# ELECTRONIC DISCOVERY: PITFALLS & POSSIBILITIES

John Callcott and Eric J. Hulett
Steptoe & Johnson, PLLC

The use of electronic devices to create, send and store information is fundamentally changing the litigation process. New opportunities are being created for lawyers who adapt. New dangers now exist for those that do not. Counsel who do not understand this electronic revolution will miss evidence that could be critical to their case, face preventable charges of spoliation, and fail to properly represent their clients.

As much as 90% of all information created in offices today is prepared electronically.[1] Much of it is now disseminated via some form of e-mail, and many "documents" are never actually printed onto paper. In the year 2000 alone, an estimated 1.4 trillion e-mails were sent by North American businesses.[2] This is only one example of the massive amounts of information that now exist primarily in electronic form. The problems associated with this change in how information is communicated go beyond what lawyers should include in their discovery requests. Thinking that e-mail is simply another "document" will cost lawyers and their clients time and money.

This paper begins by exploring the differences and dangers associated with the discovery of electronic files. It continues with a discussion of how courts have begun to address key issues in this area. These unsettled questions include what falls within the scope of permissible electronic discovery, whether a party may be made to reconstitute and retrieve "deleted" files and who should bear such costs. Finally, this article suggests that the position taken by some courts that deleted electronic files are not discoverable, is of greater merit than opposing views.

## *Why Electronic Files Are Different*

There are several important differences between paper and electronic "documents." A

[1] Jason Hoppin, *Discovery's Future Is Electronic*, The Recorder, January 16, 2003.

[2] Kristin M. Nimsger, *Same Game, New Rules,* Legal Times, March 20, 2002.

critical one relates to the mechanisms used to store electronic information. When a document is drafted on a computer and saved, the data that results may be stored in several physical locations. If the machine is unconnected to a computer network, the data is likely saved onto a "local" hard drive, which is the hard drive installed in the user's machine. If the computer is networked, the physical location of the data will depend on the software in use as well as the network itself. The data may still be found on the local hard drive, or it may be transmitted over the network to a separate site where another hard drive acts as a repository of information for the computers on the system.

This same data may exist in still other locations if it is "backed up." Backing up data refers to the process of copying information from the place where it is normally utilized, to a secondary location for safe keeping. This action is typically done at some stated interval and the copy of data is preserved for a period of time as protection against unexpected data loss. There are many different processes that can be used to back up information. Duplicate hard drives may be employed or the information may be transferred to another media entirely such as magnetic tape or optical disk. Some companies even utilize third parties to back up their data using secure internet connections.

Another important feature regarding the creation of electronic files is the manner in which the information is placed on a hard drive as well as the implications of this storage method for "deleting" files. When a file is saved to a hard drive, the main body of data containing the substance of the document is located in one place. In a second place, akin to an index, is located information that tells the computer where the main body of data is found. In most programs, when a user instructs a computer to delete a file, the only information that is actually changed is the index data. The main body of information is still physically present and readable to anyone with a software program capable of close analysis of the hard drive. This "deleted" information

will remain intact until it is overwritten. When this happens will depend on a variety of factors including how frequently files are saved to the hard drive, the size of the hard drive and the programs in use. Files could remain for days, months or longer, if the hard drive is used infrequently.

To render the data virtually unretrievable, the physical portions of the drive where it resides must be completely overwritten. Programs which specialize in this process use different algorithms. One standard utilized by the Department of Defense writes over the requested areas numerous times with 0's and 1's and also with randomly generated data.[3] Another protocol known as the Guttman Method, overwrites the space 35 times.[4]

Even if a drafter uses a program to physically erase a document from a hard drive, "metadata" may still remain that could provide significant insight into the file. Metadata is literally data about data. It is information that a computer automatically creates and saves when electronic documents are drafted or disseminated. Metadata can include when an item was created, by whom, as well as when it was last accessed or modified. Some metadata even includes past revisions and edits to a file. If it is important to know who drafted a document, metadata may tell you regardless of the signature on the page. If it is important to know when a document was created, accessed or modified, metadata may reveal that as well. Different programs create different types, and all of it is left undiscovered if a requesting attorney accepts only a printed copy of an electronic file. Moreover, opposing counsel may allege that your client

[3] John R. Mallery, *Secure File Deletion, Fact or Fiction?*, July 16, 2001, <http://www.sans.org/rr/incident/deletion.php>.

[4] Peter Guttman, *Secure Deletion of Data from Magnetic and Solid-State Memory*, paper first published in the Sixth USENIX Security Symposium Proceedings, San Jose, California, July 22-25, 1996, <http://www.cs.auckland.ac.nz/~pgut001/pubs/secure_del.html>.

is withholding information, if metadata that is available is not produced. In smaller cases where electronic documents are at issue, prudent counsel may wish to enter into stipulations to circumvent such charges and avoid the expense of having to closely examine hard drives and networks for this information. On the other hand, if fraud or other improper behavior is suspected, metadata may prove the point. Already cases have occurred where parties have attempted to forge e-mails, only to have them proven false by close examination of the related electronic file.[5]

Aside from telling litigators more about "documents" that do exist, electronic data can also provide crucial information about whether a file was created at all. This fact was demonstrated in a Texas medical malpractice case where a cardiologist was accused of spoliation.[6]American Lawyer Media, November 19, 2001. The procedure that was the subject of the lawsuit usually created a set of images that were supposed to be saved to a hospital's computer network. During the discovery process, it was noted that the images for the procedure were not in the database. The plaintiff cried spoliation. The defendant managed to avoid this negative inference by utilizing computer forensic examiners who could demonstrate that the information in question was never saved and therefore the doctor could not have erased the image files.

***The Electronic Discovery Process***

Although metadata and other electronic information may be useful, it can be expensive to collect and use. Unlike a paper document, electronic information is "latent," similar in concept to a fingerprint.[7] It is not immediately observable or admissible. There must be a

[5] *Munshani v. Signal Lake*, No 005529BLS (Mass. Superior Court October 9, 2001).

[6] See discussion of case, Carlyn Kokler, *Discovery Goes Electronic***,**

[7] L. M. Larsen, *Here's How to Avoid Nasty Bytes*, Law Technology News, September 30, 2002.

collection process, whereby the data is located, gathered and preserved. The information must be converted to a useable form, which can be cost-effectively analyzed. Finally, the data must be presented in admissible form. All of these tasks must occur in such a manner that the data is not altered or destroyed. Each step in the process presents different difficulties.

The first step in gathering electronic evidence is to determine whether it exists and where. As noted above, this information may be located on a local hard drive, or elsewhere within the computer network. It could be backed up to magnetic tape, stored on optical disk, or with a third party data service. In addition, individuals could have e-mailed the data to their home computers or saved it to a laptop, floppy drive or personal data assistant. If a litigant has an information technology department, this is a good place to start asking these questions. Even these individuals, however, may not know what kind of information is being retained, where and for how long.

After a determination is made where the data may reside, it must be gathered in such a manner that does not damage or alter it. The very act of turning a hard drive on or opening an electronic file can change the metadata associated with it. Computer forensic examiners will "image" a hard drive, or make sector by sector duplicates of it at the time of their initial examination. One of these images will be a working copy that can be altered if necessary to retrieve data. Another image will be maintained in pristine condition, which will provide a snapshot of the hard drive as it was received by the examiner. If competent outside specialists are not used, and in-house personnel or counsel inadvertently alter the drive, a party could be exposed to charges of spoliation.

One way to handle electronic discovery requests that may help guard against such claims is to request the appointment of a special master to conduct the electronic discovery for both parties. This process avoids the problem of one consultant failing to find data, and another more competent one producing it. If a party relies on an electronic recovery specialist that misses data

that is then found by opposing counsel's expert, charges of spoliation or fraud will be forthcoming. Also, the use of a special master eases the handling of attorney-client issues.

After data has been collected, it must be organized in a manner conducive to cost-effective analysis. If the sum total of the data at issue consists of 20 small electronic files, the easiest method may be to image, review and produce them with their metadata on paper. On the other hand, if an electronic request results in a data collection of 300,000 files, a plan for searching this information by keyword, drafter or date range should be developed. A thoughtful plan for analysis can save the client significant costs, as well as prevent surprises at trial and the unintentional waiver of attorney-client privilege.

Inherent in the collection and preservation process is the need for speed. Because backup tapes may be recycled, "deleted" data overwritten, and e-mail archives purged, a party seeking this information should immediately request its preservation as soon as litigation is anticipated. Even if no request is made, a party may be expected to institute its own preservation procedures, or face spoliation charges. This is particularly true if the party has no coherent retention policy. If metadata reveals that the critical file was deleted three months ago, and some different parts of the computer network inadvertently retain data from earlier periods, charges of spoliation may follow.

In any complex case, the electronic discovery process will likely require the use of computer specialists. In-house information technology personnel usually lack the expertise and equipment to image and analyze the necessary information. Their attempts to do so could taint the data and give opposing counsel leverage through spoliation claims. Likewise, counsel unfamiliar with the process may be well advised to seek assistance from an electronic discovery consultant. Where a request for "any and all" electronic data could net a database of hundreds of thousands of files, more refined and cost-effective tactics are needed.

Although computer forensic examiners and electronic discovery consultants may be

helpful, they can be very expensive. Some bill hourly, while others charge by the megabyte of data analyzed or the number of related images produced.[8] Costs will always be a major concern. In one case in the late 1990's involving the drug "fen/phen," the estimated cost to restore information on approximately 600 backup tapes ranged from 1.15 to 1.75 million dollars.[9]

***The Increased Importance of Pre-Litigation Planning***

The cost of electronic discovery and its ability to generate spoliation claims accentuates the need for clients to have defined data retention policies and computer networks capable of responding to preservation requests. Courts may increasingly determine that electronic discovery requests are foreseeable. This is troubling, given that a 2000 ABA study found that 83% of litigators' business clients had no established protocol dealing with electronic discovery requests.[10] At a minimum, clients need to know what data is being captured, where it is being stored and for how long. Information technology departments can assist in making these initial determinations. At the same time, these individuals should be educated as to the legal ramifications of changes in data protocols.

Once basic information is known, a strategy can be developed that systematically handles data retention. This policy should provide for scheduled and complete erasures of deleted information, but maintain the capacity to preserve categories of data if the need arises. Further, a comprehensive plan will anticipate electronic discovery requests, and seek to implement storage protocols that minimize the expense of retrieving and sorting data.

Failure to properly prepare for electronic discovery requests and respond to them when

---

[8] Ashby Jones, *Firms Discover E-Discovery***,** American Lawyer Media, March 25, 2002.

[9] *Linnen v. A.H. Robins Company, Inc*., No. 97-2307 (Mass.Superior Court June 1999).

[10] Pia L. Potter, *Manual Processing of Electronic Data is Outdated***,** The National Law Journal, June 7, 2001, citing PricewaterhouseCoopers' section of litigation of the "American Bar Association Pulse Survey: Digital Discovery and its Importance on the Practice of Litigation."

served can have devastating consequences. In one extreme case, a defendant's failure to preserve, search and produce data led a court to enter judgment in plaintiff's favor, and award plaintiff's counsel various fees.[11] In this matter, the defendant ignored plaintiff's electronic discovery requests over an extended period of time, while placing in charge of the production process someone lacking an appreciation of the importance of searching for electronic information. The fact that the client and its counsel had repeatedly represented to the court that all relevant data had been produced, when it had not been searched for, angered the court. Increasingly, clients may find themselves held to discovery standards that simply did not exist five years ago.

In working with these issues, many clients will be left asking why they should have to bear the cost of implementing data retention policies and responding to expensive electronic discovery requests. The reasons that have been given by courts vary, and there is no settled consensus. The next portion of this paper addresses the current state of law as it relates to these and other important questions. In particular, it examines the scope of electronic discovery the courts are currently permitting, how costs are being apportioned, and whether e-mails that have been "deleted" from a system are still considered discoverable.

***Discovery of Computerized Information***

[11] *Metropolitan Opera Association, Inc., v. Local 100 Hotel Employee and Restaurant Employees International Union* 212 F.R.D. 178 (S.D.N.Y. 2003).

Discovery of computerized information has been an increasing concern of litigants and courts, with published opinions as far back as 1972. The changing nature of business use of various computer systems, specifically including e-mail, has created novel questions and discovery disputes. These issues can be reduced to three questions: (1) Is currently existing computerized data discoverable? (2) Is back-up or deleted computerized data discoverable? (3) Can the cost of producing back-up or deleted computerized data be shifted to the requesting part?

***Is Currently Existing Computerized Data Discoverable?***

Yes. West Virginia Rule of Civil Procedure 34, which is the same as its Federal counterpart, states that discoverable "documents" include "other data compilations from which information can be obtained, translated, if necessary, by the respondent through detection devices into reasonably usable form[.]"

It should be kept in mind that although a document may be discoverable under the terms of Rule 34, the production of that document may be limited or denied if the production is overly burdensome, pursuant to Rule 26(b)(1)(A)--(C).[1]

---

[1] Also, there are minor differences between the Federal and West Virginia rules in this regard. Since the cases discussed below are all federal cases, both the Federal and the West Virginia rule will be set forth below for easy reference. "The frequency or extent of use of the discovery methods set forth in subdivision (a) shall be limited by the court if it determines that: (A) The discovery sought is unreasonably cumulative or duplicative or is obtainable from some other source that is more convenient, less burdensome, or less expensive; (B) The party seeking discovery has had ample opportunity by discovery in the action to obtain the information sought; or (C) The discovery is unduly burdensome or expensive, taking into account the needs of the case, the amount in controversy, limitations on the parties' resources, and the importance of the issues at stake in the litigation." *West Virginia Rule of Civil Procedure 26(b)(1)(A)--(C)*. "The frequency or extent of use of the discovery methods otherwise permitted under these rules and by any local rules shall be limited by the court if it determines that: (I) the discovery sought is unreasonably cumulative or duplicative, or is obtainable from some other source that is more convenient, less burdensome, or less expensive; (ii) the party seeking discovery has had ample opportunity by discovery in the action to obtain the information sought; or (iii) the burden or expense of the proposed discovery outweighs its likely benefit, taking into account the needs of the case, the amount in controversy, the parties' resources, the importance of the issues at stake in the litigation, and the importance of the proposed discovery in resolving the issues." *Federal Rule of Civil Procedure 26(b)(2)(I)--(iii)*.

The burdensomeness analysis is also referred to as the proportionality requirement by some commentators.[2] Additionally, an objection may be raised in opposition to a discovery request based upon lack of relevance. "The question of the relevancy of the information sought through discovery, which essentially involves a determination of how substantively the information requested bears on the issues to be tried, is a factor that has been stressed by a number of courts. [multiple citations omitted] Under Rule 26(b)(1), discovery is not limited only to admissible evidence, but applies to information 'reasonably calculated to lead to the discovery of admissible evidence.' Nevertheless, the information sought must be relevant to the issues in the case."[3]

In a widely cited electronic discovery case, *Bills v. Kennecott Corp.*, the District Court proclaimed: "It is now axiomatic that electronically stored information is discoverable under Rule 34 of the Federal Rules of Civil Procedure if it otherwise meets the relevancy standard prescribed by the rules, although there may be issues in particular cases as to the form of what must be produced."[4]

---

[2] The test for whether a discovery request is "unduly burdensome or expensive" under West Virginia Rule of Civil Procedure 26(b)(1)(C) is expressed in *State Farm v. Stephens*. "Under Rule 26(b)(1)(iii) of the West Virginia Rules of Civil Procedure, a trial court may limit discovery if it finds that the discovery is unduly burdensome or expensive, taking into account the needs of the case, the amount in controversy, limitations on the parties' resources, and the importance of the issues at stake in the litigation." Syll. Pt. 2, *State Farm Mut. Auto. Ins. Co. v. Stephens*, 188 W. Va. 622, 425 S.E.2d 577 (1992). "Where a claim is made that a discovery request is unduly burdensome under Rule 26(b)(1)(iii) of the West Virginia Rules of Civil Procedure, the trial court should consider several factors. First, a court should weight the requesting party's need to obtain the information against the burden that producing the information places on the opposing party. This requires an analysis of the issues in the case, the amount in controversy, and the resources of the parties. Secondly, the opposing party has the obligation to show why the discovery request is oppressive on its face. Finally, the court must consider the relevancy and materiality of the information sought." Syll. Pt. 3, *Stephens, supra.*

[3] *Stephens*, 425 S.E.2d at 583.

[4] 108 F.R.D. 459, 461 (D. Utah 1985)(citations omitted).

Similarly, in more recent and also widely cited decisions, federal courts have held that: "Thus, today it is black letter law that computerized data is discoverable if relevant."[5] Electronic documents, including currently existing email, "are no less subject to disclosure than paper records."[6]

The United States District Court for the Southern District of California found "that by requesting 'documents' under FRCP 34, Plaintiff also effectively requested production of information stored in electronic form."[7] The Court quoted at length the Advisory Committee Notes for FRCP 34: ". . . It makes clear that Rule 34 applies to electronics data compilations. . . respondent may be required to use his devices to translate the data into usable form. . ."[8]

***Is Back-Up or Deleted Computerized Data Discoverable?***

At least 12 reported decisions specifically involve the discovery of deleted computer files, including email. There are also several law review articles, and many legal periodical articles, on this subject. The majority of these cases have held that deleted computer files and email are discoverable under Rule 34. However, as is discussed below, this view is not universal and has been heavily criticized by commentators.

***Decisions Allowing Discovery of Deleted Files***

"First, computer records, including records that have been 'deleted,' are documents discoverable under Fed. R. Civ.P. 34. See generally Crown Life Ins. Co. v. Craig, 995 F.2d 1376

---

[5] *Anti-Monopoly, Inc. v. Hasbro, Inc.*, 1995 U.S. Dist. LEXIS 16355, p. 4 (Nov. 3, 1995).

[6] *Rowe Entertainment, Inc., v. The William Morris Agency, Inc., et al.*, 205 F.R.D. 421, 428 (S.D. N.Y. 2002). See also: *Playboy Enterprises, Inc. v. Welles*, 60 F.Supp.2d 1050, 1053 (S.D. Cal. 1999); *Daewoo Electronics Co. v. U.S.*, 650 F.Supp. 1003, 1006 (Cr. Int'l Trade 1986).

[7] *Playboy Enterprises*, *supra*.

[8] *Id.*

(7th Cir. 1993); Illinois Tool Works, Inc. v. Metro Mark Products, Ltd., 43 F.Supp.2d 951 (N.D. Ill. 1999)."[9]

Likewise, the United States District Court for the District of Minnesota concluded "that deleted information, on the Defendants' computer equipment, may well be both relevant and discoverable."[10] The plaintiff's motion specifically addressed deleted files and emails, and the concern that over time the deleted emails might be overwritten by ordinary use of the computer.

In *Rowe v. The William Morris Agency, Inc., supra.,* the Court evaluated the defendant's motion for protective order regarding the production of emails. The decision speaks in terms of backup tapes and restoring emails, although the decision does not specifically describe the files as "deleted" emails. Nevertheless, the Court without great elaboration, and citing four cases over a fifteen year period, concluded that the requested information was "no less subject to disclosure than paper records."[11]

The Court in *Anti-Monopoly, Inc. v. Hasbro, Inc., supra.*, ordered the production of computer reports and invoices, apparently including the re-creation of deleted or backup files. The Court did not specifically address this issue, but it can be inferred from the Court's comment that if "the aggregating reports referred to in the first paragraph truly 'no longer exist in electronic form,' obviously that moots the issue. . . Defendants will need to represent not just that the reports are not available electronically but that it is not possible to electronically re-create the reports by running a specially-written computer program over existing computerized business data."[12]

---

[9] *Simon Property Group, L.P. v. my Simon, Inc*., 194 F.R.D. 639, 640 (S.D. Ill. 2000).

[10] *Antioch Co. v. Scrapbook Borders, Inc.,* 210 F.R.D. 645 (D. Minn. 2002).

[11] *Rowe*, 205 F.R.D. at 428.

[12] *Anti-Monopoly, Inc.*, p. 7, n. 1.

In *Playboy Enterprises, Inc. v. Welles, supra.*, the plaintiff filed a motion to compel access to defendants' computer hard drive in order to restore and produce deleted emails. The Court had no problem in swiftly concluding that deleted emails were discoverable. "The Court finds that by requesting 'documents' under Fed. R. Civ. P. 34, Plaintiff also effectively requested production of information stored in electronic form. Had Defendant printed any relevant e-mails, as is directed by the Advisory Notes to Fed. R. Civ. P. 34, such e-mails would have been produced as a 'document'. Plaintiff needs to access the hard drive of Defendant's computer only because the Defendant's actions in deleting those e-mails made it currently impossible to produce the information as a 'document'."[13]

Unfortunately, the *Playboy Enterprises* Court seemed to equate deleted email with merely moving a paper document from one file cabinet (for instance in your office) to another file cabinet (for instance in the basement storage room). The more accurate analogy is to view deleted email as the equivalent of paper documents that have been thrown into the trash and taken to the garbage dump.

***Decisions Denying Discovery of Deleted Files***

Although directly addressing the cost issue, and ultimately allowing discovery of deleted emails, the United States District Court for the Southern District of New York obviously equates retrieval of email with retrieval of discarded paper garbage, which should clearly be considered not discoverable. "**Just as a party would not be required to sort through its trash to resurrect discarded paper documents,** so it should not be obligated to pay the cost of retrieving deleted e-mails."[14]

The United States District Court for the District of Columbia, in *McPeek v. Ashcroft, et*

---

[13] *Playboy Enterprises, Inc.*, 60 F.Supp. 2d at 1053.

[14] *Rowe Entertainment, Inc., et al. v. The William Morris Agency, Inc., et al.*, 205 F.R.D. 421, 431 (S.D. N.Y. 2002) (emphasis added).

*al.*,[15] refused to order the wholesale production of back-up tapes, including emails, in a recent case that gives hope that some courts may understand the inherent difference between paper discovery and discovery requesting back-up files or deleted emails.

In *McPeek*, the Plaintiff sued the Federal Bureau of Prisons for sexual harassment and discrimination. Plaintiff sought production of back-up and deleted data. "He wants to force DOJ [Dept. of Justice] to search its backup systems since they might yield, for example, data that was ultimately deleted by the user but was stored on the backup tape and remains there today."[16] The Court concluded:

> There is certainly no controlling authority for the proposition that restoring all backup tapes is necessary in every case. The Federal Rules of Civil Procedure do not require such a search, and the handful of cases are idiosyncratic and provide little guidance.[17]

The *McPeek* Court severely criticized the rationale and conclusions of *In re Brand Name Prescription Drugs*, 1995 U.S. Dist. LEXIS 8281, 1995 WL 360526 (N.D. Ill. June 15, 1995), which is a widely cited case supporting unfettered production of backup or deleted computerized information. "**The one judicial rationale that has emerged is that producing backup tapes is a cost of doing business in the computer age. [citation omitted] But, that assumes an alternative . . . What alternative is there? Quill pens?**"[18]

---

[15] 202 F.R.D. 31 (D. D.C. 2001).

[16] *McPeek*, 202 F.R.D. at 32.

[17] *McPeek*, 202 F.R.D. at 33 (emphasis added).

[18] *McPeek*, 202 F.R.D. at 33 (emphasis added). However, despite this common sense observation, this case cannot be made to stand for the precise proposition that deleted computer files and emails are not discoverable because the Court concluded that it would "take small steps" and ordered that a "test run" be made by performing a "backup restoration of the e-mails" for a one year period for only the computer of the supervisor in question. *McPeek*, 202 F.R.D. at 34.

### *ABA Civil Discovery Standards*

Likewise, the ABA Civil Discovery Standards conclude that deleted email is not discoverable. "Unless the requesting party can demonstrate a substantial need for it, a party does not ordinarily have a duty to take steps to try to restore electronic information that has been deleted or discarded in the regular course of business but may not have been completely erased from computer memory."[19] The "Comment" to this Standard states: "Attempting to retrieve previously deleted electronic information can be time-consuming and costly. Just as a party ordinarily has no duty to create documents, or to re-create or retrieve previously discarded ones, to respond to a documents request, it should not have to go to the time and expense to resurrect or restore electronic information that was deleted in the ordinary course of business."[20]

### *Commentators Criticizing Production and Cost of Restoring Deleted Files*

Some commentators also conclude that deleted computer files, including emails, are outside the scope of discovery, just as paper documents that have been thrown in the trash and taken to the garbage dump are not required to be produced by a party. Even those commentators who recognize deleted files as discoverable nevertheless criticize the burden and expense. Given the usefulness of these commentaries for counsel resisting invasive electronic discovery requests, the significant excerpts are set forth below for ready reference.

"Electronic mail does not have a counterpart in the conventional paper-based world. Several characteristics make e-mail particularly problematic. One is the sheer volume, which can be staggering, even for a small company or individual. Another is the lack of a coherent filing system . . . These factors combine to make retrieval of e-mail message by topic difficult, even with computer-based word-searching, and screening for relevance and privilege costly and

---

[19] ABA, *Civil Discovery Standards*, 29(a)(iii), p. 50 (August 1999).

[20] *Id.*, p. 51 (emphasis added).

time-consuming. . . Large volumes of assorted, undifferentiated text files are difficult to screen for privilege. . . Manual review of the message by people is time consuming and costly, as well as stupefyingly dull. . . **In the conventional paper-based world, once a document is shredded, incinerated, or buried in a landfill, it is not longer subject to discovery as a practical matter**. However, the routine 'deletion' of a computer-based document does not destroy the data. . . Aside from the occasional practice of 'dumpster diving,' the discovery of deleted computer documents does not have a close analogue in conventional, paper-based discovery."[21]

"A more textured view may show that retrieving some older computerized materials – called 'legacy data" – is qualitatively different from, and more difficult than reviewing hard copy materials. . . . The starting point for the discovery of electronic data is to uncover the kinds of things that discovery has sought since the Federal Rules took effect. Hard copy discovery usually discloses only that which the creator decided to put on the page. . . Electronically stored data conventionally include other information as well. **A computer will automatically add details that it finds useful – such as the date on which a document was last modified and perhaps the identity of the person who made the modifications – that would not appear on the hard copy. . . One could arguably treat this involuntarily created information as beyond the scope of the present definition of 'documents' discoverable under rule 34** . . . Moreover, the 'delete' function on a PC does not actually do what it says; the hard drive of every computer still has on it electronic materials that the user considers long gone. . . . [C]onsider that a lawyer will often rewrite ordinary letters three or four times before sending them. All those drafts might be found somewhere. But it is hardly obvious that, as a general rule, insisting on

---

[21] Kenneth J. Withers, *Computer-Based Discovery in Federal Civil Litigation*, Federal Courts Law Review (2000), p. 2, § IIC-D (emphasis added). (Kenneth J. Withers is a Research Associate at the Federal Judicial Center, Washington D.C.).

heroic efforts to disinter interim versions would make sense. . . When it comes time to locate all these materials, the dimensions of the search may look daunting and unprecedented. **The pertinent comparison, however, is to a customary search for hard copies. In theory, that could mean that a large organization must open every drawer in every desk worldwide**."[22]

"Courts and commentators have generally interpreted Rule 34 and its accompanying Advisory Committee Note to allow the discovery of electronic evidence. As Magistrate Judge Andrew Peck concluded in an oft-quoted phrase several years ago, 'today it is black letter law that computerized data is discoverable if relevant.' And, one leading treatise on federal civil procedure states that 'the rule now clearly allows discovery of information even though the information is on computer.' The absence of any recent decisional law or commentary taking a contrary position illustrates that if there were doubts as to whether Rule 34 permitted discovery of electronic documents such as e-mail when it was amended in 1970, those doubts now have been universally dispelled. As stated earlier, however, whether the Rules permit discovery of the newest forms of electronic evidence such as cookies, temporary files and residual data remains an open question."[23]

"Despite some similarities, the differences between the two forms of discovery are, on both technological and practical levels, fundamental. The resulting difficulties for the adjudicatory system therefore also differ fundamentally."[24] "[C]urrent doctrine is in a state of

---

[22] Professor Richard L. Marcus, *Complex Litigation at the Millennium: Confronting the Future: Coping with Discovery of Electronic Material*, 64 Law & Contemp. Prob. 253, 263-267 (Summer 2001) (emphasis added). (Professor Marcus is the Coil Chair in Litigation, Univ. of California, Hastings College of Law, and since 1996 has served a Special Reporter to the Advisory Committee of Civil Rules in its continuing review of the discovery rules for the Federal Rules of Civil Procedure.)

[23] Scheindlin & Rabkin, *Electronic Discovery in Federal Civil Litigation: Is Rule 34 Up to the Task?*, 41 B. C. L. Rev. 327, 350-51 (2000) (emphasis added).

[24] Professor Martin H. Redish, *Electronic Discovery and the Litigation Matrix*, 51 Duke L. J. 561, 566 (November 2001). (Prof. Redish is the Ancel Professor of Law and

confusion that for the most part ignores important differences between electronic and traditional discovery and that fails to provide meaningful guidance to litigants or courts."[25] "**Conceivably, one argument could be raised that although the 1970 amendment makes clear that computer data is discoverable, the amendment's reach does not necessarily extend to forms of electronically stored data that differ from the normal type of computer data and that were developed after the amendment's enactment – for example, e-mail** [.]"[26] Professor Redish concludes that "**[t]o continue to employ pre-computer age discovery standards in the age of electronically stored data, then, would be the technological equivalent of driving a horse and buggy down Interstate 94**."[27]

Although presented by various courts as established law, the decisions equating the discovery of email with that of paper documents arises more from the courts' lack of technical understanding than from clear precedent. "The court's reasoning simply illustrates the lack of familiarity and knowledge that much of the judiciary has regarding computer related issues."[28] For example, "problems regarding decisions involving discovery of electronically stored data stem from the fact that most judges have little experience with today's computer technology. Chepesiuk illustrates this

point by noting 'that when the Supreme Court handed down its decision on the Communications

---

Public Policy at Northwestern University School of Law.).

[25] *Id.* at 569.

[26] *Id.* at 573.

[27] *Id.* at 627 (emphasis added).

[28] Giacobbe, *Allocating Discovery Costs in the Computer Age: Deciding Who Should Bear the Costs of Discovery of Electronically Stored Data*, 57 Wash. & Lee L. Rev. 257, 285 (Winter 2000).

Decency Act in 1997, not one of the justices had ever been on the Internet.'"[29]

In a widely cited non-scholarly journal article, entitled *In Defense of the DELETE Key*," Judge James M. Rosenbaum, United States District Judge for the District of Minnesota, has entertainingly captured the essence of the frustration that litigants face involving e-mail discovery.

> It is becoming widely known that a computer's DELETE key represents an elaborate deception. The deception is pure, and inheres in the key's name: When the DELETE key is used, nothing is deleted. . . In practice, this once-arcane fact has spawned a new legal industry: the mining of e-mails, computer files, and especially copies of hard drives to obtain deleted material.
>
> Knowing these facts leads me to two thoughts: one, we have now placed an electronic recording device over every office door; and two, we should not stand for it.
>
> * * *
>
> This is the stuff, which, in less electronic times, would have been wadded up and thrown into a wastebasket. This is what the DELETE button was meant for, and why pencils still have erasers.[30]

***Can the Cost of Producing Back-up or Deleted Computerized Data Be Shifted to the Requesting Party?***

The first step in analyzing whether the requesting party may be required to pay all or a portion of the costs of retrieving, reviewing, and producing deleted email, or other deleted, archived, or back-up computerized data, is whether the discovery request is overly burdensome.

"Under Rule 26(b)(1)(iii) of the West Virginia Rules of Civil Procedure, a trial court may limit discovery if it finds that the discovery is unduly burdensome or expensive, taking into

---

[29] *Id*., at n. 165 (quoting Ron Chepesiuk, *Trial by E-Mail*, Student Lawyer, Sept. 1998; 31, 36.).

[30] Rosenbaum, *In Defense of the DELETE Key*, The Green Bag, 2d Series, Vol. 3, No. 4, pp. 393-396 (Summer 2000).

account the needs of the case, the amount in controversy, limitations on the parties' resources, and the importance of the issues at stake in the litigation."[31] "Where a claim is made that a discovery request is unduly burdensome under Rule 26(b)(1)(iii) of the West Virginia Rules of Civil Procedure, the trial court should consider several factors. First, a court should weight the requesting party's need to obtain the information against the burden that producing the information places on the opposing party. This requires an analysis of the issues in the case, the amount in controversy, and the resources of the parties. Secondly, the opposing party has the obligation to show why the discovery request is oppressive on its face. Finally, the court must consider the relevancy and materiality of the information sought."[32]

Not surprisingly, there are no West Virginia cases discussing cost shifting in the discovery of computerized data and particularly email or deleted email. There are cases from several other jurisdictions which discuss cost shifting in the context of various computer information, e.g., data tapes, punch cards, printouts, but only a few recent cases that have addressed the specific issue of the costs of email discovery.

One of the earliest cases to discuss shifting the cost of producing computerized information is *Adams v. Dan River Mills, Inc.*,[33] a racial discrimination action, where Federal District Judge Dalton granted the plaintiff's motion to compel production of defendant's computerized payroll and W-2 files, even though defendant had previously produced the paper documentation for the same data. The Court concluded that because "of the accuracy and inexpensiveness of producing the requested documents in the case at bar, this court sees no reason why the defendant should not be required to produce the computer cards or tapes and the

---

[31] Syll. Pt. 2, *State Farm Mut. Auto. Ins. Co. v. Stephens*, 188 W. Va. 622, 425 S.E.2d 577 (1992).

[32] Syll. Pt. 3, *Stephens, supra.*

[33] 54 F.R.D. 220 (W.D. Va. 1972).

W-2 printouts to the plaintiffs. . . [I]t is hereby Ordered and Adjudged that the defendant produce the current master payroll file and the requested W-2 printouts in the appropriate computerized form." *Adams*, 54 F.R.D. at 222. However, the Court then further ordered "that **the plaintiffs shall pay the cost of preparing these documents**[.]"[34]

In *Bills v. Kennecott Corp.*,[35] the Utah Federal Court evaluated defendant's motion for payment of discovery costs involving plaintiff's age discrimination action. Defendant offered to provide the requested computer data to plaintiff either on computer tape or by printout, conditioned on plaintiff's payment of the costs of production. Plaintiff refused. The cost incurred in producing the printout was $5,411.25. The Court ruled, citing *Adams v. Dan River Mills, supra*, that the plaintiff was entitled to both printout and computer tape production. The Court declined to shift the cost of production to the plaintiff, based upon the following four factors: "(1) The amount of money involved is not excessive or inordinate; (2) The relative expense and burden in obtaining the data would be substantially greater to the requesting party as compared with the responding party; (3) The amount of money required to obtain the data as set forth by defendant would be a substantial burden to plaintiffs; (4) The responding party is benefitted in its case to some degree by producing the data in question." [36] The *Bills* Court issued a prescient warning in regards to these factors, which could apply to many decisions involving this issue:

> This Court does not attempt to set forth an ironclad formula into which the facts of this or another case can be placed for determination of what "undue" means under Rule 34. Such a formula would be judicially imprudent and wholly impractical in

---

[34] *Id* (emphasis added).

[35] 108 F.R.D. 459 (D. Utah 1985).

[36] *Bills*, 108 F.R.D. at 464.

> view of the diverse nature of the claims, discovery requests and parties before the Courts in a variety of cases and situations.[37]

Shifting the cost of production to the requesting party was upheld by the Ninth Circuit in *Penk v. Oregon State Bd of Higher Educ.*[38] In *Penk*, the plaintiff raised a claim of sexual discrimination. During discovery defendant produced copies of the Board's central computer base tapes containing faculty information for a five year period. The data were the basis for plaintiff's statistical study in support of plaintiff's claim. Inaccuracies were discovered in the entry of the underlying original data. Plaintiff moved the Court to require defendant to correct the data and produce corrected tapes. "The judge ruled that the board 'was not obligated under the Federal Rules to make data compilations more extensive or accurate than those used by defendant in the ordinary course of defendant's business.'" The trial judge ordered the corrections to be made with both parties to share the costs equally. The cost of correcting the data totaled approximately $100,000. Plaintiff refused to pay its share. The Ninth Circuit Court of Appeals held, **"We do not think, however, that the district court had any obligation to require the defendant to subsidize the plaintiffs' costs of litigation**. . . There was no abuse of discretion here."[39]

Strongly analogous to restoring deleted email, the manual re-entry of data from original records for purposes of reconstructing a database was found to be unduly burdensome and an undue hardship on the producing party in *Williams v. E. I. DuPont, et al.*[40] In *Williams*, the plaintiff, EEOC, brought a Title VII action against defendant, DuPont. DuPont requested that

---

[37] *Bills*, 108 F.R.D. at 463.

[38] 816 F.2d 458 (9th Cir. 1987).

[39] *Penk*, 816 F.2d at 468-69. (emphasis added).

[40] 119 F.R.D. 648 (W.D. Ky. 1987).

the EEOC produce a copy of the computerized database of thirty years of DuPont employment records created by the EEOC, including all code books and related materials. DuPont asserted that for it to re-create the database would require manually key-punching 3,189 employee records, 32 years of collective bargaining agreement data, and various discovery information. The database was created for and used by the EEOC's expert in the case. DuPont asserted that a copy of the database was necessary to study and evaluate the expert's opinions and reports.

The Court found that DuPont had demonstrated an undue hardship "in terms of the time and expense required by the procedure."[41] The Court then concluded that "the defendant [DuPont] may discover, **at its own expense**, copies of the computerized database . . . "[42]

In *Alexander v. F.B.I., et al.*,[43] the plaintiffs, former federal employees, asserted that the Executive Office of the President and the F.B.I. had improperly provided and reviewed personnel files. Plaintiffs requested that the EOP provide a wide range of materials, including deleted emails and hard drive files. The EOP asserted that "wholesale restoration and searches of years-old backed-up and archived e-mail, deleted and archived computer files, or share drive files is not part of a reasonable search . . . as such an exercise is burdensome, costly, and unlikely to lead to responsive documents."[44] The EOP estimated that searching through one EOP employee hard drive would require approximately 265 hours and cost approximately $15,675 in contractor fees and a search of all relevant files would consume approximately 4,273 hours and cost approximately $235,015 in contractor fees. For email specifically, the restoration of one month of e-mail would cost approximately $20,000 per month restored. The plaintiffs submitted a

---

41 *Id.* at 651.

42 *Id.*

43 188 F.R.D. 111 (D. D.C. 1998).

44 *Alexander*, 188 F.R.D. at 116.

contrary affidavit from their computer expert; however, the Court viewed that expert as unqualified and disregarded his opinions. The Court then concluded that for these reasons, "the EOP is not required to completely restore all deleted files and e-mail as plaintiffs insist."[45]

In a widely cited case, *Playboy Enterprises, Inc. v. Welles*, the United States District Court for the Southern District of California granted plaintiff's motion for access to defendant's computer hard drive in order to obtain a copy of the hard drive to search for deleted e-mail. In this trademark infringement case, the Court found "it likely that relevant information is stored on the hard drive of Defendant's personal computer."[46] Defendant countered that her business would suffer financial loss due to the four to eight hours that the computer would be shutdown to recover the information. The Court ordered that the copying of the hard drive be performed, but coordinated to accommodate defendant's business schedule, and that defendant's counsel will be given the opportunity to review and control all recovered e-mails and withhold for further argument any claimed to be privileged. The contracted hired to produce the mirror image of the hard was required to sign the protective order and be considered an officer of the court. "**Further, Plaintiff will pay the costs associated with the information recovery**."[47]

Even in what is considered by some commentators to be a decision allowing far too broad discovery of computer files, including requiring the responding party to "design a computer program to extract the data from its computerized business records", the Court in *Anti-Monopoly, Inc. v. Hasbro, Inc.*, 1995 U.S. Dist. LEXIS 16355 (Nov. 3, 1995), nevertheless required the requesting party to pay the costs involved. The Court found that the producing party's arguments against production were previously rejected by *National Union Electric Corp. v. Matsushita*

---

45 *Alexander*, 188 F.R.D. at 117.

46 60 F.Supp.2d 1050, 1053 (S.D. Calif. 1999).

47 *Id*. at 1054 (emphasis added).

*Electric Indust. Co.*, 494 F.Supp. 1257 (E.D. Pa. 1980), "at least where the requesting party offered to pay the cost of creating the computer program."[48] "The Court notes that, as in Matsushita, further Court rulings may depend on plaintiff's willingness to pay defendants' costs in creating the required computer program [citations omitted]."[49]

*Simon Property Group, L.P. v. my Simon, Inc.*,[50] provides one of the more thoughtful decisions concerning discovery of deleted computer files and cost allocation. *Simon* is a trademark infringement case. Plaintiff requested access to defendant's founders' and programming employees' work and home computers to search for deleted files and emails. The Court noted "some troubling discrepancies with respect to defendant's document production."[51]

"The challenge here is to arrange for this effort to be undertaken without undue burdens on defendant, in terms of its business, its relationships with its attorneys, and the privacy of its founders."[52] The Court expressly relied upon the *Playboy Enterprises* decision, discussed above. The Court concluded "that **plaintiff is entitled to attempt (at its own expense) the task of recovering deleted computer files**. . ."[53] The Court set forth the following protocol:

> In essence, **plaintiff shall select and pay an expert** who will inspect the computers in question to create a "mirror image" or "snapshot" of the hard drives. . . Defendant shall have the chance to object to the selection of the expert. The court will appoint the expert to carry out the inspection and copying as an officer of the court.

---

48 *Anti-Monopoly, Inc.,* 1995 U.S. Dist. LEXIS 16355 (Nov. 3, 1995) at p. 5.

49 *Id.* at p. 8.

50 194 F.R.D. 639 (S.D. Ind. 2000).

51 *Simon*, 194 F.R.D. at 41.

52 *Id.*

53 *Id* (emphasis added).

> The expert shall then use his or her expertise to recover from the "mirror image" of the hard drive of each computer, and to provide in a reasonably convenient form to defendant's counsel, all available word-processing documents, electronic mail messages, powerpoint or similar presentations, spreadsheets, and similar files. The court intends that files making up operating systems and higher level programs in the computer not be duplicated, and that the copying be limited to the types of files reasonably likely to contain material potentially relevant to this case. [citation omitted] To the extent possible, the expert shall also provide to defendant's counsel: (1) the available information showing when any recovered "deleted" file was deleted, and (b) the available information about the deletion and contents of any deleted file that cannot be recovered.
>
> After receiving these records from the expert, defendant's counsel shall then have to review these records for privilege and responsiveness to plaintiff's discovery requests, and shall then supplement defendant's responses to discovery requests, as appropriate.
>
> * * *
>
> The court does intend that the inspection be carried out to minimize disruption of and interference with defendant's business.[54]

A good example of a producing party establishing undue burden and expense through facts, e.g., affidavits and data, rather than argument, can be found in *McPeek v. Ashcroft*,[55] Although the Court did not address cost shifting, the Court was clearly alarmed by the expense and effort necessary to comply with plaintiff's request for deleted emails. The Court's observations are useful:

> Finally, economic considerations have to be pertinent if the court is to remain faithful to its responsibility to prevent "undue burden or expense". Fed. R. Civ. P. 26(c). If the likelihood of finding something was the only criterion, there is a risk that someone will have to spend hundreds of thousands of dollars to produce a single

---

[54] *Simon*, 194 F.R.D. at 641-42 (emphasis added).

[55] 202 F.R.D. 31 (D. D.C. 2001).

> e-mail. That is an awfully expensive needle to justify searching a haystack. It must be recalled that ordering the producing party to restore backup tapes upon a showing of likelihood that they will contain relevant information in every case gives the plaintiff a gigantic club with which to beat his opponent into settlement. No corporate president in her right mind would fail to settle a lawsuit for $100,000 if the restoration of backup tapes would cost $300,000. While that scenario might warm the cockles of certain lawyers' hearts, no one would accuse it of being just.[56]

In another widely cited case, again from the United States District Court for the Southern District of New York, the cost of restoring deleted email messages from backup discs or tapes was shifted to the plaintiff, requesting party.[57] The Court opened its decision with the following quote, which is emblematic of discovery of electronic information in complex cases: "Too often, discovery is not just about uncovering the truth, but also about how much truth the parties afford to disinter. As this case illustrates, discovery expenses frequently escalate when information is stored in electronic form."[58]

The plaintiffs sued the defendants for racially discriminatory and anti-competitive practices involving concert promotions. Plaintiffs requested defendants to produce email messages, including deleted emails. The Court initially evaluated the burden of production as to each defendant, since their computer systems and thus burdens differed. After examining the costs of retrieval, the Court held, in general, that "the expense of locating and extracting responsive e-mails is substantial, even if the more modest estimates of the plaintiffs are credited."[59] The Court discussed the basic assumptions underlying discovery of paper documents and how those assumptions apply to computerized data.

---

[56] *McPeek*, 202 F.R.D. at 34.

[57] *Rowe v. The Williams Morris Agency, Inc.*, 205 F.R.D. 421 (S.D. N.Y. 2002).

[58] *Rowe*, 205 F.R.D. at 423.

[59] *Rowe*, 205 F.R.D. at 428-29.

> The underlying assumption is that the party retaining information does so because that information is useful to it, as demonstrated by the fact that it is willing to bear the costs of retention. That party may therefore be expected to locate specific data, whether for its own needs or in response to a discovery request. With electronic media, however, the syllogism breaks down because the costs of storage are virtually nil. Information is retained not because it is expected to be used, but because there is no compelling reason to discard it. And, even if data is retained for limited purposes, it is not necessarily amenable to discovery. Back-up tapes, for example, "are not archives from which documents may easily be retrieved. The data on a backup tape are not organized for retrieval of individual documents or files, but for wholesale, emergency uploading onto a computer system. Therefore, the organization of the data mirrors the computer's structure, not the human records management structure, if there is one.[60]

The *Rowe* Court admitted the "shortcomings of either bright-line rule" for cost shifting, and set forth several factors considered by various courts: "(1) the specificity of the discovery requests; (2) the likelihood of discovering critical information; (3) the availability of such information from other sources; (4) the purposes for which the responding party maintains the requested data; (5) the relative benefit to the parties of obtaining the information; (6) the total cost associated with production; (7) the relative ability of each party to control costs and its incentive to do so; and (8) the resources available to each party. Each of these factors is relevant in determining whether discovery costs should be shifted in this case."[61]

The Court analyzed each factor and concluded that the "**relevant factors thus tip heavily in favor of shifting to the plaintiffs the costs of obtaining discovery of e-mails in this case**."[62] "**The plaintiffs shall bear all costs associated with the production described** . . ."[63]

---

[60] *Rowe*, 205 F.R.D. at 429.

[61] *Rowe*, 205 F.R.D. at 429.

[62] *Id.* (emphasis added)

[63] *Id*. at 433 (emphasis added).

The protocol set forth required the plaintiff to designate an expert to isolate each defendant's emails and prepare them for review. The expert will then produce a mirror image of any hard drive containing emails and copy any back-up tape. Plaintiffs' counsel will compose a search procedure for identifying responsive emails and notify defendants' counsel of the same. The expert will then implement the agreed-to search method and produce the documents. Plaintiffs' counsel may review the documents and provide them to defendants' counsel to review for privilege.

The analysis of the *Rowe* Court was followed by the United States Court for the Eastern District of Louisiana in *Murphy Oil USA, Inc., v. Fluor Daniel, Inc.*[64] In *Murphy Oil*, a refinery owner sued a maintenance company for breach of contract. Murphy Oil sought discovery of all emails, including deleted emails, of Fluor for the pertinent fourteen month period. The Court stated that *Rowe* "provides sound guidance for resolution of these issues where the retrieval, production and review of e-mail from backup tapes is at issue."[65] The Court applied the eight factors set forth in *Rowe* and concluded that the "relevant factors tip in favor of shifting the cost to Murphy."[66] Interestingly, the Court separately noted "that Flour has presented uncontroverted evidence that it would cost $6.2 million and take more than six months, excluding attorney time, to place the e-mail in a form where it can be produced."[67]

One important disagreement with *Rowe* involved privilege review. Under the *Rowe* criteria, the defendants' counsel was <u>not</u> given an opportunity to perform a privilege review before the documents were viewed by opposing counsel. The *Murphy Oil* Court noted that the

---

64 2002 U.S. Dist. LEXIS 3196 (Feb. 19, 2002).

65 *Murphy Oil*, at p. 9.

66 *Murphy Oil*, at p. 17.

67 *Id.* at p. 8.

defendant's privilege review must be performed before the documents are produced to plaintiff's counsel, and that the defendant should bear the cost of sorting through the produced materials to identify privileged documents.

In a recent decision, *Byers v. Illinois State Police,* issued June 3, 2002, the United States District Court for the Northern District of Illinois analyzed the plaintiff's request for defendant's archived emails. While holding that computer files, including e-mails, are discoverable, the Court rejected "plaintiffs' attempt to equate traditional paper-based discovery with the discovery of e-mail files. Several commentators have noted important differences between the two."[68] The Court referred to all of the cases discussed above, and concluded without much difficulty that "[b]ased on the cost of the proposed search and the plaintiffs' failure to establish that the search will likely uncover relevant information, **the Court concludes that the plaintiffs are entitled to the archived e-mails only if they are willing to pay for part of the cost of production**."[69]

### *Conclusion*

The current majority of cases recognize discovery of computer files, e-mail and deleted e-mail. However, a growing trend of courts and commentators recognize that deleted e-mail should not be considered discoverable --- comparing the recovery of deleted e-mail to the retrieval of paper documents from the garbage dump and, therefore, the better view is that deleted computer files, particularly e-mail, should not be discoverable. Moreover, clear and persuasive authority exists for shifting the cost of recovering deleted computer files, including cases specifically addressing recovery of deleted e-mail, to the requesting party.

Counsel must be aware of the pervasiveness of computerized information, particularly e-

---

[68] *Byers v. Illinois State Police, et al.*, 2002 U.S. Dist. LEXIS 9861 (June 3, 2002), p. 37 (emphasis added).

[69] *Id*. at p. 32.

mail, in the transaction of everyday business, including small businesses. Analyzing and responding to discovery requests must take these realities into consideration in order to best represent and protect the client from unintentional failure to produce or spoliation charges and the costs associated with electronic discovery.