieu of litigation hold, was misplaced because tapes were recycled every three years).

(n11)Footnote 8. **Litigation hold should target "key players."**

*5th Circuit See Consolidated Aluminum Corp. v. Alcoa, Inc., 2006 U.S. Dist. LEXIS 66642, at *25 (M.D. La. July 19, 2006)* (court found party negligent for failing to suspend purging email program regarding a "key player," although party avoided adverse inference instruction sanction because it placed "document hold" on four other "key players").

*11th Circuit See Connor v. Sun Trust Bank, 2008 U.S. Dist. LEXIS 16917, at * 36 (N.D. Ga. 2008)* (defendant company sanctioned for failing to suspend automatic deletion of 30-day-old emails on backup tapes despite spoliation of relevant email by defendant's employee who was previously notified of litigation hold but nonetheless destroyed email).

(n12)Footnote 8.1. **Litigation hold applies to laptops.** *See Bryant v. Gardner, 587 F. Supp. 2d 951, 968 (N.D. Ill. 2008)* (defendants failed in their obligation to preserve evidence when they permitted employee to continue to use his laptop for months after suit was filed, causing deleted files to be overwritten and permanently unrecoverable, all of which could have been avoided if defendants had made an imaging of the computer's contents immediately after suit was filed).

(n13)Footnote 9. **Residual-deleted files destroyed when overwritten.** *See Gates Rubber Co. v. Bando Chem. Indus., 167 F.R.D. 90, 112 (D. Colo. 1996)* (copying program onto computer erased 7 to 8 percent of residual-deleted files).

(n14)Footnote 10. **If not available from another source, relevant evidence cannot be deleted.** *See* Optowave Co., Ltd. v. Nitikin, 2006 U.S. Dist. LEXIS 81345, at *32 (M.D. Fla. Nov. 7, 2006) (party sanctioned for deleting information while reformatting hard drive).

(n15)Footnote 11. **Some information on contents of destroyed document necessary to determine relevancy.**

8th Circuit See E*Trade Securities LLC v. Deutsche Bank AG, 2005 U.S. Dist. LEXIS 3021, at *23 (D. Minn. Feb. 17, 2005) (minimal showing required that relevant documents were destroyed before finding spoliation).

10th Circuit See Procter & Gamble Co. v. Haugen, 179 F.R.D. 622, 631 (D. Utah 1998) (no sanction for destroying email communications if court has no information to judge fairly what contents of missing data were); *see also Crandall v. The City and County of Denver, Colorado, 2006 U.S. Dist. LEXIS 66958, at *5-8 (D. Colo. Sept. 19, 2006)* (failure to suspend purging of emails not sanctionable "absent some proof that, in fact, it is potentially relevant evidence that has been spoiled or destroyed," but court allowed two additional depositions concerning alleged lost emails).

(n16)Footnote 12. **Precise knowledge of contents of destroyed document not necessary to show relevancy.**

*2d Circuit See Treppel v. Biovail Corp., 2008 U.S. Dist. LEXIS 25867, at *35-36 (S.D.N.Y. Apr. 2,*

2008) (party need not show that specific documents were lost; it is sufficient to show that "certain types of relevant documents existed and that they were necessarily destroyed by the operation of the autodelete function on Biovail's computers or by other features of its routine document retention program").

8th Circuit See Alexander v. National Farmers Org., 687 F.2d 1173, 1205-1206 (8th Cir. 1982) (relevance and prejudice from destruction of evidence could not be clearly ascertained, but adverse inference sanction warranted).

10th Circuit See Gates Rubber Co. v. Bando Chem. Indus., 167 F.R.D. 90, 115 (D. Colo. 1996) (requesting party has initial burden to establish minimal relevance of destroyed evidence; "[s]anctions are appropriate when something is not produced or disappears which is known to exist, which ought to exist, or which may reasonably be inferred to exist").

11th Circuit See Telectron, Inc. v. Overhead Door Corp., 116 F.R.D. 107, 110 (S.D. Fla. 1987) (default judgment entered when destroyed documents fell within category of documents directly pertinent to plaintiff's case).

(n17)Footnote 13. **Emails retained under retention policy.** *See* Kormendi v. Comp. Assoc. Int'l, Inc., 2002 U.S. Dist. LEXIS 20768, at *7-8 (S.D.N.Y. October 21, 2002) (search for defendant's emails deleted under records retention policy may be attempted, but at plaintiff's expense).

(n18)Footnote 14. **Routine purging of emails may not warrant sanctions.** *See generally Fed. R. Civ. P. 37(e).*

*4th Circuit See Broccoli v. Echostar Comm. Corp., 2005 U.S. Dist. LEXIS 16000, at *8 (D. Md. Aug. 4, 2005)* (computer's purging function may be valid, but must be suspended or modified to ensure that relevant emails, which are not otherwise available on other sources, are not destroyed).

*11th Circuit See Connor v. Sun Trust Bank, 2008 U.S. Dist. LEXIS 16917, at *36 (N.D. Ga. Mar. 5, 2008)* (party sanctioned for failing to suspend automatic purging of emails after 30 days because employee destroyed relevant email, though she had been notified earlier not to destroy relevant emails in accordance with litigation hold).

(n19)Footnote 15. **Litigation hold may be required to suspend purging.**

*2d Circuit See Pension Comm. of the Univ. of Montreal Pension Plan v. Banc of Am. Sec., LLC, 2010 U.S. Dist. LEXIS 1839, at *12 (S.D.N.Y. Jan. 11, 2010)* (destroying email that leads to loss of evidence after duty to preserve has attached constitutes gross negligence or willfullness); *Convolve, Inc. v. Compaq Computer Corp., 223 F.R.D. 162, 175-176 (S.D.N.Y. 2004)* (court declined to sanction party with adverse inference for failing to suspend purging of emails because emails were not shown to be relevant).

3d Circuit See Mosaid Tech. Inc. v. Samsung Elec. Co., 348 F. Supp. 2d 332, (D.N.J. 2004) (court ordered spoliation adverse inference jury instruction against defendant for failing to place litigation hold on computer's automatic deletion of emails).

*6th Circuit See Daimler Chrysler Motors v. Davis Racing, Inc., 2005 U.S. Dist. LEXIS 38162, at *4-6 (E.D. Mich. Dec. 22, 2005)* (emails lost due to preexisting feature of computer system, which deletes messages on scheduled basis, subject to adverse inference as no litigation hold was established).

(n20)Footnote 16. **Litigation hold should target "key players."** *See Thompson v. U.S. Dept. of Housing and Urban Dev., 219 F.R.D. 93, 100 (D. Md. 2003)* (litigation hold should have been placed on email records of certain corporate officers).

(n21)Footnote 16.1. **Affidavit showing scope of search may be required.**

*11th Circuit See Wells v. XPEDX, 2007 U.S. Dist. LEXIS 29610, at *4-5 (M.D. Fla. April 23, 2007)* (court required additional information on scope of search of active databases before ruling on whether good cause was shown for search of backup tapes for emails purged under records-retention policy).

*D.C. Circuit Cf. Disability Rights Council of Greater Washington v. Washington Metropolitan Transit Authority, 2007 U.S. Dist. LEXIS 39605, at *25-26 (D.D.C. June 1, 2007)* (court ruled that party's failure to suspend automatic email purging required party to search inaccessible backup tapes for requested information).

(n22)Footnote 17. **Backup tapes recycled periodically.**

*1st Circuit See Linnen v. A.H. Robins Co., 1999 Mass. Super. LEXIS 240, at *3 (June 15, 1999)* (recycling backup tapes every three months is widely accepted business practice).

*7th Circuit See Danis v. USN Communs., Inc., 2000 U.S. Dist. LEXIS 16900, at *34 (N.D. Ill. Oct. 20, 2000)* (maintained backup tapes for 30 days solely for disaster recovery purposes).

(n23)Footnote 18. *Fed. R. Civ. P. 26(b)(2)(iii)*.

(n24)Footnote 19. **Recycling of backup tapes generally permissible.** *See Zubulake v. UCB Warburg, LLC, 2003 U.S. Dist. LEXIS 18771, at *12 (S.D.N.Y. Oct. 22, 2003)* (party need not preserve all computer backup tapes).

(n25)Footnote 20. **Some backup tapes must be preserved.**

*2d Circuit See Pension Comm. of the Univ. of Montreal Pension Plan v. Banc of Am. Sec., LLC, 2010 U.S. Dist. LEXIS 1839, at *12 (S.D.N.Y. Jan. 11, 2010)* (destroying certain backup tapes after duty to preserve has attached constitutes gross negligence or willfullness); *Zubulake v. UCB Warburg, LLC, 2003 U.S. Dist. LEXIS 18771, at *16-17 (S.D.N.Y. Oct. 22, 2003)* (while recognizing general principle, court requires that computer backup tapes be preserved if party can identify where particular documents of essential employees involved in litigation are stored in backup tapes and information is not otherwise available).

*4th Circuit See Consolidated Aluminum Corp. v. Alcoa, Inc., 2006 U.S. Dist. LEXIS 66642, at *17-18 (M.D. La. July 19, 2006)* (recycling of backup tapes containing emails from "key player," whose emails on active database were not preserved, was negligent).

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Moore's Federal Practice: Discovery of Electronically Stored Information

Volume 7: Analysis: Civil Rules 30-37A
Chapter 37A Discovery of Electronically Stored Information
F. SANCTIONS

7-37A Moore's Federal Practice: Electronic Discovery § 37A.58

AUTHOR: by John K. Rabiej

§ 37A.58 CHECKLIST

[1] General Company Retention and Disposition Policies

1. Create reasonable and good faith company-wide record disposition schedules and policies that further legitimate business purposes (*§ 37A.56[1]*).

2. Develop company-wide protocols for home computer use (*§ 37A.05[5][d]*).

3. Establish policies concerning retirement of old computer systems and programs, ensuring ability to access and read old computer data ("legacy" data) (*§ 37A.05[6]*).

4. Maintain written company policies regarding access to employees' computer systems and email, and notify employees of their limited expectation of privacy (*§ 37A.56[1]*).

[2] Preservation Duty in Anticipation of Litigation

1. Learn client's computer environment and information available on client's computers, to determine what to preserve, what to disclose, and what to withhold from disclosing.

2. Implement preservation plan upon awareness of potential litigation (*§ 37A.10[3]*; *see* [3], *below*).

3. Advise client of duty to preserve relevant evidence (*§ 37A.10[5]*).

4. Advise client to advise employees of duty to preserve relevant evidence, including, in written notice to employees, details of litigation, scope of information to be preserved, and consequences of failure to preserve (*§ 37A.10[5]*).

[3] Preservation Plan

1. Determine what electronically stored information is relevant to claim or defense of any party in litigation.

2. Implement backup procedures, e.g., back up servers regularly and retain backup tapes (*§ 37A.05[2]*).

3. Take into consideration auto delete and auto archive features of computer systems and applications.

4. Make mirror-image copies of local hard drives before erasing or retiring (*§ 37A.10*).

5. Preserve "legacy" or outdated hardware and software to enable reading of older data (*see* [1], *above*).

6. Provide written notice to employees of preservation obligations regarding potentially discoverable information.

7. Monitor and record employee compliance with preservation procedures.

8. Confer with opposing party regarding preservation measures.

9. Seek court order if appropriate.

[4] Early Recognition of Electronic Discovery Issues

1. Identify relevance and sources of potential electronically stored information early in litigation (*§ 37A.20*).

2. Consider hiring computer technician to help collect, preserve, and analyze electronic information.

3. Confer early with opposition to prevent spoliation and establish expectations of electronic discovery.

4. Consider sending preservation letter, establishing paper trail for preservation, outlining type of evidence claimed to be relevant to claims and defenses, and demanding preservation of electronically stored evidence.

5. Disclose electronically stored information that disclosing party may use to support its claims or defenses, unless solely for impeachment, as part of initial disclosure obligations (*§ 37A.20[3]*).

6. If electronic simulations or records are expected to be used at trial, provide advance notice to opposition to avoid delay in assuring authenticity (*§ 37A.20[2]*).

7. If circumstances warrant, request that court order expedited discovery to prevent destruction of relevant evidence or to obtain seized computer equipment necessary for ongoing business operations (*§ 37A.23*).

[5] Requesting Production of Electronically Stored Information

1. Consider different forms of discoverable electronic information, including hard drives, databases, other storage media, emails, software, and residual-deleted data, as well as home computers, laptops, and mobile handheld devices in which relevant information may be available.

2. Determine whether creation of special programs to retrieve electronic data is necessary (*§ 37A.44[2]*).

3. Consider formal discovery requests pertaining to opposing party's computer environment, systems, and processes, including party's record retention and destruction policies, if information was not provided in initial disclosure.

4. Consider formal discovery requests for electronically stored information relied on (*§ 37A.34[1][e]*):

a. By opponent's expert as basis for his or her opinion;

b. For creation of computer model or simulation.

5. Determine whether on-site computer inspection is appropriate (*§ 37A.44[3][c]*).

6. Focus discovery requests by seeking relevant information from (*§ 37A.34[2]*):

a. Individual files;

b. Individual hard drives;

c. Computer database accessed by individual users; and/or

d. Any of opponent's computer systems and equipment with respect to distinct period of time.

7. Determine format of production desired, including (*§ 37A.42*):

a. Electronic copies only (specifying preferred storage medium);

b. Paper copies only; or

c. Electronic and paper copies.

8. Consider special issues surrounding production of emails, such as cost and burden of retrieval, and potential privileged nature of attorney-client communications (*§ 37A.04*).

[6] Responding to Electronic Discovery Requests

1. Determine whether objection is appropriate based on (*§ 37A.34[2]*):

a. Relevancy;

b. Undue expense or burden;

c. Privilege such as work product;

d. Assertion that request seeks cumulative or duplicative materials; and/or

e. Assertion that alternative, more convenient, means to obtain information is available.

2. Review electronically stored information being disclosed carefully to avoid inadvertent disclosure of privileged information and risk of waiver of privilege (*§ 37A.04*).

3. Consider entering into confidentiality agreement with opposition, or seeking court order, to maintain privileged status of documents despite disclosure (*§ 37A.32[5][c]*).

[7] Analyzing Electronically Stored Information

1. Check for duplicate information, especially regarding emails.

2. Utilize data searching software, in consultation with computer technician if necessary, to search viewable and hidden areas of hard drive, as well as to search other storage media.

3. Search for potentially helpful embedded information or metadata, such as:

a. Identity of file's author and date of file's creation, modification, and deletion;

b. Blind copies of email, as well as names on distribution lists; and

c. Hidden formulas in spread-sheets.

4. Search for files ostensibly deleted but still available in computer's free space.

Legal Topics:

For related research and practice materials, see the following legal topics:
Civil ProcedureDiscoveryElectronic DiscoveryGeneral OverviewCivil ProcedureDiscoveryMotions to CompelCivil ProcedureDiscoveryPrivileged MattersGeneral OverviewCivil ProcedureDiscoveryProtective OrdersEvidenceRelevanceSpoliation