Manual For State Trial Courts Regarding Electronic Discovery Cost - Allocation

Spring 2009

Prepared by: Joint E-Discovery Subcommittee of The Association of The Bar of the City of New York
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This Manual is intended to assist New York State Judges and court personnel in managing issues relating to the cost of discovery of electronically stored information (“ESI”). In the past decade, discovery involving ESI has increased dramatically. Once confined to the large, complex commercial case, discovery of ESI is increasingly routine in all varieties of civil and criminal cases. ESI has become a very significant, if not the most significant, cost item in parties’ pre-trial litigation budgets. According to one study, document review alone now accounts for between 58% and 90% of litigation costs.\(^1\) A recent legal industry survey found that: 87% of respondents believed that “e-discovery increases the costs of litigation”; 75% of respondents “agreed that discovery costs, as a share of total litigation costs, have increased disproportionately due to the advent of e-discovery”; and 83% of respondents “believed that litigation costs drive cases to settle that should not settle on the merits.”\(^2\)

To understand the potential magnitude of e-discovery costs, consider the volume of electronic discovery at issue in the case *In re Tyson Foods, Inc. Fair Labor Standards Act Litigation*, No. 4:07-CV-01854-CDL (M.D. Ga.). In response to plaintiffs’ document requests, Tyson’s forensics experts spent 750 hours collecting six terabytes of potentially relevant ESI from 229 computer hard drives at nine Tyson facilities in six states and 52 different servers at 37 locations.\(^3\) After processing the data and working with plaintiffs’ counsel to attempt to develop key word searches that could eliminate false positive hits and reduce the universe of potentially relevant data to a more manageable size, Tyson estimated in briefing to the Court that it would still have to review approximately 500 gigabytes of data, which translates to approximately 22,500,000 pages.\(^4\) Based on industry statistics suggesting that attorneys can review on average 40 documents or 125 to 136 pages per hour, Tyson committed itself to assigning 50 attorneys to review the documents for production at a rate of 1,000,000 documents per month, with a rolling

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\(^4\) *Id.* at 9 & n.9.
production until the review was complete. As these numbers suggest, in a case like *Tyson Foods*, collection and processing costs can easily reach hundreds of thousands of dollars, if not more, while attorney review costs can reach the millions of dollars.

Although most electronic discovery disputes will not assume the scale of *Tyson Foods*, the costs associated with e-discovery are clearly substantial and, accordingly, it is likely that the New York State courts will increasingly be confronted with e-discovery cost disputes. Although New York law mandates that the requesting party pay the costs of discovery, when faced with the potentially enormous costs of ESI, there is authority under New York law for requesting parties to seek protective orders aimed at shifting all or part of ESI costs to the producing party.

This Manual does not attempt to create model rules. Its purpose is to provide assistance in identifying and managing cost disputes that are unique to ESI. The Manual discusses these issues in the context of the New York courts’ attempt to reduce the scope and cost of discovery by requiring a requesting party to bear the costs of its discovery request. The Manual also places New York’s standards in a comparative context by summarizing the standards regarding who should pay for the production of ESI that have been adopted by other jurisdictions and professional organizations. The underlying focus of the Manual is broad in that it includes precedent from employment, matrimonial and complex commercial disputes. The effective management of ESI costs will benefit all New Yorkers, whether they are individuals involved in a matrimonial dispute or large corporations litigating commercial matters.

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5 *Id.* at 14-15.
INTRODUCTION

ESI presents unique issues impacting discovery costs. As recognized in Lipco Elec. Corp. v. ASG Consult. Corp., 4 Misc.3d 1019(A), 2004 WL 1949062 (Sup. Ct. Nassau Co. Aug. 18, 2004), “[e]lectronic discovery raises a series of issues that were never envisioned by the drafters of the CPLR.” Id. at *6. “Some of the questions presented include: are the documents still on the hard drive or are they on some form of back-up; have the documents been deleted; what software was used to create and store the documents; and is that software commercially available or was the software created and/or licensed specifically for the user.” Id. Contemplating these questions, the Lipco court noted a key distinction between paper and electronic record-keeping that affects discovery costs:

With traditional paper records, the documents are generally stored in a usable and obtainable form, such as job folders. Furthermore, documents and records that are retained generally have a value since the company is willing to pay the cost involved in storing such documents. This is not true with computer or electronic documents. Records are not kept because they are necessary but because the cost of storage is nominal. Furthermore, electronic records are not stored for the purpose of being able to retrieve an individual document. Rather, they are retained for emergency uploading into a computer system to permit recovery from catastrophic computer failure. Retrieving computer based records or data is not the equivalent of getting the file from a file cabinet or archives. Id. at *8 (citations omitted). In view of these differences, the Court recognized that “[t]he cost of providing computer records can be rather substantial.” Id.

The New York courts seek to contain discovery costs by requiring requesting parties to bear the costs of their discovery requests. But courts can also encourage parties to take additional steps to reduce the costs of e-discovery. For example, as the Commercial Division now contemplates in its Rule 8(b), parties should appear at preliminary conferences having already conferred on e-discovery issues, including how to address costs. In addition, because the scope of discovery and the search terms and strategies the parties employ are critical to containing e-discovery costs, courts should encourage the parties to agree on an e-discovery protocol and, when they do not, courts should be prepared to intervene. It is reasonable for judges and court personnel to expect this level of preparation from the parties. Because of the complex issues involved in managing electronic information, many large organizations are sophisticated about the computing environments in which they do business. Even
small businesses and some individuals now create and store many, if not most, records and documents electronically. Courts may reasonably anticipate that, by the time parties arrive for a preliminary conference, they understand how much potentially relevant ESI they possess, where it resides, whether it is “accessible” or “inaccessible,” and approximately how much it will cost to produce.6

With these considerations in mind, this Manual has been prepared to provide judges and court personnel of this State with a compendium of sources on the current law on cost-shifting in e-discovery. The Manual is organized as follows. First, it describes how parties typically approach the production of ESI if they are following the discovery protocol established by the Electronic Discovery Reference Model (“EDRM”), a standards body that has developed best practices in ESI production. Next, the Manual reviews the law on cost-shifting followed by New York courts and compare it with the law followed by federal courts in New York.7 Third, it briefly discusses how other states have addressed cost issues. Fourth, the Manual reviews the proposed cost-shifting standards adopted by organizations such as the Conference of Chief Justices, the Sedona Conference,8 and the American Bar Association. Finally, a Glossary defines selected technical terms that are used in connection with ESI cost issues, both in this Manual and in the relevant case law and literature generally.

---6 The distinction between accessible and inaccessible ESI is critical. As discussed herein, among jurisdictions and commentators who have addressed the issue, a consensus has emerged that no initial duty to produce inaccessible ESI exists, and that if production of such ESI is ultimately ordered, cost-shifting or cost-sharing is generally appropriate.

---7 The Committee considered whether New York should continue to follow the “requester pays” rule with respect to electronic discovery or follow the cost-sharing rule followed by the New York federal courts on this issue. After deliberation, the Committee decided not to take a position on this issue and instead authored this Manual to provide a current view of the law taken by various jurisdictions and organizations to assist the courts in the exercise of their discretion in disputed ESI matters.

---8 The Court in Aguilar v. Immigration and Customs Enforcement Division, 255 F.R.D. 350, 355 (S.D.N.Y. 2008), described the Sedona Conference as “a nonprofit legal policy research and education organization, has a working group comprised of judges, attorneys, and electronic discovery experts dedicated to resolving electronic document production issues. Since 2003, the Conference has published a number of documents concerning ESI, including the Sedona Principles. Courts have found the Sedona Principles instructive with respect to electronic discovery issues.” The Sedona Conference’s publications have focused on discovery issues in general and electronic discovery in particular. See http://www.thesedonaconference.org (last visited June 30, 2009).
E-discovery is no longer a matter only for cases involving large corporations. Individuals, small businesses, and large organizations alike increasingly create and store much, if not most, of their data electronically. In New York, an e-discovery cost dispute has already arisen in at least one matrimonial case, when the imaging of hard drives was ordered in *Etzion v. Etzion*, 7 Misc.3d 940, 796 N.Y.S.2d 844 (Sup. Ct. Nassau Co. 2005). Whether an ESI production involves a single hard drive, the laptops and shared network folders of a hundred employees, or a thousand disaster recovery back-up tapes, information technology ("IT") experts typically follow the "best practices" of the Electronic Discovery Reference Model ("EDRM") (www.edrm.net), a protocol developed to attempt to ensure the integrity of ESI production. To oversee the e-discovery process and guide the parties through it at the least possible cost, courts should be conversant with these best practices.

1. **THE ELECTRONIC DISCOVERY REFERENCE MODEL**

An ESI production following the EDRM protocol involves the following steps: (1) information management; (2) identification; (3) preservation and collection; (4) processing, review and analysis; and (5) production. The protocol is typically undertaken by IT experts under the close supervision of lawyers. Courts have recognized the need for experts in the ESI discovery context, and one court recently commented that "it is risky for a trial judge to attempt to resolve issues involving technical areas without the aid of expert assistance." *Victor Stanley, Inc. v. Creative Pipe, Inc.*, 250 F.R.D. 251, 261 n.10 (D. Md. 2008). If parties follow the EDRM protocol, ESI production issues can be streamlined and disputes regarding unreasonable expense minimized, if not eliminated. One beneficial aspect of compliance with the EDRM is the creation of a "data map" that identifies the types and location of a litigant’s relevant ESI.

The chart below summarizes the stages of the EDRM:
In reviewing the discussion of the EDRM that follows, The Sedona Conference Commentary on Achieving Quality in the E-Discovery Process (Public Comment Version, May 2009), provides a useful backdrop of suggested quality control measures that can be used by the parties throughout the discovery protocol and quality assurance methods that can be used at the end of the discovery process. The impetus for the Commentary was the fact that “Cost-conscious clients and over-burdened judges are demanding that parties now undertake new approaches to solving litigation problems.” Id.

The Commentary sets forth five “quality measures” that “may be of assistance in taming the ESI beast during the various phases of the discovery workflow process.” Id. at 1. Those measures are common sense techniques aimed at ensuring that the parties are efficiently managing what can become an unwieldy process. The suggested techniques are as follows: judgmental sampling, independent testing (by third party professionals), reconciliations (i.e., comparing inputs to outputs), inspection by counsel and statistical sampling. Not all of these measures are needed or wanted by the parties in every case, which is why it is important that the parties agree at the outset of a case about what quality techniques are appropriate to the demands of their case. Id. at 9-12.

**A. Information Management**

In a time in which almost all information is produced and stored electronically, proper electronic information management is essential to every organization. Proper

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9 Based upon the public comment period typically used by The Sedona Conference, it is likely that a final edition of the Commentary will be available in approximately February, 2010.
information management, while not existing for the purposes of litigation, is a prerequisite to an efficient and appropriate response to a discovery request for ESI. According to EDRM, an effective records management program should accomplish the following: (1) ensure that all needed business records are retained; (2) ensure that all records required to be retained by law are retained for the requisite time period; (3) ensure that all authorized users can access business records efficiently; (4) ensure that all business records can be located, read, used, and authenticated; (5) establish litigation hold procedures to ensure that responsive documents are not destroyed once litigation and/or governmental investigation is reasonably anticipated; and (6) establish procedures to ensure the timely destruction of appropriate documents as their respective retention periods expire.10

When the duty to preserve evidence attaches, counsel following the EDRM typically work with IT experts to locate and become familiar with the client’s document retention policies. Retention policies can be complex, encompassing the policies and procedures for the treatment of active data retention, backup, and disaster recovery. Policies for the handling and routine deletion of various types of ESI may differ (i.e., the deletion of routine ESI may differ from the deletion of other forms of ESI). For this reason, counsel and their IT consultants generally meet with the client’s chief information officer (“CIO”) and other IT personnel to develop an accurate understanding of the architecture of the client’s electronic systems.

At this stage, counsel will also typically draft a “litigation hold” memorandum directing that relevant evidence be preserved. Counsel also works with the client to ensure that routine document destruction programs are halted in departments potentially containing relevant ESI, that relevant personnel are instructed not to destroy any potentially relevant ESI, and that all potentially relevant ESI is preserved.11

B. Identification

Once the duty to preserve evidence attaches, a party following the EDRM will identify the ESI that is potentially material and necessary.12 During the identification

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12 Increasingly, businesses have focused on ways of improving the efficiency of the identification and collection aspects of the EDRM. Traditionally, the initial identification and collection methods capture a large amount of ESI unrelated to the litigation. Improved technologies, broadly termed enterprise-wide search utilities, allow in-house personnel to identify and index materials meeting certain specified criteria. The goal of these technologies is to enable litigants to reduce the costs of litigation by, among other things, improving their control over “unstructured” and “semi-structured” content, most notably email. See Debra Logan, et al., “MarketScope for E-Discovery Software Product Vendors,” Gartner Research (December 17, 2008).
stage, counsel, the IT experts, and the client: (1) identify key witnesses, data custodians and departments with potentially relevant ESI; (2) determine the relevant time frame to assist in locating and culling relevant ESI; (3) develop keyword lists to help in the search process that include, inter alia, the relevant jargon and acronyms; (4) identify all potentially relevant data types; (5) create a data map of the client’s information systems; (6) diagram the client’s network environment, including all document management systems, data types, email systems, and additional data storage media like computer hard drives, CD-ROMs, DVDs, ZIP drives, flash drives, digital voicemail stores, personal digital assistants, etc.; (7) determine whether forensic data capture through mirror imaging of hard drives and servers will be needed for deleted or overwritten ESI; (8) determine the potential relevance of backup media, retired hardware systems, and disaster recovery systems; (8) identify legacy systems (i.e., systems no longer in use); (9) determine whether any potentially relevant ESI is stored offsite; and (10) document all data identification efforts.13

For the purpose of quality control over the identification process, counsel often sample potentially relevant data to define the legal and factual issues, which can help refine further efforts to identify and locate material and necessary ESI. Identification is a dynamic process, and the list of players and information systems that are deemed relevant will change as legal and factual issues develop.14

C. Preservation and Collection

(i) Preservation

Preservation in the ESI context involves: (a) halting the destruction of any relevant ESI; and (b) copying the relevant ESI from the media in which it resides to preserve it in its current state. To narrow the scope of preservation, parties should be encouraged to agree on the types of ESI that must be preserved, i.e., whether it is sufficient to preserve only currently accessible emails and electronic documents like Word, Adobe, and Excel files, or whether the case will require discovery from inaccessible sources like deleted emails residing on hard drives and servers, disaster recovery tapes, and legacy systems. Although there is generally no initial duty to produce inaccessible ESI, it is a best practice to preserve known inaccessible ESI in case it later becomes necessary to produce. Once the scope of preservation is determined, IT experts forensically copy the relevant ESI.15

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(ii) Collection: Search Strategy, A Key Component of Cost

Once the data is preserved, IT experts collect the material and necessary ESI from the preserved data. The technical aspects of collection are beyond the scope of this Manual, but descriptions of these processes are available at www.edrm.net. In any case, understanding the search process is essential for courts. Searching is a key element in constructing a database for later attorney review and production to the requesting party. The goal of searching at the collection stage is to create a database that is neither over-inclusive (i.e., containing an unacceptably large amount of irrelevant ESI) nor under-inclusive (i.e., missing an unacceptably large amount of relevant ESI). Although several search methodologies currently exist, all have limitations, and IT experts continue to attempt to develop optimal methodologies that maximize the capture of relevant ESI and minimize the capture of irrelevant ESI that attorneys must then review. Proper searching is critical for cost containment because the amount of irrelevant ESI in the database is directly proportional to the fees attorneys will incur to review the data for responsiveness and privilege.

Searching is also an essential component of the attorney review phase, discussed below in Section 4.B. Because the search methodologies are the same for both phases, this discussion is applicable to both phases.

A recent case illustrating the connection between search terms and cost also shows that courts are intolerant of producing parties that fail to engage in the negotiation of appropriate searches. In In re Fannie Mae Securities Litigation, 552 F.3d 814 (D.C. Cir. 2009), a government agency that received a subpoena from defendants gave defendants sole discretion to choose search terms. Defendants then indentified 400 search terms, resulting in hits to 80 percent of the agency’s emails. Although the agency hired 50 contract attorneys, expended $6,000,000 (nine percent of the agency’s annual operating budget) to search ESI, and substantially complied with the subpoena, the Court eventually lost patience with the agency’s failure to complete the production despite numerous extensions and held it in contempt. The Court ordered the agency to produce all privileged documents that it had not yet entered on its privilege log, subject to a non-waiver and clawback order. The D.C. Circuit affirmed the order on appeal. Had the agency negotiated less burdensome and more targeted search terms, its review costs might have been reduced, and the agency might have completed its production sooner and avoided the contempt order.

(a) Simple and Advanced Keyword Searches

Simple keyword searching involves selecting a list of words or phrases and using them to identify documents in the preserved ESI. More advanced forms of keyword searching are also in use. For example, Boolean searching, familiar from Westlaw and Lexis, utilizes “operators” such as “and,” “or” and “not” to make keyword searching more sensitive. Boolean searching also uses “wildcards” (usually expressed with an asterisk or exclamation point) to expand word stems - e.g., searching for “cat!” will call up “cat” as well as “cats,” “catalogue,” “catastrophe,” etc. Boolean searching also makes use of proximity searching (expressed by “w/” or simply “/” followed by a number, like “/5” to express “within 5”) to allow searching combinations of words within a certain proximity of one another.

However, whether keyword search terms are used individually or as part of a Boolean search, simply inputting search terms into a database and accepting the results is inadequate. The best practice is for attorneys working with IT experts to review statistically significant random samples of documents from both the presumptively relevant and the presumptively irrelevant databases to determine if the presumptively relevant database is under-inclusive or over-inclusive. They can then attempt to revise the keywords and Boolean searches to make them more “sensitive” and therefore more accurate.

(b) Other Methodologies

A shortcoming of keyword and Boolean searching is that, while concepts can be expressed in writing in almost limitless ways, studies have shown that “people coming in after the fact are actually very poor at guessing the right words to use in a search - words that find the documents a person is looking for without overwhelming the retrieval with irrelevant documents.”

A number of alternative methods of searching, currently in various stages of development and use, attempt to improve upon keyword searching by using...
algorithms that can learn and match words that are conceptually related. At least five such alternative methods currently exist:

1. “Fuzzy” searching improves on keyword searching by finding all forms of words, including misspellings.

2. A “Bayesian” or probabilistic search tool analyzes a “training set” of highly relevant documents to determine the probabilities with which words occur in them, and then ranks unknown documents according to their likely relevance by analyzing the interrelationships, proximity, and frequency of words appearing in those documents as compared to the “training set.”

3. “Clustering” groups documents by their similarity with each other based on the similarity of the words that appear in the documents.

4. “Dimensionality reduction systems” operate on the theory that words that are related to the same concept frequently appear together; once the program learns this vocabulary, it then identifies documents that utilize conceptually related words. These systems will return as hits not just documents containing the word searched but also documents containing words the system has “learned” are conceptually related to the searched word.

5. Search systems are being developed that can search for all known synonyms of a keyword or all words related to the keyword through a pre-programmed taxonomy of vocabulary.

Despite its deficiencies, keyword searching, combined with review of sample documents and iterative revision of searches to make them more sensitive, remains the current state-of-the-art search methodology. Courts have recently alluded to the fact that concept searching may at some point supplement key words as the preferred search method. In Victor Stanley v. Creative Pipe, Inc., 250 F.R.D. 251 (D.Md. 2008), the court, noting that there is “room for optimism” regarding the development of more accurate and less expensive search technologies, described the work of the National Institute of Standards and Technology (NIST), an agency within the U.S. Department of Commerce, that has embarked on a cooperative project with the Department of Defense to evaluate various search methodologies. Id. at 261 n.10. This project, the Text

20 In Disability Rights Council of Greater Washington v. Washington Metropolitan Transit Authority, 242 F.R.D. 139, 148 (D.D.C. 2007) Judge Facciola, in discussing how restored backup tapes should be searched, stated that "...recent scholarship...argues that concept searching, as opposed to keyword searching, is more efficient and more likely to produce the most comprehensive results. See George L. Paul & Jason R. Baron, Information Inflation: Can the Legal System Adapt? 13 Rich. J.L. & Tech. 10 (2007)."
Retrieval Conference (TREC), has evolved into a research effort, TREC Legal Track, aimed at studying the ESI review process in order to evaluate a variety of search methodologies.\textsuperscript{21} \textit{Id.} Based upon the results of TREC Legal Track’s efforts to date, researchers have not yet found an “ultimate search method” to replace keyword searching.

(c) Challenging a Party’s Search Methodology: Defective Keyword Searches

Courts increasingly challenge parties’ search methodologies if they are unsupported or insufficient. For example, in \textit{Victor Stanley v. Creative Pipe, Inc.}, 250 F.R.D. 251 (D. Md. 2008), the Court found that a party had waived the attorney-client privilege as to inadvertently produced documents — despite the use of 70 separate keyword searches in conducting the privilege screen — because counsel failed to provide the Court with the means to analyze whether the precautions undertaken to screen out privileged documents were sufficient. The Court noted that defendants failed to show that the keyword search that they performed was reasonable because they failed to identify: the keywords selected, the rationale for their selection, the qualifications of the persons who selected the keywords to design a proper search, whether the search was a simple keyword search or Boolean search, whether counsel tested the results of the search to assess its reliability and appropriateness for the task, and the quality of the search’s implementation. \textit{Victor Stanley}, 250 F.R.D. at 259-60. The Court noted the “well known limitations and risks” associated with keyword searches and the fact that “proper implementation” requires “… knowledge beyond the ken of a lay person (and a lay lawyer) …” \textit{Id.} at 260 (citation omitted). The Court admonished the defendants to use methods that comply “with the Sedona Conference Best Practices,” which would have helped convince “the court that the method chosen was reasonable and reliable.” \textit{Id.} at 262.\textsuperscript{22}

Magistrate Judge Peck of the Southern District of New York also issued an opinion in which he, like the \textit{Victor Stanley} court, expressed frustration with deficient keyword searches of ESI. Judge Peck noted that, “This case is just the latest example of lawyers designing keyword searches in the dark, by the seat of the pants, without adequate (indeed, here, apparently without any) discussion with those who wrote the emails.” \textit{William A. Gross Constr. Assocs., Inc. v. American Manufs. Mut. Ins. Co.}, 256

\begin{footnotesize}
\begin{itemize}
\item \textsuperscript{21} See Oard, Douglas W., et al., \textit{Overview of the TREC 2008 Legal Track} (2009), for the results of Legal Track’s most recent analyses.
\end{itemize}
\end{footnotesize}
F.R.D. 134, 135 (S.D.N.Y. 2009). The Court in Gross Construction stated that “the best solution in the entire area of electronic discovery is cooperation among counsel” and the Court “strongly endorse[d] The Sedona Conference Cooperation Proclamation (available at www.TheSedonaConference.org).” Id. at 136. Finally, Judge Peck concluded that:

Electronic discovery requires cooperation between opposing counsel and transparency in all aspects of preservation and production of ESI. Moreover, 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.” It is time that the Bar – even those lawyers who did not come of age in the computer era – understand this.

Id.23

(d) The Importance of Sampling as a Quality Control and Assurance Method

As the foregoing section shows, courts and research organizations have recognized the limitations of search methodologies, especially key word searches. Accordingly, the judiciary is increasingly attuned to the importance of sampling to ensure the highest degree of accuracy possible in database searches. See, e.g., Victor Stanley, 250 F.R.D. at 262 (criticizing a party’s search methodology for potentially privileged documents because it “failed to demonstrate that there was quality-assurance testing”). For example, in Victor Stanley, when a party sought to claw back what it claimed were inadvertently produced privileged documents, the Court held that the party had taken inadequate quality control measures regarding its ESI prior to production and therefore waived the privilege. In particular, the Court severely criticized the party’s search for potentially privileged material in an ESI database because the party had not conducted sampling “of the text searchable ESI files that were determined not to contain privileged information on the basis of the keyword search to see if the search results were reliable.” The Court reasoned that sampling was vital because:

23 In Omnicare, Inc. v. Mariner Health Care Management Co., No. 3087-VCN, 2009 WL 1515609 (Del. Ch. May 29, 2009), an unpublished opinion of the Delaware Chancery Court, the Court noted the parties’ inability to agree upon an E-Discovery Stipulation because of disagreement regarding search terms. The Court stated that it had not been informed about the scope of the dispute but that it might be “best resolved by a neutral third party with recognized expertise in searching complex databases.” Id. at *8.
Common sense dictates that even a properly designed and executed keyword search may prove to be over-inclusive or under-inclusive, resulting in the identification of documents as privileged which are not, and non-privileged, which, in fact, are. The only prudent way to test the reliability of the keyword search is to perform some appropriate sampling of the documents determined to be privileged and those determined not to be in order to arrive at a comfort level that the categories are neither over-inclusive nor under-inclusive. There is no evidence on the record that the Defendants did so in this case.

*Id.* at 257.

In addition to mandating that a producing party adequately sample to ensure a complete production, federal courts have also held that a requesting party must sample in order to narrow its searches. In *Ross v. Abercrombie & Fitch Co.*, No. 2:05-cv-0819, 2008 WL 4758678 (S.D. Ohio Oct. 27, 2008), the Court held that because the defendant had already produced more than a million pages of documents at significant expense, the burden of proving that more information should be produced was on the requesting party. The requesting party proposed to reduce the producing party’s costs by having the producing party produce 1.3 million pages without reviewing them for privilege, subject to a claw back agreement and a promise by the requesting party to return any privileged documents it discovered. However, the producing party refused to agree to this protocol. The Court resolved the dispute by ruling that the requesting party hire “a person conversant with key word searching” to refine its searches and test it on a sample group of documents to determine if the searches could be refined further. *Id.* at 3.

In sum, the above two cases illustrate the willingness of the federal courts to require both requesting and producing parties to sample data in order to ensure quality and reduce costs. The *Victor Stanley* court was firm in its insistence on sampling as quality control to ensure the reliability of a production, and the *Ross* court was unwilling to order another costly production, absent the use of sampling by the requesting party to narrow the potential review database. Most recently, Magistrate Judge Peck in *William A. Gross Constr. Assocs.*, likewise, confirmed the importance of sampling to assure accuracy and warned that his directives should “serve as a wake-up call to the Bar” in the Southern District of New York. 256 F.R.D. at 134.24

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D. Processing, Review and Analysis

Once a database has been assembled through the search processes described above, the database must be processed and reviewed and analyzed by attorneys before the ESI can be produced to the requesting party.

(i) Processing

Processing is a technical step “to prepare relevant files for efficient and expedient review . . ., production, and subsequent use.” In the processing stage, ESI is captured and preserved; documents are associated with their custodians (users); metadata is associated with the individual electronic files to which it belongs; parent-child relationships are established between, for example, documents and attachments; de-duplication of identical copies of ESI takes place; a means for suppressing non-relevant documents (such as by date) based on metadata, etc., is established; and certain data can be unprotected and revealed if relevant. It is at this stage that inaccessible ESI (such as deleted files) would be restored and reprocessed into a searchable form if its production has been agreed upon or ordered.25

(ii) Review

Review is the stage at which lawyers substantively review documents for responsiveness and privilege. The challenge litigants face is to be able to retrieve documents reliably and in a cost-effective manner. The search strategies described above are again critical at this stage.

(iii) Analysis

Analysis in the sense used here includes not only legal analysis of key data, but also factual analysis of grouped and manipulated data, such as the charts and graphs that some systems can generate to show, for example, the relative volumes of email correspondence between key players in an organization.26

E. Production

Finally, once the ESI has been reviewed and non-responsive, privileged, and confidential documents removed, the ESI is ready to be produced to the requesting party. The parties should be encouraged to agree, through a discovery order or protective order, on the form of production (e.g., native file format vs. imaged format


whether metadata will be produced, whether production will be rolling or at once, and how to deal with any inadvertent production of privileged documents.\textsuperscript{27} The failure of the parties to agree upon these types of issues at the outset of a case is very likely to result in increased discovery disputes and the substantial costs that they engender.

(i) The Importance of an Agreement among the Parties at the Outset of Litigation Regarding ESI as a Means to Avoid Production Disputes and Contain Costs

The absence of an early agreement about the production of metadata – “data about the data” - is a classic example of how cumbersome a discovery process can become if the parties do not make their expectations about ESI production clear at the outset of a case. The decision of Judge Maas in \textit{Aguilar v. Immigration and Customs Enforcement Division}, 255 F.R.D. 350, 355 (S.D.N.Y. 2008), illustrates this point clearly. In \textit{Aguilar}, the plaintiffs did not request metadata at the initial discovery conference or in their first request for production of documents.\textsuperscript{28} By the time they requested metadata, the defendants had substantially completed their collection of documents for production. Judge Maas noted that plaintiffs faced an “uphill battle” in seeking metadata because of their delayed request. \textit{Id.} at 359. He emphasized that electronic discovery should be a “party driven process” pursuant to the Federal Rules of Civil Procedure, case law and the \textit{Sedona Principles}, and that at the beginning of any litigation the parties should discuss the production of metadata without court intervention. \textit{Id.} at 358.

“With this heightened burden in mind,” Judge Maas ruled that the plaintiffs’ belated request for metadata was not dispositive of their motion. Rather, he measured the importance of the metadata to plaintiffs against the burden its belated retrieval imposed upon defendant. The Court ultimately granted and denied aspects of

\textsuperscript{27} See http://www.edrm.net/wiki/index.php/Production_-_Negotiation_Considerations; and http://www.edrm.net/wiki/index.php/Production_-_Form_of_Production.

\textsuperscript{28} Judge Maas, relying on \textit{The Sedona Principles} and protocols for the discovery of ESI published by the U.S. District Court for the District of Maryland, described three types of metadata and why they might be relevant in discovery: (1) substantive metadata (embedded in the document, it reflects editing changes or comments not apparent on the face of the document that are useful in showing the origin of a document and the history of revisions); (2) system metadata (may not be embedded in the document but can be obtained from the operating system on which the document was created, it is automatically generated information about the creation or revision of a document. Judge Maas observed that system metadata is most relevant if a document’s authenticity is at issue or if there is an issue about who received a document and when); and (3) embedded metadata (data inputted into a file by its creators or users, but cannot be seen on the face of the document. Examples include formulas used to create spreadsheets, hidden columns, references, fields or linked files, which are often key to understanding complex spreadsheets.) \textit{Id.} at 354-55.
plaintiffs’ motion and allocated costs among the parties with respect to the various categories of ESI sought. However, in conclusion, Judge Maas observed:

This lawsuit demonstrates why it is so important that parties fully discuss their ESI early in the evolution of a case. Had that been done, the Defendants might not have opposed the Plaintiffs' requests for certain metadata. Moreover, the parties might have been able to work out many, if not all, of their differences without court involvement or additional expense, thereby furthering the “just, speedy, and inexpensive determination” of this case . . . Instead, these proceedings have now been bogged down in expensive and time-consuming litigation of electronic discovery issues only tangentially related to the underlying merits of the Plaintiffs' . . . claims. Hopefully, as counsel in future cases become more knowledgeable about ESI issues, the frequency of such skirmishes will diminish.

Id. at 364. (citation deleted). See Dahl, et al. v. Bain Capital Partners, LLC, et al., No. 07-12388-EFH, slip op. at 4-5 (D. Mass. June 22, 2009) (“Rather than a sweeping request for metadata, the Shareholders should tailor their requests to specific word documents, specific emails or specific sets of email…. This more focused approach will, the court hopes, reduce the parties’ costs and work. Furthermore, it reflects the general uneasiness that courts hold over metadata’s contribution in assuring prudent and efficient litigation.”)

2. COOPERATIVE DISCOVERY AMONG COUNSEL: METHODS TO REDUCE E-DISCOVERY COSTS


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29 However, In re Fannie Mae Securities Litigation, 552 F.3d 814 (D.C. Cir. 2009), illustrates the problems created by an agreement that is overly broad and allows the party seeking discovery to have sole discretion in the choice of search terms for ESI.

30 The Sedona Conference Cooperation Proclamation (July 2008).
1. Utilizing internal ESI discovery “point persons” to assist counsel in preparing requests and responses;

2. Exchanging information on relevant data sources, including those not being searched, or scheduling early disclosures on the topic of ESI;

3. Jointly developing automated search and retrieval methodologies to cull relevant information;

4. Promoting early identification of form or forms of production;

5. Developing case-long discovery budgets based on proportionality principles; and

6. Considering court-appointed experts, volunteer mediators, or formal ADR programs to resolve discovery disputes.

Id. at 2. Counsel should be motivated to cooperate early in the litigation in order to avoid the costly problems that a delayed consensual ESI agreement creates, especially in view of the recent state-wide amendments to the Uniform Rules of the New York Trial Courts concerning preliminary conferences. Those amendments specifically provide that the Court may establish “the method and scope of any electronic discovery” at the preliminary conference, including the “anticipated cost of data recovery and proposed initial allocation of such cost.” N.Y. COMP. CODES R. & REGS. tit. 22, sec. 202.12(c)(3)(f) (2009).
State and federal courts in New York approach the question of whether the requesting party or the responding party should bear the costs of e-discovery differently. New York courts impose a “requester-pays” standard. In contrast, federal courts use a balancing test to determine when they may shift e-discovery costs from the responding party to the requester.

1. NEW YORK STATE’S “REQUESTER-PAYS” STANDARD IN THE ESI CONTEXT

New York case law establishes that the requesting party bears the costs of producing discovery. Courts have consistently applied this rule to electronic discovery, although the language of CPLR 3103(a) does not expressly require that the requesting party pay the costs of an e-discovery request and the Commercial Division Rules permit parties to agree to share ESI costs.

A. The Application of the Requester-Pays Standard

(i) Generally

In 2005, the New York Supreme Court applied the requester-pays standard in the e-discovery context in Lipco, supra. Lipco sought ESI from ASG, including legacy backup tapes. Although the Court recognized that “[e]lectronic discovery raises a series of issues that were never envisioned by the drafters of the CPLR,” such as whether the requested ESI was accessible or inaccessible (2004 WL 1949062 at *6), and discussed the leading federal cases on cost shifting for inaccessible ESI, including Rowe Entertainment Inc. v. The William Morris Agency, Inc., 205 F.R.D. 421 (S.D.N.Y. 2002) and Zubulake v.
UBS Warburg LLC, 217 F.R.D. 309 (S.D.N.Y. 2003) ("Zubulake I"), the Court nevertheless stated that:

... cost shifting of electronic discovery is not an issue in New York, since the courts have held that, under the CPLR, the party seeking discovery should incur the costs incurred in production of discovery material. CPLR 3103(a) specifically grants the court authority to issue a protective order to prevent a party from incurring unreasonable expenses in complying with discovery demands. Therefore, the analysis of whether electronic discovery should be permitted in New York is much simpler than it is in the federal courts. The court need only determine whether the material is discoverable and whether the party seeking the discovery is willing to bear the cost of production of the electronic material.

Lipco, 2004 WL 1949062 at *9 (citations omitted). Because Lipco would not agree to pay the costs of its ESI request, the Court refused to compel production. Id.

The Supreme Court followed Lipco in T.A. Ahern Contractors Corp. v. Dormitory Auth. of the State of N.Y., ___ N.Y.S.2d ___, 2009 WL 806779 (Sup. Ct. N.Y. Co. 2009). There, the defendant agreed to produce emails requested by the plaintiff, provided that the plaintiff pay the estimated $35,000 cost for an ESI expert to search for responsive emails. The plaintiff refused to bear this cost, moved to compel production, and asked the Court to apply the Zubulake “cost shifting model” to the dispute. Id. at *5. However, the Court refused to apply Zubulake because it involved federal discovery, where the “presumption” exists that “the responding party must bear the expense of complying with discovery requests,” and where, without cost shifting, “the potential would exist for litigants to formulate overly broad discovery requests which have the effect – whether intended or otherwise – of placing unnecessary and oppressive (even prohibitive) costs upon an opponent.” Id. (citations omitted). Instead, the Court found that New York’s existing requester-pays standard adequately addressed this concern by giving a litigant “a strong incentive to formulate its discovery requests in a manner as minimally burdensome as possible.” Id. Noting that it was “not empowered – by statute or case law – to overturn the well-settled rule in New York State that the party seeking discovery bear the cost incurred in its production,” the Court followed Lipco and refused to order production of the emails “until such time as [the plaintiff] communicates that it is willing to bear the costs incurred for their production, subject to any possible reallocation of costs at trial.” Id. at *6 (citations omitted).32

32 Before the decision in T.A. Ahern Contractors, two unpublished opinions by a judicial hearing officer (“JHO”) assigned by the Commercial Division refused to follow Lipco. The JHO characterized Lipco as applying a bright-line rule to electronic discovery that is only appropriate for traditional paper discovery. See EBC I, Inc. v. Goldman, Sachs & Co., No. 601805-2002, slip. op. at 3 (Sup. Ct. N.Y. Co. Feb. 15, 2007) (Bradley, JHO). In that case, the JHO applied the Zubulake balancing factors (discussed in Section 2
(ii) Requester’s Payment of Attorneys’ Fees and Costs

The New York courts diverge over the issue of whether the requester-pays standard mandates that the requesting party reimburse the producing party for attorneys’ fees and costs. For example, New York courts sometimes require the requesting party to pay not only the technical costs of producing ESI, but also the responding party’s legal fees for reviewing the ESI. See Delta Financial Corp. v. Morrison, 13 Misc.3d 604, 612, 819 N.Y.S.2d 908, 914 (Sup. Ct. Nassau Co. 2006) (court ordered that requesting party seeking back-up tapes would be “responsible for one hundred percent of the search process, de-duplication process, as well as attorneys’ fees and costs for the privilege review process”). In contrast, Waltzer v. Tradescape & Co., 31 A.D.2d 302, 304, 819 N.Y.S.2d 38, 40 (1st Dep’t 2006) held that privilege and relevancy review costs are to be borne by responding party. Additionally, one New York court declined to extend the requester-pays standard to require a requesting party to pay for the producing party to have its own IT expert oversee the requester’s IT expert’s collection of ESI from the producing party’s computer. See Etzion v. Etzion, 7 Misc.3d at 945, 796 N.Y.S.2d at 847 (holding that, under New York’s requester-pays standard, requesting party would bear costs of imaging producing party’s computer hard drives and producing documents, while each side would bear the cost of its own IT expert, subject to possible reallocation of costs after trial).

B. Producing Parties’ Objections to the Cost of Production

New York courts will not preclude an ESI production solely because the producing party objects to the cost. See Weiller v. New York Life Ins. Co., 800 N.Y.S.2d 359 (slip. op.), 2004 WL 3245345, at *7 (Sup. Ct. N.Y. Co. 2005) (court ordered production of “[a]ll databases, electronic material, tape media, electronic media, hard drives, computer disks and documents” from defendants even though they objected that it would cost more than $1,000,000 to produce; the Court stated that it “would, at the below), in determining whether to deviate from New York’s requester-pays rule, before determining that the requesting party should bear the costs of accessing inaccessible ESI. Id. at 5. The JHO also applied the Zubulake factors in determining that the parties should equally divide the producing party’s legal fees for reviewing the ESI before producing it to the requesting party. Id. at 7-8. See also EBC I, Inc. v. Goldman, Sachs & Co., No. 601805-2002, slip. op. at 4-6 (Sup. Ct. N.Y. Co. June 19, 2006) (Bradley, JHO) (criticizing Lipco and determining that the court would apply the Zubulake factors in determining whether and how to allocate the costs for the producing party to restore and produce material from backup tapes). These decisions are both available online at http://iapps.courts.state.ny.us/iscroll/.

33 The federal practice accords with Waltzer. See Zubulake v. UBS Warburg LLC, 216 F.R.D. 280, 290 (S.D.N.Y. 2003) (“Zubulake III”) (holding that “the responding party should always bear the costs of reviewing [for privilege] and producing electronic data once it has been converted to an accessible form” because first, the producing party has the exclusive ability to control the cost of the review and second, once inaccessible information has been restored, the usual rules of discovery apply) (emphasis in original).
appropriate juncture, entertain an application by defendants to obligate plaintiff, the requesting party, to absorb all or a part of the cost of the e-discovery it seeks, or will seek, herein’’; see also Blue Tree Hotel Investments (Canada) Ltd. v. Starwood Hotels & Resorts Worldwide, Inc., C 604295-00, slip op. at 6-7 (Sup. Ct. N.Y. Co. July 29, 2003) (even though nonparty objected to producing ESI based on the expense, court, citing Zubulake, required nonparty to produce ‘‘readily accessible documents such as ‘active, online data’’ within ten days and further required it to produce within 30 days an affidavit ‘‘outlining the steps that must be taken to comply with Blue Tree’s subpoena, including the format in which the data is stored and projected costs and time of retrieval.’’ Moreover, a party objecting to the cost of electronic discovery must provide non-hearsay evidence to support its claims regarding costs. See Sage Realty Corp. v. Proskauer Rose Goetz & Mendelsohn LLP, 294 A.D.2d 190, 191, 743 N.Y.S.2d 72, 73 (1st Dep’t 2002).

C. CPLR 3103(a): Protective Orders; Prevention of Abuse

The Court in Lipco relied on CPLR 3103(a) to relieve the responding party of the costs of the e-discovery demanded from it. However, CPLR 3103(a) does not expressly mandate cost-shifting to the requesting party. Specifically, it provides that ‘‘[t]he court may at any time on its own initiative, or on a motion of any party or of any person from whom discovery is sought, make a protective order denying, limiting, conditioning or regulating the use of any discovery device. Such order shall be designed to prevent unreasonable annoyance, expense, embarrassment, disadvantage, or other prejudice to any person or the courts.’’ CPLR 3103(a). This language authorizes the use of protective orders to prevent e-discovery abuse and gives courts the ability to adjust the requester-pays standard if equity requires.

D. Commercial Division Rule 8(b): Consultation Prior to Preliminary and Compliance Conferences

In 2006, the New York State Supreme Court Commercial Division’s Rules of Practice were promulgated. Rule 8(b) thereof requires the parties to address electronic discovery comprehensively and permits them to share costs for electronic data recovery voluntarily. Specifically, the rule provides that, before the preliminary conference, ‘‘counsel shall confer with regard to anticipated electronic discovery issues,’’ including ‘‘(iv) anticipated cost of data recovery and proposed initial allocation of such cost.” N.Y. COMP. CODES R. & REGS. tit. 22, sec. 202.70(g)(8)(b).34

34 Rule 8(b) states in full: “Prior to the preliminary conference, counsel shall confer with regard to anticipated electronic discovery issues. Such issues shall be addressed with the court at the preliminary conference and shall include but not be limited to (i) implementation of a data preservation plan; (ii) identification of relevant data; (iii) the scope, extent and form of production; (iv) anticipated cost of data recovery and proposed initial allocation of such cost; (v) disclosure of the programs and manner in which the data is maintained; (vi) identification of computer system(s) utilized; (vii) identification of the
The adoption of Rule 8(b) appears to constitute a recognition that the requester-pays standard requires greater flexibility than expressed in cases like Lipco, particularly in commercial cases involving large volumes of ESI. The Nassau County Commercial Division made this need for greater flexibility explicit in its form Preliminary Conference Stipulation and Order (“Stipulation and Order”), revised in February 2009, which represents “an attempt to say more about what Rule 8(b) requires.”

In response to concerns from the bar regarding which party, the requester or the producer, bears the costs of electronic discovery, the Stipulation and Order includes item 12(e), which provides that “[i]ssues with regard to cost shifting shall be brought to the attention of the Court as soon as practicable.”


The Uniform Rules of New York Trial Courts concerning preliminary conferences were recently amended to include a provision regarding ESI. NYCRR § 202.12(c)(3), which is similar to Commercial Division Rule 8(b), requires that counsel evaluate ESI issues and consult in advance with their clients and opposing counsel. This amendment underscores the advisability of counsels’ compliance with best practices as set forth in the EDRM and specifically envisions the Court establishing, where it deems appropriate, an ESI protocol that is sufficiently detailed that it may include the “anticipated cost of data recovery and proposed initial allocation of such cost.”

2. THE LAW ON COST-ALLOCATION FOR INACCESSIBLE ESI FOLLOWED BY NEW YORK FEDERAL COURTS

New York federal courts apply a balancing test to determine whether to shift some or all the costs of producing “inaccessible” ESI from the responding party to the requesting party. This balancing test derives from the Southern District of New York’s (“SDNY”) decisions in cases such as Rowe and Zubulake.

individual(s) responsible for data preservation; (viii) confidentiality and privilege issues; and (ix) designation of experts.”


http://www.courts.state.ny.us/courts/comdiv/PDFs/Nassau-PC-Order2-1-09.pdf.

Mitev, at 6.
A. The Zubulake Seven-Factor Balancing Test

Rowe, supra, involved a class action by black concert promoters who alleged that they had been “frozen out of the market for promoting events with white bands by the discriminatory and anti-competitive practices of the defendants.” Id. Plaintiffs sought to discover emails relating to the selection of concert promoters, which defendants refused to produce because much of it resided on legacy back-up tapes using obsolete software, making it prohibitively expensive to produce. 205 F.R.D. at 424-26. Having first ruled that the high cost of recovery alone was not a basis for precluding discovery, Judge Francis devised an eight-factor balancing test to determine who should bear the costs of retrieving the data from the tapes. Applying the test, Judge Francis found that it required shifting the production costs to the requesting plaintiffs.\(^{38}\) Id. at 432.

Shortly thereafter, in Zubulake v. UBS Warburg LLC, 217 F.R.D. 309 (S.D.N.Y. 2003) (“Zubulake I”), plaintiff sought to obtain emails contained on various media, including back-up tapes. The Court noted that whether a production is unduly burdensome depends upon whether it is in an accessible or inaccessible form. Judge Scheindlin further noted that whether ESI is accessible or inaccessible depends upon the media on which it is stored. She then described three types of ESI that are accessible (active, online data, rear-line data and offline storage/archives) and two that are inaccessible (backup tapes; erased, fragmented or damaged data). Id. at 318-20.\(^{39}\)

Finding that the eight Rowe factors “tend to favor the responding party, and frequently result in shifting the costs of electronic discovery to the requesting party,” Judge Scheindlin modified the Rowe test into a seven-factor test, including: (1) the “extent to which the request is specifically tailored to discover relevant information”; (2) the “availability of such 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 costs and its incentive to do so”; (6) the “importance of the issues at stake in the litigation”; and (7) the “relative benefits to the parties of obtaining the information.”

\(^{38}\) Those factors were: (1) the specificity of the requests; (2) the likelihood of a successful search; (3) the availability of the information from other sources; (4) the purposes of retention of the information; (5) the benefits to the parties of retrieving the data; (6) the total costs of retrieval; (7) the ability to control costs; and (8) the parties’ respective resources. 205 F.R.D. at 429-432.

\(^{39}\) The complete citation of the various Zubulake opinions is:

231 F.R.D. 159 (2005) (“Zubulake VI”)
217 F.R.D. at 322. Judge Scheindlin stressed that the first two factors, which together formed a “marginal utility test,” should receive the greatest weight in the Court’s analysis. Id. at 323.

In Zubulake v. UBS Warburg LLC, 216 F.R.D. 280 (S.D.N.Y. 2003) (“Zubulake III”), Judge Scheindlin applied the seven-part balancing test and determined that defendant should bear 75 percent of the cost of restoring backup tapes and plaintiff the remaining 25 percent. Id. at 289.40 The Court made clear, however, that, as a general rule, only the costs of restoration and searching should be shifted and that the responding party should “always” bear the costs of reviewing and producing ESI once it has been converted to an accessible form. Id. at 289.

3. COST-ALLOCATION CONSIDERATIONS IN NONPARTY DISCOVERY: NEW YORK STATE AND FEDERAL LAW

Both New York State and federal law protect nonparties from undue expense in responding to subpoenas. However, New York courts require a requesting party to pay the nonparty’s full costs and attorneys’ fees to produce ESI, while federal courts award costs and fees based on a sliding scale determined by the nonparty’s “closeness” to the litigation.

A. New York

CPLR 3111 and 3122(d) direct state courts to protect nonparties from undue expense in responding to a subpoena: both sections provide that “[t]he reasonable production expenses of a nonparty witness shall be defrayed by the party seeking discovery.” CPLR 3111; CPLR 3122(d).41 Recent case law demonstrates the New York

40 In 2006, the amendments to the FRCP incorporated cost-shifting for inaccessible ESI into FRCP 26. See FRCP 26(b)(2)(B), FRCP 26(b)(2)(C), and 2006 comment to FRCP 26. However, the comment warns that “[a] requesting party’s willingness to share or bear the access costs may be weighed by the court in determining whether there is good cause. But the producing party’s burdens in reviewing the information for relevance and privilege may weigh against permitting the requested discovery.” Comment to subdivision (b)(2) of 2006 Amendment to FRCP. In other words, simply because the requesting party has offered to pay the costs of accessing “inaccessible” data cannot by itself make producing the discovery non-burdensome, because the producing party may still incur burdensome expenses in preparing the discovery for production to the requesting party.

41 CPLR 3111 states in full: “The notice or subpoena may require the production of books, papers and other things in the possession, custody or control of the person to be examined to be marked as exhibits, and used in the examination. The reasonable production expenses of a non-party witness shall be defrayed by the party seeking discovery.” CPLR 3111. CPLR 3122(d) states that: “Unless the subpoena duces tecum directs the production of original documents for inspection and copying at the place where such items are usually maintained, it shall be sufficient for the custodian or other qualified person to deliver complete and accurate copies of the items so produced. The reasonable production expenses of a nonparty witness shall be defrayed by the party seeking discovery.” CPLR 3122(d).
courts’ concerns about the burdens of ESI discovery on nonparties. For example, In the Matter of the Application of Maura, 17 Misc. 3d 237, 842 N.Y.S.2d 851 (Sup. Ct. Nassau Co. 2007), the Court refused to allocate the cost of imaging a nonparty law firm’s hard drive to the law firm on the basis that “[t]he CPLR provides that the party seeking discovery should incur the costs incurred in the production of discovery material.” Id. at 247, 842 N.Y.S.2d at 858-59 (citing Lipco). In reaching this conclusion, the Court observed that, “The New York courts have often looked to federal cases for guidance on the issues of electronic discovery.” Id. at 246. Because the matter at issue concerned an alleged alteration of a prenuptial agreement, the Court ordered that a “direct clone” of the law firm’s hard drive should be produced but declined to allocate the cost of that discovery to the nonparty “as has been done in certain circumstances, especially in the federal courts.” Id.

Nonparty ESI costs were also analyzed in Finkelman v. Klaus, No. 5257/05, 2007 WL 4303538 (Sup. Ct. Nassau Co. Nov. 28, 2007). There, the Court held that under CPLR 3122(d) a nonparty may recover both the expenses necessary to retrieve electronically stored information and the attorneys’ fees incurred in reviewing that ESI for privilege. Id. at *6. In so doing, the Court noted that “… the costs of producing electronic records can be very steep and while what constitutes reasonable production expenses has not been well defined by state courts, guidance can be obtained from federal court decisions.” Id. at *6. The Court further stated that “unanimity” is lacking in the federal courts as to whether, in addition to copying costs, the reasonable cost of labor expended to do a document production, including attorney’s fees, are covered under Federal Rule of Civil Procedure 45. Id. However, the Court recognized the “sound rationale behind the federal rule” that nonparties should not have to subsidize the costs of litigation and that “In fact, in the Practice Commentaries to CPLR 3122, it is noted that while reference to attorneys’ fees is not made in that statute, ‘[t]he court could be empowered to direct such a payment, particularly where any substantial right of the non-party witness is involved and representation by an attorney is needed.’” Id. (citation deleted).

While the New York courts recognize the need to protect nonparties, they have been unwilling to permit a nonparty to avoid ESI production with unsubstantiated assertions of inaccessibility. For example, in Blue Tree Hotel Investments (Canada) Ltd. v. Starwood Hotels and Resorts Worldwide, Inc., C 604295-00 (slip op.) (Sup. Ct. N.Y. Co. July 29, 2003), the plaintiff hotel owners subpoenaed nonparty Arthur Andersen (“Andersen”) who had provided audit services at the request of the managing agent defendant, Starwood Hotels & Resorts Worldwide, Inc. The Court agreed with the hotel owners that “… Andersen has done nothing to demonstrate just how time consuming and expensive” it would have been to retrieve the ESI requested. Id. at 7. Relying upon the Zubulake analysis, the Court ordered accessible “active, online data” to be produced promptly and a detailed affidavit submitted within 30 days from a
knowledgeable individual describing the format in which the remaining data requested was stored, as well the alleged time and expense of retrieving it. *Id.*

**B. Federal**

Like CPLR 3111 and 3122(d), FRCP 45 requires courts to “protect” a nonparty “from significant expense resulting from the inspection and copying commanded” in a subpoena, and courts in the SDNY have awarded nonparties their legal fees incurred in producing discovery. New York federal courts balance three factors to allocate costs and attorneys’ fees: the nonparty’s interest in the case, its ability to bear the costs of production and the public importance of the litigation. *First American Corp. v. Price Waterhouse LLP*, 184 F.R.D. 234, 241 (S.D.N.Y. 1998). Of these three factors, the nonparty’s interest in the case is the most critical. Thus, totally disinterested nonparties are not required to bear production costs. See, e.g., *In re Application of the Law Firms of McCourts and McGrigor Donald*, No. M. 19-96 (JSM), 2001 WL 345233, at *2 (S.D.N.Y. Apr. 9, 2001) (nonparty insurer need not bear costs or fees in producing discovery). However, courts have held that nonparties who were involved in the relevant transactions, and should therefore have “reasonably anticipated being drawn into subsequent litigation,” must bear a portion of their costs and attorneys’ fees. See *First American Corp.*, 184 F.R.D. at 243 (nonparty auditors could recover only a portion of their costs and attorneys’ fees); and *Dow Chem. Co. v. Reinhard*, No. M8-85 (HB), 2008 WL 1968302, at *2 (S.D.N.Y. Apr. 29, 2008) (nonparty law firm had to bear half of its costs and fees in producing the requested discovery).
THE LAW OF ESI BURDEN AND EXPENSE IN OTHER STATES

Among the states that have addressed cost-allocation for e-discovery, some mandate and others permit cost-shifting for inaccessible ESI to the requester. By contrast, the rule in Delaware is that the responding party pays, subject to the Court’s discretion to alter this rule where appropriate. This case law may provide New York courts with useful comparisons when deciding an e-discovery cost dispute under Lipco, T.A. Ahern Contractors Corp. and CPLR 3103(a).

1. STATES THAT REQUIRE COST-SHIFTING FOR INACCESSIBLE ESI

California’s Code of Civil Procedure Section 2031.280(c) mandates that the requesting party pay the responding party’s costs to translate otherwise inaccessible data into a usable form. See Cal. C.C.P. § 2031.280(c). In the one decision construing this section, Toshiba America Electronic Components, Inc. v. Superior Court of Santa Clara County, 124 Cal.App.4th 762 (Cal. Ct. App. 6th Dist. 2004), the Court held that Section 2031.280(c) required the requesting party to pay the costs for “recovering usable information from the responding party’s computer backup tapes.” Id. at 765. However, the Court emphasized that the statutory mandate covered only “reasonable expenses for a necessary translation” of the producing party’s computer data and stated that the requesting party could seek relief if it believed that the translation of data was unnecessary or the expense was unreasonable. Id. at 772-73.

Texas also mandates cost-shifting to the requesting party for inaccessible ESI. Under Texas Rule of Civil Procedure 196.4, ESI that is not “reasonably available to the responding party in its ordinary course of business” need not be produced without a court order. Tex. R. Civ. P. 196.4. However, if the Court orders production of such ESI, “the court must also order that the requesting party pay the reasonable expenses of any extraordinary steps required to retrieve and produce the information.” Id. No Texas decision has interpreted Rule 196.4.

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42 Section 2031.280(c) provides that, “[i]f necessary, the responding party at the reasonable expense of the demanding party shall, through detection devices, translate any data compilations included in the [discovery] demand into reasonably usable form.”

43 As for nonparty discovery, Texas Rule of Civil Procedure 205.3(f), like CPLR 3122(d), requires a party to pay the nonparty’s costs of production: “A party requiring production of documents by a nonparty must reimburse the nonparty’s reasonable costs of production.” Tex. R. Civ. P. 205.3(f).
2. STATES THAT PERMIT COST-SHIFTING FOR INACCESSIBLE ESI

A number of states either permit or suggest they would permit courts to allocate the costs of producing inaccessible ESI to the requesting party. However, very few court decisions currently exist on the subject of cost-shifting or cost-allocation. For example, in an Illinois case, *Vision Point of Sale, Inc. v. Haas*, No. 04 CH 2387, 2004 WL 5326424 (Ill. Cir. Ct. Cook Co. Sept. 27, 2004), plaintiff demanded the right to search defendant’s computers for evidence of a theft of a trade secret. Relying on *Rowe*, *Zubulake* and the principles devised by the Sedona Conference (discussed below), the Court held that plaintiff and defendant would evenly split the costs that plaintiff’s computer forensics experts had incurred so far; that defendant would bear 75% and plaintiff 25% of the costs of searching defendant’s computers going forward; and that the Court would reallocate the costs, if necessary, at the conclusion of the case. *Id.* ¶ W(3).

A court in North Carolina addressed ESI cost-shifting in *Analog Devices, Inc. v. Michalski*, No. 01 CVS 10614, 2006 WL 3287382 (N.C. Super. Guilford Co. Nov. 1, 2006). There, defendants requested that plaintiff produce inaccessible emails contained in backup tapes. *Id.* at *3. From North Carolina’s version of FRCP 26, the Court derived five non-exclusive factors for deciding whether to shift costs: “(1) the burden and expense of production; (2) the needs of the case; (3) the amount in controversy; (4) any limitations on the parties’ resources; and (5) the importance of the issues at stake.” *Id.* at *14. Of overriding importance to the Court was whether its decision would determine the outcome of the case by either making it impossible for one party to obtain needed discovery or by making the costs of discovery so high as to force a settlement. *Id.* at *12. The Court ordered the parties to split the costs of retrieving the inaccessible ESI and reserved “an assessment of the final costs based on the outcome” of the case. *Id.* at *16.

In *Ex Parte Cooper Tire & Rubber Co.*, 987 So.2d 1090, 1107 (Ala. 2007), the Alabama Supreme Court suggested that it would permit cost-shifting by stating that considering the *Rowe* and *Zubulake* factors would be “an appropriate exercise of the trial court’s discretion” in addressing a “discovery request for ESI.”

A number of states have adopted civil procedure rules that permit cost-shifting or cost-allocation for electronic discovery. Several of these states have adopted an analog to Federal Rule of Civil Procedure 26(b)(2)(B), which relieves a party of the initial requirement to produce ESI that is “not reasonably accessible because of undue burden or cost,” but permits courts to order discovery of such ESI on a showing of good cause, and to “specify conditions for the discovery.” Those states include: Arizona (Ariz. R. Civ. P. 26(b)(1)(B)); Indiana (Ind. R. Trial P. 26(C)(9)); Iowa (Iowa R. Civ. P. 1.504(2)); Minnesota (Minn. R. Civ. P. 26.02(b)(2)); Montana (Mont. R. Civ. P. 26(b)(1)); New Jersey (N.J. Civ. Practice Rule 4:10-2(f)); North Dakota (N.D. R. Civ. P. 26(b)(2)(B)); and Utah (Utah R. Civ. P. 26(b)(2)).
A smaller number of states have adopted rules that more explicitly permit cost-shifting for the production of electronic discovery. For example, Idaho has adopted Idaho Rule of Civil Procedure 34(b)(2), which provides that, if the Court orders the production of inaccessible ESI, “the court may also order that the requesting party pay the reasonable expenses of any extraordinary steps required to retrieve and produce the information.” I.R.C.P. 34(b)(2). Maryland has adopted Maryland Rule of Procedure 2-402(b)(2), which provides that a party requesting inaccessible ESI “shall establish that its need for the discovery outweighs the burden and cost of locating, retrieving and producing the information. If persuaded that the need for discovery does outweigh the burden and cost, the Court may order discovery and specify conditions, including an assessment of costs.” M.R.P. 2-402(b)(2). Mississippi Rule of Civil Procedure 26(c) is identical to Texas Rule of Civil Procedure 196.4 except that cost-shifting for inaccessible ESI is made permissive rather than mandatory. Miss. R. Civ. P. 26(c).44

3. THE APPROACH OF THE DELAWARE CHANCERY COURT

In Omnicare, Inc. v. Mariner Health Care Management Co., No. 3087-VCN, 2009 WL 1515609, (Del. Ch. May 29, 2009), the Delaware Chancery Court handled a discovery dispute relating to the defendants’ refusal to restore and produce, at their expense, email for certain periods for which no email was available due to an automatic deletion program that defendants had in effect. The emails were contained on backup tapes. At the outset, the Court noted that under Delaware law the responding party bears the expense of responding to discovery requests but that under Court of Chancery Rule 26, the Court has wide discretion to manage discovery and “to alter this norm where appropriate.” The parties did not address Delaware law in their motions but instead relied upon cases citing the federal discovery rules, in particular, Zubulake.

The Court noted that there was “wisdom” in the Zubulake approach but found it “… unnecessary to endorse any particular approach to the cost-shifting analysis.” Id. at *7. Then, the Court found that the defendants had not adequately demonstrated that the ESI was not reasonably accessible. Vice Chancellor Noble reasoned that “Simply because the ESI is now contained on Backup Tapes instead of in active stores does not necessarily render it not reasonably accessible.” Id. Having said that, the Vice Chancellor adopted a two step approach proposed by the defendants which involved first, a production from defendants’ “active stores” in order to assess the likelihood of finding relevant and discoverable data on the Backup Tapes; and, second, if that the production from the “active stores” proved helpful, then recovery from the “Backup Tapes would be fruitful and processing of the Backup Tapes at defendants’ expense would be appropriate.” Id.

COST-ALLOCATION FACTORS ADOPTED BY ORGANIZATIONS ADDRESSING ELECTRONIC DISCOVERY

After the Zubulake decisions, a number of organizations authored guidelines addressing issues of electronic discovery, including cost-allocation. Some guidelines have adopted balancing tests based on Zubulake that apply the seven Zubulake factors exactly as set forth in that opinion, while others modify the Zubulake approach. These “modified” approaches, in addition to opening the possibility of cost shifting even for accessible ESI, provide additional factors that a court can consider in deciding an e-discovery cost dispute.45

1. THE CCJ GUIDELINES: ADOPTING ZUBULAKE

The Conference of Chief Justices’ Guidelines for State Trial Courts Regarding Discovery of Electronically-Stored Information (“CCJ Guidelines”) adopt the Zubulake approach to cost-allocation for inaccessible ESI. See Conference of Chief Justices Working Group on Electronic Discovery, Guidelines for State Trial Court Judges Regarding Discovery of Electronically-Stored Information (Approved August 2006),46 at 7. The CCJ Guidelines recommend that courts utilize the seven Zubulake factors in addressing cost-allocation because they will require parties to engage in a “cost/benefit analysis” that “will both encourage requesting parties to carefully assess whether all the information sought is worth paying for, while discouraging the producing party from storing the information in such a way as to make it extraordinarily costly to retrieve.” Id. at 8.47

45 All of these organizations’ guidelines have been assembled in one unreported state court opinion, Analog Devices, Inc. v. Michalski, supra. As discussed above, that court declined to rely on the Zubulake factors or on any of the guidelines discussed herein and instead derived its own list of five factors from North Carolina Rule of Civil Procedure 26, North Carolina’s analog to FRCP 26. 2006 WL 3287382, at *13.


2. MODIFIED ZUBULAKE APPROACHES: THE SEDONA CONFERENCE AND THE ABA CIVIL DISCOVERY STANDARDS

A. Introduction: The Endorsement of Cost-Shifting for Accessible Information and Other Modifications of the Zubulake Test.

In contrast with the CCJ’s approach, the Sedona Conference and the American Bar Association (“ABA”) have adopted modified approaches that do not strictly limit cost-allocation to inaccessible ESI. The Sedona Conference adds an additional factor to Zubulake’s seven-factor test, which arguably opens the way to cost-allocation for accessible ESI. The ABA addresses cost-allocation within the larger context of motions to protect against and compel electronic discovery, and recommends sixteen factors for courts to consider in deciding these issues. Like the Sedona Principles, the ABA allows for the possibility of cost-allocation for accessible ESI.

B. The Sedona Conference

The Sedona Conference has developed a highly influential and detailed statement of fourteen principles for electronic discovery entitled The Sedona Principles (Second Edition): Best Practices Recommendations & Principles for Addressing Electronic Document Production (“Sedona Principles”). Principle Thirteen of the Sedona Principles addresses the issue of cost-allocation and cost shifting for electronic discovery. Principle Thirteen incorporates the seven Zubulake factors and states that the responding party should generally bear the costs of discovery except when the ESI demanded is not “reasonably available in the ordinary course of business.” Sedona Principles, at 67. However, the Sedona Principles do not limit cost shifting to ESI that is inaccessible. Rather, they endorse cost shifting even if ESI is reasonably accessible but where the volume of the data requested may be disproportionate to the needs of the case. Id. Furthermore, the Sedona Principles also expand on Zubulake by defining “costs” more broadly to include not only technical retrieval and production costs, but also privilege review costs and costs related to the disruption to the business caused by ESI production. Id.; see also Principle Two and comment 2.b, id. at 17 (addressing non-monetary “costs” of the production of ESI, such as “invasion of privacy rights, risks to business and legal confidences, and risks to privileges”).

Finally, the comment to Principle Thirteen warns that “[c]ost-shifting cannot replace reasonable limits on the scope of discovery.” It “should not be used as an alternative to sustaining a responding party’s objection to undertaking” extraordinary efforts to produce ESI. Such efforts “should only be required where the requesting party demonstrates substantial need or justification” for the information. Courts should therefore “discourage burdensome requests that have no reasonable prospect, given the size of the case, of significantly contributing to the discovery effort, even if the requesting party is willing to pay.” Id. at 68 (Comment 13.b). In short, whatever rule of cost-allocation a court adopts, the Sedona Conference takes the position that it should
not become an excuse to bypass the requirement, that discovery is only warranted when its usefulness to the litigation outweighs the burden it will cause to the responding party.\textsuperscript{48}

\section*{A. ABA Civil Discovery Standards}

In August 2004, the American Bar Association released its revised \textit{Civil Discovery Standards}. American Bar Association, \textit{Civil Discovery Standards} (Aug. 2004).\textsuperscript{49} The \textit{Civil Discovery Standards} address cost-allocation within the larger context of motions to compel or protect against the production of ESI and provide a list of sixteen factors that courts should consider in resolving such motions. \textit{Id.} at 59. With respect to cost-allocation specifically, the ABA adopted not only the \textit{Zubulake} factors, but also additional factors that could allow a court to take an even more nuanced approach to cost-allocation. These additional factors include: (1) the “extent to which production would disrupt the normal operations and processing routines of the responding party” (Factor I); (2) whether the requesting party had offered to defray all or part of the producing party’s production costs (Factor J); (3) whether the request would require the responding party to convert ESI to hard copies or hard copies to an electronic format (Factor N); and (4) whether the responding party had, in anticipation of future discovery requests, strategically stored the ESI in an inaccessible form not justified by business necessity (Factor O). \textit{Id.} at 60.

The ABA guidelines also supplement \textit{Zubulake} in two other important ways. First, like the \textit{Sedona Principles}, they arguably would permit cost shifting for accessible ESI by making inaccessibility one factor to consider in deciding a motion to allocate costs. \textit{Id.} (Factor M). Second, unlike the other guidelines discussed herein, the ABA guidelines specifically consider whether the “responding party has deleted, discarded or erased” ESI after that party became aware of the likelihood of litigation. \textit{Id.} at 61. (Factor P). Here, the ABA has recognized that the issue of spoliation cannot be divorced from cost-allocation and that a requesting party should not be required to bear the costs of restoring ESI that the producing party has attempted to hide or destroy. While addressing the additional costs of spoliation is arguably possible within the original

\textsuperscript{48} The \textit{Sedona Principles} also address nonparty discovery and recommend, based on the 1991 amendments to FRCP 45, that ESI discovery costs should be mandatorily shifted to the requesting party unless those requests are “narrowly focused.” \textit{Id.} at 69 (comment 13.c). \textit{See also The Sedona Conference Commentary on Non-Party Production and Rule 45 Subpoenas} (April 2008), which establishes an eight-factor balancing test for cost shifting and allocation in the context of non-party discovery, based on an eight-factor test used in \textit{Tessera, Inc. v. Micron Technology, Inc.}, 2006 WL 733498 (N.D. Cal. March 22, 2006). This document is available for download at http://www.thesedonaconference.org/content/miscFiles/Rule_45_Subpoenas.

\textsuperscript{49} The ABA \textit{Civil Discovery Standards} can be downloaded at http://www.abanet.org/litigation/discoverystandards/2004civildiscoverystandards.pdf.
seven *Zubulake* factors, because it increases the costs of production relative to the amount in controversy and the parties’ resources (the third and fourth *Zubulake* factors), the ABA guidelines make clear that spoliation is a factor that deserves independent weight in favor of allocating costs against a party that has attempted to destroy material and necessary evidence.\(^5^0\)

\(^{50}\) See also *Disability Rights Council of Greater Washington v. Washington Metropolitan Transit Authority*, 242 F.R.D. 139 (D.D.C. 2007). This case is instructive on the interplay between spoliation and discovery of inaccessible ESI, even though it does not expressly address cost-allocation. There, the defendant did not institute a “litigation hold” requiring employees to retain relevant documents until two years after the commencement of the litigation. Moreover, it did not halt its automatic purging of emails after sixty days until that time. *Id.* at 145. The court ruled that under the circumstances good cause existed to order the defendant to search its store of monthly disaster recovery back-up tapes for relevant emails. *Id.* at 148.
State and federal courts around the country are increasingly facing the issue of how to reduce and allocate the costs of producing ESI. Federal courts, the few states that have addressed the issue, and several independent organizations have adopted a cost-sharing approach that generally requires the producing party to bear the costs of producing ESI, except when the requested ESI is “inaccessible,” at which point the requesting party is made to bear some or all of the cost. New York’s approach of requiring the requesting party to bear all ESI production costs, whether the ESI is accessible or inaccessible, contrasts with these other approaches, and represents a policy determination that making requesting parties responsible for discovery costs is the most efficient means of containing the scope of discovery and the costs associated with it.

Whichever party bears the costs of producing ESI, opportunities exist to reduce these costs. Because document review comprises the bulk of ESI costs, narrowing the scope of ESI that parties must review in the first instance offers the best opportunity for cost-savings over the course of a case. Courts can help reduce costs by requiring parties to cooperate in determining the scope of discovery, whether inaccessible ESI or metadata must be produced, and what the search terms and methodologies should be. Courts can also manage costs by encouraging parties to use the most effective sampling strategies, which can narrow the universe of documents to be reviewed. Finally, requiring parties to agree on these matters at the outset of a case is a crucial aspect of any cost-containment approach to ESI.

51 See, e.g., Wiginton v. CB Richard Ellis, Inc., 229 F.R.D. 568, 574, 576 (N.D. Ill. 2004) (noting that search terms can influence the scope and cost of review, and also noting that a party that helped choose search terms would not be heard to complain about the results of using those terms).

52 In Victor Stanley, the court cautioned parties to confer with each other to formulate “a mutually agreeable search and retrieval method” and suggested that they enter into a court approved agreement as a means of avoiding unnecessary costs in searching for and producing ESI. 250 F.R.D. at 261 n. 10. In appropriate circumstances, courts may wish to offer the parties the opportunity to hire a neutral ESI expert jointly as a means of reducing ESI costs.

53 See, e.g., Victor Stanley, where the court admonished the parties to conduct searching and sampling in accordance with “the Sedona Conference Best Practices,” which would have helped convince “the court that the method chosen was reasonable and reliable.” 250 F.R.D. at 262; The Sedona Conference Commentary on Achieving Quality in the E-Discovery Process (May 2009) extensively discusses various types of sampling as a means to reduce costs.

54 See, e.g., Aguilar v. Immigration and Customs Enforcement Division, 255 F.R.D. 350, 355 (S.D.N.Y. 2008) (Court observed that early agreement on ESI by the parties to that dispute might have avoided “Court involvement or additional expense”); Treppel v. Biovail Corp., 233 F.R.D. 363, 374 (S.D.N.Y. 2006)
(plaintiff’s refusal to stipulate to a “search methodology” for defendant’s document searches was a “missed opportunity” because “plaintiff might have convinced [defendant] to broaden its search in ways that would uncover more responsive documents and avoid subsequent disputes”).

55 The Committee also thanks Jonathan D. Twombly for his assistance.
The following is a glossary of terms that may be helpful to courts in analyzing ESI issues. This glossary is not strictly limited to terms relating to cost shifting, nor is it limited to terms that are used in this Manual. These definitions have been adopted from *The Sedona Conference Glossary: E-Discovery & Digital Information Management (2d Ed.)*.56

**Active Data:** Information residing on the direct access storage media (disc drives or servers) that is readily visible to the operating system and/or application software with which it was created. It is immediately accessible to users without restoration or reconstruction.

**Application:** A collection of one or more related software programs that enable an end-user to enter, store, view, modify, or extract information from files or databases. The term is commonly used in place of “program” or “software.” Applications may include word processors, Internet browsing tools, spreadsheets, email clients, personal information managers (contact information and calendars), and other databases.

**Archival Data:** Archival Data is information an organization maintains for long-term storage and record keeping purposes, but which is not immediately accessible to the user of a computer system. Archival Data may be written on system hard drives. Some systems allow users to retrieve archival data directly while other systems require the intervention of an IT professional.

**Attachment:** A record or file associated with another record for the purpose of retention, transfer, processing, review, production and routine records management. There may be multiple attachments associated with a single “parent” or “master” record. In many records and information management programs, or in a litigation context, the attachments and associated record(s) may be managed and processed as a single unit. In common use, this term often refers to a file (or files) associated with an email for retention and storage as a single message unit.

**Backup Data:** An exact copy of ESI that serves as a source for recovery in the event of a system problem or disaster. Backup Data is generally stored separately from Active Data on portable media. Backup Data is distinct from Archival Data in that Backup Data may be a copy of Active Data, but the more meaningful difference is the method and structure of storage that impacts its suitability for certain purposes.

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56 Available for download at http://www.thesedonaconference.org/content/miscFiles/TSCGlossary_12_07.pdf.
**Backup Tape:**  Magnetic tape used to store copies of ESI, for use when restoration or recovery is required. ESI on backup tape is generally recorded and stored sequentially, rather than randomly, meaning in order to locate and access a specific file or data set, all ESI on the tape preceding the target must first be read, a time-consuming and inefficient process. Backup tapes typically use data compression, which increases restoration time and expense, given the lack of uniform standards governing data compression.

**Backup Tape Recycling:**  Describes the process whereby an organization’s backup tapes are overwritten with new data, usually on a fixed schedule determined jointly by records management, legal, and IT sources. For example, the use of nightly backup tapes for each day of the week with the daily backup tape for a particular day being overwritten on the same day the following week; weekly and monthly backups being stored offsite for a specific period of time before being placed back in the rotation.

**Bibliographical/Objective Coding:**  Extracting objective information from electronic documents such as date created and author/recipient/copies, and associating the information with a specific electronic document. See also Subjective Coding.

**Byte:**  A byte is the basic measurement of most computer data and consists of eight bits. Computer storage capacity is generally measured in bytes. Although characters are stored in bytes, a few bytes are of little use for storing a large amount of data. Therefore, storage is measured in larger increments of bytes, for example: Kilobyte, Megabyte, Gigabyte, Terabyte, Petabyte, Exabyte, Zettabyte and Yottabyte (listed here in order of increasing volume).

**Case De-Duplication:**  Eliminates duplicates to retain only one copy of each copy per case. For example, if an identical document resides with three custodians, only the first custodian’s copy will be saved. See De-Duplication.

**Coding:**  Automated or human process by which documents are examined and evaluated using pre-determined codes, and the results recorded. Coding usually identifies names, dates, and relevant terms or phrases. Coding may be structured (limited to the selection of one of a finite number of choices), or unstructured (a narrative comment about a document). Coding may be objective, i.e., the name of the sender or the date, or subjective, i.e., evaluation as to the relevancy or probative value of documents. See Bibliographical/Objective Coding and Subjective Coding.

**Computer Forensics:**  Computer Forensics is the use of specialized techniques for recovery, authentication and analysis of electronic data when an investigation or litigation involves issues relating to reconstruction of computer usage, examination of residual data, authentication of data by technical analysis or explanation of technical features of data and computer usage. Computer forensics requires specialized expertise that goes beyond normal data collection and preservation techniques available to end-users or system support personnel, and generally requires strict adherence to chain-of-custody protocols. See also Forensic Copy.
**Custodian:** Person having control of a network, computer or specific electronic files.

**Custodian De-Duplication:** Culls a document to the extent multiple copies of that document reside within the same custodian’s data set. See De-Duplication.

**Customer-Added Metadata:** See User-Added Metadata.

**Data:** Any information stored on a computer. All software is divided into two general categories: data and programs. Programs are collections of instructions for manipulating data. In database management systems, data files are the files that store the database information. Other files, such as index files and data dictionaries also store administrative information, known as metadata.

**Data Categorization:** The categorization and sorting of ESI – such as foldering by “concept,” content, subject, taxonomy, etc. – through the use of technology – such as search and retrieval software or artificial intelligence – to facilitate review and analysis.

**Data Mining:** Data mining generally refers to techniques for extracting summaries and reports from databases and data sets. In the context of electronic discovery, this term often refers to the processes used to cull through a collection of ESI to extract evidence for production or presentation in an investigation or in litigation.

**De-Duplication:** De-Duplication (“De-Duping”) is the process of comparing electronic records based on their characteristics and removing or marking duplicate records within the data set. The definition of “duplicate records” should be agreed upon, i.e., whether an exact copy from a different location (such as a different mailbox, server tapes, etc.) is considered to be a duplicate. De-duplication can be selective, depending on the agreed-upon criteria. See also Case De-Duplication and Custodian De-Duplication.

**Deleted Data:** Deleted Data is data that existed on the computer as live data and which has been deleted by the computer system or end-user activity. Deleted Data may remain on storage media in whole or in part until they are overwritten or “wiped.” Even after the data itself has been wiped, directory entries, pointers or other information relating to the deleted data may remain on the computer. “Soft deletions” are data marked as deleted (and not generally available to the end-user after such marking), but not yet physically removed or overwritten. Soft-deleted data can be restored with complete integrity.

**Deleted File:** A file with disc space that has been designated as available for reuse; the deleted file remains intact until it is overwritten.

**Deletion:** Deletion is the process whereby data is removed from active files and other data storage structures on computers and rendered inaccessible except through the use of special data recovery tools designated to recover deleted data. Deletion occurs on several levels in modern computer systems: (a) File level deletion renders the
file inaccessible to the operating system and normal application programs and marks the storage space occupied by the file’s directory entry and contents as free and available to re-use for data storage, (b) Record level deletion occurs when a record is rendered inaccessible to a database management system (DBMS) (usually marking the record storage space as available for re-use by the DBMS, although in some cases the space is never reused until the database is compacted) and is also characteristic of many email systems, (c) Byte level deletion occurs when text or other information is deleted from the file content (such as the deletion of text from a word processing file); such deletion may render the deleted data inaccessible to the application intended to be used in processing the file, but may not actually remove the data from the file’s content until a process such as compaction or rewriting of the file causes the deleted data to be overwritten.

**Document Metadata:** Data about the document stored in the document, as opposed to document content. Often this data is not immediately viewable in the software application used to create/edit the document but can be accessed via a “Properties” view. Examples include document author and company, and create and revision dates. Contrast with File System Metadata and Email Metadata.  *See also Metadata.*

**Electronic Discovery ("E-Discovery"):** The process of collecting, preparing, reviewing and producing electronically stored information ("ESI") in the context of the legal process.

**Email Metadata:** Data stored in the email about the email. Often this data is not even viewable in the email client application used to create the email, e.g., blind copy addresses, received date. The amount of email metadata available for a particular email varies greatly depending on the email system. Contrast with File System Metadata.

**Embedded Metadata:** Generally hidden, but an integral part of ESI, such as “track changes” or “comments” in a word processing file or “notes” in a presentation file. While some metadata is routinely extracted during processing and conversion for e-discovery, embedded data may not be. Therefore, it may only be available in the original, native file.  *See also Metadata.*

**File Format:** The organization or characteristics of a file that determine with which software programs it can be used.

**File Server:** When several or many computers are networked together in a LAN situation, one computer may be utilized as a storage location for files for the group. File servers may be employed to store email, financial data, word processing information or to back-up the network.

**File System:** The engine that an operating system or program uses to organize and keep tract of ESI. More specifically, the logical structures and software routines used to control access to the storage on a hard disc system and the overall structure in which the files are named, stored, and organized. The file system plays a critical role in
computer forensics because the file system determines the logical structure of the hard drive, including its cluster size. The file system also determines what happens to data when the user deletes a file or subdirectory.

**File System Metadata:** Metadata generated by the system to track the demographics (name, size, location, usage, etc.) of the ESI and, not embedded within, but stored externally from the ESI. *See also* Metadata.

**Forensic Copy:** A forensic copy is an exact copy of an entire physical storage media (hard drive, CD-ROM, DVD-ROM, tape, etc.), including all active and residual data and unallocated or slack space on the media. It compresses and encrypts to ensure authentication and protect chain of custody. Forensic copies are often called “image” or “imaged copies.”

**Form of Production:** The manner in which requested documents are produced. Used to refer both to file format (e.g., native vs. imaged format) and the media on which the documents are produced (paper vs. electronic).

**Image:** (1) To image a hard drive is to make an identical copy of the hard drive, including empty sectors. Also known as creating a “mirror image” or “mirroring” the drive. (2) An electronic or digital picture of a document (e.g., TIFF, PDF, etc.).

**Legacy Data, Legacy System:** Legacy Data is ESI in which an organization may have invested significant resources, but has been created or stored by the use of software and/or hardware that has become obsolete or replaced (“legacy systems”). Legacy data may be costly to restore or reconstruct when required for investigation or litigation analysis or discovery.

**Magnetic/Optical Storage Media:** Includes, but is not limited to, hard drives, backup tapes, CD-ROMs, DVD-ROMs, Jaz and Zip drives.

**Metadata:** Data typically stored electronically that describes characteristics of ESI, found in different places in different forms. Can be supplied by applications, users or the file system. Metadata can describe how, when and by whom ESI was collected, created, accessed, modified and how it is formatted. Can be altered intentionally or inadvertently. Certain metadata can be extracted when native files are processed for litigation. Some metadata, such as file dates and sizes, can easily be seen by users; other metadata can be hidden or embedded and unavailable to computer users who are not technically adept. Metadata is generally not reproduced in full form when a document is printed to paper or electronic image. *See also* Customer-Added Metadata, Email Metadata, Embedded Metadata, File System Metadata, User-Added Metadata and Vendor-Added Metadata. For a more thorough discussion, see *The Sedona Guidelines: Best Practice Guidelines & Commentary for Managing Information & Records in the Electronic Age* (Second Edition).

**Native Format:** Electronic documents have an associated file structure defined by the original creating application. This file structure is referred to as the “native
format” of the document. Because viewing or searching documents in the native format may require the original application (for example, viewing a Microsoft Word document may require the Microsoft Word application), documents may be converted to a neutral format as part of the record acquisition or archive process. “Static” formats (often called “imaged formats”), such as TIFF or PDF, are designed to retain an image of the document as it would look viewed in the original creating application but do not allow metadata to be viewed or the document information to be manipulated. In the conversion to static format, the metadata can be processed, preserved and electronically associated with the static format file. However, with technology advancements, tools and applications are becoming increasingly available to allow viewing and searching of documents in their native format, while still preserving all metadata.

Native Format Review: Review of ESI in its current “native” format using either an application capable of supporting native format review or the original application in which the ESI was created.

Near-Line Data Storage: Storage in a system that is not a direct part of the network in daily use, but that can be accessed through the network. There is usually a small time lag between the request for ESI stored in near-line media and its being made available to an application or end-user. Making near-line data available will not require human intervention (as opposed to “off-line” data which can only be made available through human actions).

OCR (Optical Character Recognition): A technology process that translates and converts printed matter on an image into a format that a computer can manipulate (ASCII codes, for example) and, therefore, renders that matter text searchable. OCR software evaluates scanned data for shapes it recognizes as letters or numerals. All OCR systems include an optical scanner for reading text, and software for analyzing images. Most OCR systems use a combination of hardware (specialized circuit boards) and software to recognize characters, although some inexpensive systems operate entirely through software. Advanced OCR systems can read text in a large variety of fonts, but still have difficulty with handwritten text. OCR technology relies upon the quality of the imaged material, the conversion accuracy of the software, and the quality control process of the provider. This process is generally acknowledged to be between 80 and 99 percent accurate.

Off-Line Data: The storage of ESI outside the network in daily use (e.g., on backup tapes) that is only accessible through the off-line storage system, not the network.

Off-Line Storage: ESI maintained or archived on removable disc (optical, compact, etc.) or magnetic tape used for making disaster-recovery copies of records for which retrieval is unlikely. Accessibility to off-line media usually requires manual intervention and is much slower than on-line or near-line storage, depending on the storage facility. The major difference between near-line data and off-line data is that
off-line data lacks an intelligent disc subsystem, and is not connected to a computer, network, or any other readily-accessible system.

**Residual Data:** Residual Data (sometimes referred to as “Ambient Data”) refers to data that is not active on a computer system. Residual Data includes (1) data found on media free space; (2) data found in file slack space; and (3) data within files that has functionally been deleted in that it is not visible using the application with which the file was created, without use of undelete or special data recovery techniques. May contain copies of deleted files, Internet files and file fragments.

**Restore:** To transfer data from a backup medium (such as tapes) to an on-line system, often for the purpose of recovery from a problem, failure, or disaster. Restoration of archival media is the transfer of data from an archival store to an on-line system for the purposes of processing (such as query, analysis, extraction, or disposition of that data). Archival restoration of systems may require not only data restoration but also replication of the original hardware and software operating environment. Restoration of systems is often called “recovery.”

**Sampling:** Sampling usually (but not always) refers to the process of testing a database or a large volume of ESI for the existence or frequency of relevant information. It can be a useful technique in addressing a number of issues relating to litigation, including decisions about what repositories of data are appropriate to search in a particular litigation, and determination of the validity and effectiveness of searches or other data extraction procedures.

**Sampling Rate:** The frequency at which analog signals are converted to digital values during digitization. The higher the rate, the more accurate the process.

**Server:** Any central computer on a network that contains ESI or applications shared by multiple users of the network on their client PCs. A computer that provides information to client machines. For example, there are web servers that send out web pages, mail servers that deliver email, list servers that administer mailing lists, FTP servers that hold FTP sites and deliver ESI to requesting users, and name servers that provide information about Internet host names. See File Server.

**Storage Media:** See Magnetic/Optical Storage Media.

**Subjective Coding:** The coding of a document using legal interpretation as the data that fills a field, versus objective data that is readily apparent from the face of the document, such as date, type, author, addresses, recipients and names mentioned. Usually performed by paralegals or other trained legal personnel. See also Bibliographical/Objective Coding.

**Unallocated Space:** The area of computer media, such as a hard drive, that does not contain normally accessible data. Unallocated space is usually the result of a file being deleted. When a file is deleted, it is not actually erased, but is simply no longer accessible through normal means. The space that it occupied becomes unallocated
space, \textit{i.e.}, space on the drive that can be reused to store new information. Until portions of the unallocated space are used for new data storage, in most instances, the old data remains and can be retrieved using forensic techniques.

\textbf{User-Added Metadata:} Data or work product created by a user while reviewing a document, including annotations and subjective coding information.

\textbf{Vendor-Added Metadata:} Data created and maintained by the electronic discovery vendor as a result of processing the document. While some vendor-added metadata has direct value to customers, much of it is used for process reporting, chain of custody and data accountability. Contrast with User-Added Metadata.

\textbf{ZIP:} A common file compression format that allows quick and easy storage for transport.
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