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The Rise of the Proportionality Principle and How to Leverage It

By Bennett Borden and Neil Magnuson

The burden of finding, preserving, reviewing and producing electronically stored information (ESI) has been one of the key drivers of recent developments in eDiscovery law, especially since the 2006 Amendments to the Federal Rules of Civil Procedure. One of these developments, the proportionality principle in Fed. R. Civ. P. 26, has taken the foreground in providing the most relief to the burden of eDiscovery. Courts are increasingly creative and facile in applying the principle, but careful planning and pleading is required to fully benefit from its provisions. In this article, we review the development of the law in this area, and provide several examples from cases that we hope will help to inform the bench and the bar concerning its use. *Read more*

Databases: Roadblock or Fork in the Road?

By Chioma Deere

Often the unseen repositories for user-friendly reports, databases are everywhere. Databases have proved to be often overlooked sources of highly relevant information in litigation. When databases are not incorporated in meet and confer discussions or added to eDiscovery protocols, difficulties may arise. In addition, requesting parties seeking propounding broad discovery requests may request entire databases, which may bring electronic discovery to a screeching halt. All is not lost, however, because depending on the relevancy value of the information, databases can provide efficient, pointed, and usable evidence in litigation. As best practices and relevant case law on the topic continues to evolve, databases have *Read more*

iDiscovery: Collecting Documents from Apple's Mac Computers and iOS Mobile Devices

By Jihad Beauchman and Edward Rippey

eDiscovery has largely subsisted in a Microsoft Windows environment since its inception. From collection to review, many of the e-discovery tools and services are designed for Windows systems to collect documents from Windows computers for review on Windows computers. But, like all things, this chain of services and tools is evolving. With the number of Apple's Mac computers and iOS mobile devices being employed by Fortune 500 companies growing, legal practitioners will need to be prepared to perform eDiscovery in the Mac/iOS environments. This article looks at the issues that legal practitioners need to be aware of when conducting document collection for clients utilizing Apple computing and mobile devices. Conversely, this *Read more*

High Stakes Cross-Border and Domestic Trade Secret Investigation

By Eamonn Markham

In this particular litigation there was an interesting combination of cross-border and domestic issues in a bet-the-company case. The company involved is a major manufacturer of microprocessors. One particular chip, a significant product for this Company, contains software (firmware) which is a combination of persistent memory and program code and data stored on the chip. That chip together with firmware is used in many different devices and plays a significant role in the company's roster of products. An employee brought to a Company attorney's attention that a competitor's code may have been incorporated into that chip's firmware. If true, the potential exposure could have been in the order of tens, if not *Read more*

The Rise of the Proportionality Principle and How to Leverage It

By Bennett B. Borden and Neil Magnuson


The burden of finding, preserving, reviewing and producing electronically stored information (ESI) has been one of the key drivers of recent developments in eDiscovery law, especially since the 2006 Amendments to the Federal Rules of Civil Procedure. One of these developments, the proportionality principle in Fed. R. Civ. P. 26, has taken the foreground in providing the most relief to the burden of eDiscovery. Courts are increasingly creative and facile in applying the principle, but careful planning and pleading is required to fully benefit from its provisions. In this article, we review the development of the law in this area, and provide several examples from cases that we hope will help to inform the bench and the bar concerning its use.

In one recent example of the development of case law concerning the proportionality principle, in late May 2012, the United States District Court for the Western District of Virginia issued two nearly identical opinions, *Adair v. EQT Production Company*, No. 1:10-cv-00037, 2012 U.S. Dist. LEXIS 75132 (W.D. Va. May 31, 2012) (*Adair*) and *Adkins v. EQT Production Company*, No. 1:10-cv-00041, 2012 U.S. Dist. LEXIS 75133 (W.D. Va. May 31, 2012) (*Adkins*), addressing whether "otherwise accessible, responsive documents should not be produced because of the high cost of reviewing those documents for privileged or responsive information, or, in the alternative, whether the cost of such review should be shifted to the requesting party." *Adair*, 2012 U.S. Dist LEXIS 75132, at *11; *Adkins*, 2012 U.S. Dist LEXIS 75133, at *9.

Magistrate Judge Pamela Meade Sargent concluded that the cost of review of such documents and other electronically stored information (ESI) may be considered in assessing whether discovery imposes an undue burden or cost on a responding party, and that, should the cost of review in fact be found to present an undue burden, this cost could be shifted in whole or part to the requesting party. While Judge Sargent determined, in the cases of *Adair* and *Adkins*, that the entry of a court order with clawback provision would "avoid the necessity of an expensive and time-consuming privilege review," and therefore did not need to consider whether to shift the cost of any such review in these cases, *Adair* and *Adkins* nonetheless signal the extent to which courts' application of proportionality principles in discovery have evolved since Rule 26(b) of the Federal Rules of Civil Procedure was amended in 2006. *Adair*, 2012 U.S. Dist LEXIS 75132, at *13; *Adkins*, 2012 U.S. Dist LEXIS 75133, at *11-12.

This article discusses the 2006 amendment to Rule 26(b), surveys courts' application of Rule 26(b)(2)(B), and discusses the impact the amended Rule has had on the Advisory Committee's stated goal of "regulat[ing] discovery" from "sources that are accessible only by incurring substantial burdens or costs," subject to the "[Rule 26](b)(2)(C) limitations that apply to all discovery." Fed. R. Civ. P. 26, Advisory Committee's Note (2006).

I. Early Rule 26(b)

The Federal Advisory Committee on Rules of Civil Procedure ("Advisory Committee") has long recognized that the "[e]xcessive discovery and evasion or resistance to reasonable discovery" both "pose significant problems." Fed. R. Civ. P. 26, Advisory Committee's Note (1983). Accordingly, in 1983, in an effort to curb parties' costly and time-consuming discovery practices that threatened the "fundamental goal of [Fed. R. Civ. P. 1] the 'just, speedy, and inexpensive determination of every action,'" Rule 26(b) was amended to "guard against redundant or disproportionate discovery by giving the court authority to reduce the amount of discovery that may be directed to matters that are otherwise proper subjects of inquiry." Fed. R. Civ. P. 26, Advisory Committee's Note (1983). In addition to empowering courts to reduce discovery where it is "unreasonably cumulative or duplicative," the 1983 amendment also permitted such reduction where "the burden or expense of the proposed discovery outweighs its likely benefit," as measured by various metrics, including the nature and complexity of the case, the amount in controversy, and the importance of the issues at stake. Fed. R. Civ. P. 26, Advisory Committee's Note (1983); see also Fed. R. Civ. P. 26(b)(2)(C)(i)-(iii). The Supreme Court recognized that the revised Rule "vest[ed] the trial judge with broad discretion to tailor discovery narrowly." *Crawford-El v. Britton*, 523 U.S. 574, 598 (1998).

Still, while the new Rule was, at least in theory, an improvement over previous versions, the Advisory Committee remarked years later that it had "been told repeatedly that courts [had] not implemented [the Rule 26] limitations with the vigor that was contemplated." Fed. R. Civ. P. 26, Advisory Committee's Note (2000). Moreover, courts began to recognize that the application of these limitations proved "particularly complicated" where, e.g., ESI was "sought because otherwise discoverable evidence [was] only available from expensive-to-restore backup media." *Zubulake v. UBS Warburg LLC*, 217 F.R.D. 309, 316 (S.D.N.Y. 2003) (*Zubulake IV*). In such cases, courts had to devise "creative solutions for balancing the broad scope of discovery prescribed in Rule 26(a)(1) with the cost-consciousness of Rule 26(b)(2)." *Id.*[1]

[1] *Zubulake IV* illustrated the issues with inaccessible data. The Southern District of New York noted that many other courts had "automatically assumed that an undue burden or expense may arise simply because electronic evidence is involved." The court observed that "[t]his makes no sense," particularly as ESI is "frequently cheaper and easier to produce than paper evidence because it can be searched automatically, key words can be run for privilege checks, and the production can be made in electronic form obviating the need for mass photocopying." *Zubulake IV*, 217 F.R.D. at 318. The court went on to opine that "whether production of documents is unduly burdensome or expensive turns primarily on whether it is kept in an *accessible* or *inaccessible* format." *Zubulake IV*, 217 F.R.D. at 318.

Such challenges led the Advisory Committee to again recommend amendments to Rule 26(b). These amendments went into effect in December, 2006.

II. The 2006 Amendment

In 2006, Rule 26(b) was amended specifically to address the issues presented by inaccessible ESI. The amended Rule established what has been described as a "two-tiered" approach, whereby requesting parties may obtain discovery from sources that are reasonably accessible, but whereby producing parties may be relieved of obligations with respect to sources that are "not reasonably accessible because of undue burden or cost." Fed. R. Civ. P. 26(b)(2)(B).

A producing party bears the burden of showing that requested information is "not reasonably accessible." While the Rule itself does not provide any guidelines or benchmarks with respect to accessibility, a body of illustrative case law has since developed, as discussed further below. If the producing party carries its burden of demonstrating the inaccessibility of information because of undue burden or cost, the requesting party must then demonstrate "good cause" for the court to order production from the sources of such inaccessible information, taking into account the "limitations of Rule 26(b)(2)(C) that balance the costs and potential benefits of discovery." Fed. R. Civ. P. 26, Advisory Committee's Note (2006). The Advisory Committee advised that appropriate considerations may include:

(1) the specificity of the discovery request; (2) the quantity of information available from other and more easily accessed sources; (3) the failure to produce relevant information that seems likely to have existed but is no longer available on more easily accessed sources; (4) the likelihood of finding relevant, responsive information that cannot be obtained from other, more easily accessed sources; (5) predictions as to the importance and usefulness of the further information; (6) the importance of the issues at stake in the litigation; and (7) the parties' resources.

Fed. R. Civ. P. 26, Advisory Committee's Note (2006). Courts have explained that these "'good cause' factors" should not be treated "as a checklist; rather, the factors should be weighed by importance." *Helmert v. Butterball*, No. 4:08-cv-00342, 2010 U.S. Dist LEXIS 60777, at *30-31 (E.D. Ark. May 27, 2010) (citing *Zubulake IV*, 217 F.R.D. at 322); *see also Major Tours, Inc. v. Colorel*, No. 05-3091, 2009 U.S. Dist. LEXIS 97554, at *14-15 (D.N.J. Oct. 20, 2009) (noting same and discussing what the "most important considerations" are "[i]n the Court's view"). Where the requesting party shows good cause, a court may then order the production of information in spite of its adjudged inaccessibility, though it can shift some or all of the costs for such production to the requesting party.

As the discussion of recent case law below illustrates, the application of Rule 26(b) since the 2006 amendment has developed courts' understanding of "reasonably accessible" and the relative importance of the good cause factors, with courts ordering or denying production of requested

information on various grounds. Case law discussed below also demonstrates how the proportionality principles underlying Rule 26(b) have been extended to topics such as cost-shifting and preservation.

III. "Not Reasonably Accessible"

The burden of showing the inaccessibility of requested ESI is one that the would-be producing party must meet before a court will consider denying a motion to compel such information, or entering a protective order excusing the party from its production. Fed. R. Civ. P. 26(b)(2)(B). Such a showing is generally fact-driven. *Cartel Asset Mgmt. v. Ocwen Fin. Corp.*, No. 01-cv-01644, 2010 U.S. Dist. LEXIS 17857, at *44-45 (D. Colo. Feb. 8, 2010) (quoting *O'Bar v. Lowe's Home Centers, Inc.*, 2007 U.S. Dist. LEXIS 32497 (W.D.N.C. 2007) (Under Rule 26(b)(2)(B), "the party asserting that [electronically stored information] is not reasonably accessible should be prepared to specify facts that support its contention."). It is typically insufficient to base a claim of inaccessibility on conclusory statements or speculation. *See, e.g., Cartel Asset Mgmt. v. Ocwen Fin. Corp.*, No. 01-cv-01644, 2010 U.S. Dist. LEXIS 17857, at *48 (D. Colo. Feb. 8, 2010) ("The benefits of *Rule 26(b)(2)(B)* cannot be invoked on mere speculation or unsubstantiated assumptions."); *Gary Friedrich Enters., LLC v. Marvel Enters.*, No. 08-cv-1533, 2011 U.S. Dist. LEXIS 44739, at *5-6 (S.D.N.Y. Apr. 26, 2011) (defendants failed to show that information stored in backup tapes was "not reasonably accessible" where they "provided only the most general description of the nature of the [tapes]," and where they made conclusory statements regarding the "cost of de-duplicating and restoring the tapes").

The failure to provide sufficient detail to the court will often similarly doom a party's claim of inaccessibility. *See, e.g., Kolon Indus. v. E.I. Du Pont de Nemours & Co.*, No. 3:11-cv-622, 2012 U.S. Dist. LEXIS 23326, at *14-15 (E.D. Va. Feb. 23, 2012) (plaintiff failed to show information sought was "not reasonably accessible" where it did "not provide any analysis on the length of time, the man power, or the cost of meeting [defendant's] demands" and where it had "not argue[d] that it [could not] retrieve the requested documents or that it [did] not control the individuals at issue"); *Cartel Asset Mgmt. v. Ocwen Fin. Corp.*, No. 01-cv-01644, 2010 U.S. Dist. LEXIS 17857, at *45 (D. Colo. Feb. 8, 2010) (noting that defendants' declaration failed to provide "any specific information indicating how [defendants] store electronic information, the number of back-up or archival systems that would have to be searched . . . , or [defendants'] capability to retrieve information stored in those back-up or archival systems," and concluding that defendants had thus failed to show that the ESI sought was not reasonably accessible). It is critically important to understand that under Rule 26, the inaccessibility is *because of the undue burden or cost*, not the mere technical difficulty in obtaining the information, though these may be related. Providing a clear, fact-focused and defensible pleading is critical to gaining relief from the court.

Courts may consider a number of factors in adjudging accessibility, and may not always assign these the same weight in each case. In some cases, for instance, the projected cost and time involved in searching for and producing requested information may be the most salient factor. *Thermal Design,*

Inc. v. Guardian Bldg. Prods., No. 08-C-828, 2011 U.S. Dist. LEXIS 50108, at *3 (E.D. Wisc. Apr. 20, 2011) (defendants met their burden of demonstrating that the ESI sought was not reasonably accessible where, having already produced 1.46 million pages of ESI over seven months at a cost of $600,000, defendants demonstrated that a search of its "archived e-mail accounts and shared network drives" would have taken "several months" and cost an additional $1.9 million dollars to perform, plus an additional $600,000 and thirteen weeks to review); *GE v. Wilkins*, No. 1:10-cv-00674, 2012 U.S. Dist. LEXIS 22331, at *19-21 (E.D. Cal. Feb. 21, 2012) (plaintiff met its burden of showing data stored on backup tapes was "not reasonably accessible" based on the capacity of the tapes, the cost to process and review the data on the tapes, and the "incredibly unwieldy and unproductive" process required to retrieve documents from the tapes, which documents were "in an unreadable format," "compressed in zip files which crash the computers attempting to retrieve them," and/or "simply not responsive"); *Gen. Steel Domestic Sales, LLC v. Chumley*, No. 10-cv-01398, 2011 U.S. Dist. LEXIS 63803, at *6-8 (D. Colo. June 15, 2011) (plaintiff "adequately demonstrated, with affidavits, that it [was] unable to use software to separate relevant recorded sales calls from all other recorded calls" and the court therefore concluded, based on the fact that listening to all calls for relevance "would require 7,716 hours," that the calls were "not reasonably accessible").

Factors such as cost and time may also be considered alongside other factors, such as the likelihood that a search will produce relevant or non-cumulative information. *See, e.g., Radian Asset Assur., Inc. v. College of the Christian Bros.*, No. 09-cv-0885, 2010 U.S. Dist. LEXIS 144756, at *11-15 (D.N.M. Oct. 22, 2010) (information stored on backup tapes was "not reasonably accessible" in light of the cost to search for and review such information, which plaintiff conceded was "largely non-responsive ESI"); *cf. Helmert v. Butterball*, No. 4:08-cv-00342, 2010 U.S. Dist LEXIS 60777, at *26, 31-32 (E.D. Ark. May 27, 2010) (defendant failed to show that the work laptops, hard drives, and outside email accounts of its employees were not reasonably accessible, or that a search of these sources would duplicate searches of the employees' email accounts, and therefore ordering defendant to perform searches of these sources). Alternatively, cost and time may be considered in light of the type of action, or the amount at stake. *See, e.g., Rodriguez-Torres v. Gov't Dev. Bank of P.R.*, 265 F.R.D. 40, 43-44 (D.P.R. 2010) (where a financial consultant had estimated that production of the requested ESI would cost $35,000, the court held that the ESI was "not reasonably accessible because of undue burden and cost" in light of the type of action).

Some courts, however, have held that the time involved in searching for and producing such information is not dispositive of accessibility. *See, e.g., Peter Kiewit Sons', Inc. v. Wall St. Equity Group, Inc.*, No. 8:10-cv-365, 2012 U.S. Dist. LEXIS 69577, at *60-61 (D. Neb. May 18, 2012) (holding that the amount of time that is required to complete a search "has very little to do with whether . . . requested data [is] accessible"); *Peskoff v. Faber*, 240 F.R.D. 26, 31 (D.D.C. 2007) (citing *Zubulake v. UBS Warburg LLC*, 216 F.R.D. 280, 283-84 (S.D.N.Y. 2003)) (noting that a party should not "ever be relieved of its obligation to produce accessible data merely because it may take time and effort to find what is necessary").

The source of cost or time estimates may also be a relevant consideration. Often, a party will seek and obtain an affidavit on cost and time from an outside vendor or expert. *See, e.g., Calixto v. Watson Bowman Acme Corp.*, No. 07-60077, 2009 U.S. Dist. LEXIS 111659, at *31-32 (S.D. Fla. Nov. 16, 2009) (defendant established, by submitting a cost estimate from an outside vendor, that the ESI stored on its back-up tapes was not reasonably accessible due to cost); *Johnson v. Neiman*, No. 4:09-cv-00689, 2010 U.S. Dist. LEXIS 110496, at *4-5, 8-9 (E.D. Mo. Oct. 18, 2010) (ESI stored on backup tapes was "not reasonably accessible" based on the time and cost required to "catalog and restore" the data stored on each tape, as supported in part by an affidavit of an employee of the Information and Technology Services Division of the State of Missouri). In other cases, an affidavit may be sourced internally. *See, e.g., Dataworks v. Commlog LLC*, No. 09-cv-00528, 2011 U.S. Dist. LEXIS 3313 (D. Colo. Jan. 10, 2011) (holding that the plaintiff had demonstrated, through an affidavit of its in-house information technology manager, that the ESI on its back-up tapes were not reasonably accessible due to undue burden and cost).

Whether estimates are obtained externally or internally, courts have shown that they may be subject to scrutiny, and potentially discounted as evidence for or against accessibility. Wildly inflating the estimates of cost often are criticized by the court. *See, e.g., Escamilla v. SMS Holdings Corp.*, No. 09-2120, 2011 U.S. Dist. LEXIS 122165, at *16 (D. Minn. Oct. 21, 2011) (rejecting defendant's claim that searching its back-up tapes created an undue burden or cost where defendant's "entire argument relie[d] on the cost estimates provided by only one vendor," whose "cost estimates [we]re speculative and conclusory" and whose assumptions were challenged by plaintiff's expert); *cf. Starbucks Corp. v. ADT Sec. Servs.*, No. 08-cv-900, 2009 U.S. Dist. LEXIS 120941 (W.D. Wash. Apr. 30, 2009) (declining to find the requested ESI "not reasonably accessible" where defendant had provided multiple inconsistent cost estimates relating to retrieval of the ESI, and where plaintiff's cost estimate was "much more aligned . . . with" the defendant's initial, far less inflated estimate).

In some cases, ESI may be ruled inaccessible in light of a party's actual efforts to access it. *See, e.g., Vietnam Veterans of Am. v. CIA*, No. 09-cv-0037, 2012 U.S. Dist. LEXIS 87124, at *7-8 (N.D. Cal. June 22, 2012) (holding that where defendants had spent 60 hours attempting to access data on six tapes, had consulted outside vendors, had obtained additional hardware, and were only successful in accessing data on two of the six tapes, the court held that any data on the remaining four tapes was "not reasonably accessible"). *Vietnam Veterans of Am. v. CIA*, No. 09-cv-0037, 2012 U.S. Dist. LEXIS 87124, at *7-8 (N.D. Cal. June 22, 2012); *see also Annex Books, Inc. v. City of Indianapolis*, No. 1:03-cv-918, 2012 U.S. Dist. LEXIS 34247, at *11 (S.D. Ind. Mar. 14, 2012) (declaring data "not reasonably accessible" where plaintiffs had "retained two computer forensic services, spent at least $9,500 for over thirty hours of work, purchased QuickBooks Pro, and still [were] not successful in importing the bookkeeping data to QuickBooks"); *Colony Ins. Co. v. Danly, Inc.*, 270 F.R.D. 36, 41 (D. Me. 2010) (declaring requested documents "not reasonably accessible" after defendants' counsel had "invested more than 30 hours searching for documents responsive to the court's directive" and where the requesting

parties had "offer[ed] no reason to believe that further responsive documents exist[ed] or, if any d[id], that they [we]re not cumulative of those already retrieved").

Courts have shown that they will not, however, allow parties to use Rule 26(b)(2)(B) to avoid the production of ESI that is relevant and accessible. *See, e.g., Cartel Asset Mgmt. v. Ocwen Fin. Corp.*, No. 01-cv-01644, 2010 U.S. Dist. LEXIS 17857, at *58 (D. Colo. Feb. 8, 2010) (stating that Rule 26(b)(2)(B) "should not be exploited as a vehicle for gamesmanship" or "invoked as a means to forestall the production of materials that are admittedly relevant and readily accessible"). In *Cartel Asset Mgmt.*, the court not only denied the defendants' motion for a protective order, but also required the defendants to "show cause why, pursuant to *Rule 26(g)(3)*, [they] should not be required to pay the reasonable expenses, including attorneys' fees, incurred by [the plaintiff] as a result of [the motion]." *Cartel Asset Mgmt. v. Ocwen Fin. Corp.*, No. 01-cv-01644, 2010 U.S. Dist. LEXIS 17857, at *61 (D. Colo. Feb. 8, 2010).

Nor will courts permit producing parties to invoke Rule 26(b)(2)(B) where the party is itself responsible for the inaccessibility of the requested information. *See, e.g., Starbucks Corp. v. ADT Sec. Servs.*, No. 08-cv-900, 2009 U.S. Dist. LEXIS 120941, at *18 (W.D. Wash. Apr. 30, 2009) (declining to "relieve Defendant of its duty to produce [the requested ESI] merely because Defendant ha[d] chosen a means to preserve the evidence [that made] ultimate production of documents expensive").

IV. "Good Cause"

Courts have demonstrated time and again that they will not permit requesting parties to conduct fishing exhibitions for relevant ESI, particularly where the ESI has already been adjudged inaccessible because of undue burden or cost. As discussed above, once a producing party has demonstrated the inaccessibility of ESI, the requesting party must show the court that there is nonetheless good cause to order a search for and production of such ESI. Fed. R. Civ. P. 26(b)(2)(B). Typically, the requesting party's showing must rise above the level of mere speculation that relevant ESI exists. *See, e.g., Rodriguez-Torres v. Gov't Dev. Bank of P.R.*, 265 F.R.D. 40, 44 (D.P.R. 2010) (plaintiffs failed to show good cause where the "only basis for their belief that they [would] find [more relevant and responsive] information" from the requested ESI than from hard copies was their belief that "e-mail encourages senders to write . . . inappropriate comments" of the type that they speculated existed); *Dataworks v. Commlog LLC*, No. 09-cv-00528, 2011 U.S. Dist. LEXIS 3313 (D. Colo. Jan. 10, 2011) (defendant's argument – merely that back-up tapes were "available" – did not warrant an order compelling discovery of the tapes). The argument that a producing party simply hasn't produced what the requesting party has requested has also proven unavailing. *Thermal Design, Inc. v. Guardian Bldg. Prods.*, No. 08-C-828, 2011 U.S. Dist. LEXIS 50108, at *4-5 (E.D. Wisc. Apr. 20, 2011) (good cause did not exist where plaintiffs believed merely that the defendant "should have produced more ESI" than it did").

Where the requesting party has not demonstrated that it has *any* reason to believe whether or what information is likely to be obtained by a search of inaccessible information, or whether such information is likely to be relevant and not cumulative, good cause may not exist. *See, e.g., Helmert v. Butterball*, No. 4:08-cv-00342, 2010 U.S. Dist LEXIS 60777, at *26-31 (E.D. Ark. May 27, 2010) (plaintiffs had not shown that they had any idea "what, if any, discoverable information may be obtained" by rebuilding a server post office and searching the emails stored on the backup tapes); *Johnson v. Neiman*, No. 4:09-cv-00689, 2010 U.S. Dist. LEXIS 110496, at *8-9 (E.D. Mo. Oct. 18, 2010) (no good cause existed where plaintiff had "no idea what, if any, discoverable information [might] be obtained by cataloging, restoring, and searching the [ESI] stored on the backup tapes"). Courts have not hesitated to deny requesting parties' motions to compel, or grant producing parties' protective orders, in these cases. *Helmert*, 2010 U.S. Dist LEXIS 60777, at *31; *Johnson*, 2010 U.S. Dist. LEXIS 110496, at *8.

In other cases, requesting parties have failed to show that efforts to search inaccessible ESI would produce documents that are not cumulative or duplicative of documents that have already been produced. *See, e.g.*, *GE v. Wilkins*, No. 1:10-cv-00674, 2012 U.S. Dist. LEXIS 22331, at *22-24 (E.D. Cal. Feb. 21, 2012) (good cause did not exist to require a search of backup tapes for requested ESI where defendants "fail[ed] to demonstrate any concrete evidence or . . . any articulable basis upon which the Court [could] conclude that there [we]re any responsive documents remaining on the backup tapes that ha[d] not already been produced"); *Calixto v. Watson Bowman Acme Corp.*, No. 07-60077, 2009 U.S. Dist. LEXIS 111659, at *32, 35 (S.D. Fla. Nov. 16, 2009) (plaintiff did not show good cause where it "failed to establish that a search of [defendant's] reconfigured back-up tapes would result in the collection of any relevant documents that have not already been produced or identified on the privilege log"). Courts have dismissed motions to compel in these cases as well, noting that it is not enough to merely "hop[e] to find a 'crucial,' 'highly relevant,' or 'material' document . . . than [to] hav[e] any true basis to believe that one would be found." *GE*, 2012 U.S. Dist. LEXIS 22331, at *24.

It is similarly insufficient to request a search of inaccessible ESI merely because a producing party is a "large compan[y] with considerable resources." *Thermal Design*, 2011 U.S. Dist. LEXIS 50108, at *4-5. Although, according to the Advisory Committee, a "party's resources" is among the "good cause" factors to be considered, courts have shown that they will not order search and production of inaccessible ESI based solely on a party's capacity to pay. *Id.* (Noting that courts "should not countenance fishing expeditions simply because the party resisting discovery can afford to comply").

Still, whether relevant, non-cumulative information is likely to be found in a search of inaccessible ESI is not courts' only consideration; it is still necessary to consider whether the requested information may be discovered elsewhere. Some courts, for instance, have refused to find good cause to order search and production of inaccessible ESI where a requesting party has simply demanded such, without attempting to explore or suggest any less burdensome or costly alternatives, such as a search of other sources, or the use of other search terms. *See, e.g., Gen. Steel Domestic Sales, LLC v. Chumley*, No. 10-

cv-01398, 2011 U.S. Dist. LEXIS 63803, at *8-10 (D. Colo. June 15, 2011) (defendants failed to show good cause where they "provided no explanation as to why they [could not] canvass Plaintiff's past and current customers in order to discover [the sought] information about . . . statements [made] during sales calls"); *Helmert v. Butterball*, No. 4:08-cv-00342, 2010 U.S. Dist LEXIS 60777, at *13 (E.D. Ark. May 27, 2010) (where defendant claimed it was "impossible" to search emails on its system for one word within the same sentence as another word, as requested by plaintiffs, court noted that plaintiffs did not propose any alternative search method); *Tucker v. Am. Int'l Group, Inc.*, No. 3:09-cv-1499, 2012 U.S. Dist. LEXIS 35374, at *47 (D. Conn. Mar. 15, 2012) (plaintiff "failed to establish 'good cause' to compel inspection of [non-party's] records for emails that are 'not reasonably accessible'" where plaintiff "failed to prove that the information she believes is contained in such emails is essential and/or relevant and unobtainable from other sources" and in fact had admitted to having "independently obtained several" of the emails from another source).

Other courts have regarded the production of inaccessible ESI as a secondary option. For instance, rather than simply ordering production of ESI on "good cause" grounds, some courts have instead prescribed "phased" discovery, whereby the producing party will first search for and produce all accessible ESI before searching for or producing any inaccessible ESI. This allows the parties to put off addressing the latter until the receiving party has had an opportunity to assess whether it can obtain what it needs from the former. *Mancia v. Mayflower Textile Servs. Co.*, 253 F.R.D. 354, 365 (D. Md. 2008) (noting that Magistrate Judge Grimm had suggested that the parties "consider 'phased discovery,' so that the most promising, but least burdensome or expensive sources of information could be produced initially"); *Tamburo v. Dworkin*, No. 04-C-3317, 2010 U.S. Dist. LEXIS 121510, at *9 (N.D. Ill. Nov. 17, 2010) ("Phasing discovery . . . may allow the parties to develop the facts of the case sufficiently to determine whether, at a later date, further potentially more burdensome and expensive discovery is necessary or warranted."); *Doyle v. Gonzales*, No. 10-cv-0030, 2011 U.S. Dist. LEXIS 20158, at *4-6 (E.D. Wash. Feb. 10, 2011) (finding that "Plaintiff's ESI requests, if not appropriately limited, are unduly burdensome for a small town . . . with limited financial and technological resources," and therefore ordering phased discovery whereby the defendant city would not be required to "provide information on [its] backup tapes until the phased-ESI discovery shows that a document or email may only be found on the backup tapes"). These phased approaches to discovery are one of the key recent developments in proportionality decisions and can be used to great effect. Negotiating or obtaining phased ESI protocols can be one of the most powerful sources of relief to a party's eDiscovery burden.

V. Cost Shifting

While Rule 26(b)(2)(B) provides that a court may order the search for and production of ESI that is not reasonably accessible based on a showing of good cause, this rule is expressly subject to the limitations of subsection (b)(2)(C). In the interest of balancing the relative benefits and burdens of production, and ensuring that discovery is proportional to factors such as the "needs of the case" and "the amount in controversy," as provided in Rule 26(b)(2)(C)(iii), courts may consider alternatives to simply ordering

the production of requested ESI, or simply permitting a party to avoid such production. Shifting the costs associated with the production of ESI that is not reasonably accessible is one such alternative.

In some cases, for instance, courts will present cost shifting as an option to the requesting party. *See, e.g., In re Nat'l Ass'n of Music Merchs., Musical Instruments & Equip. Antitrust Litig.*, MDL No. 2121, 2011 U.S. Dist. LEXIS 145804, at *22-24 (S.D. Cal. Dec. 19, 2011) (holding that an additional search requested by plaintiffs "would likely yield only a very small number of additional responsive documents" and would therefore be overly burdensome under Rule 26(b)(2)(C)(iii), but noting that the court would permit such a search "to the extent Plaintiffs are willing to bear [its] cost").

Alternatively, cost shifting may be imposed on a requesting party where the party has made little effort to suggest any reasonable, less costly, alternatives to the production requested. *See, e.g., Annex Books, Inc. v. City of Indianapolis*, No. 1:03-cv-918, 2012 U.S. Dist. LEXIS 34247, at *11 (S.D. Ind. Mar. 14, 2012) (while defendant had demonstrated good cause, court held that defendant must "bear the future costs" of pursuing discovery of inaccessible data, as defendant had "not offered any alternative suggestions as to how the data [could] be obtained" and rather "only [sought] the data in [a particular] format at Plaintiffs' expense").

Whether a court considers an alternative such as cost shifting may depend not only on the actions of the requesting party, but also on those of the producing party. For instance, just as courts have declined to excuse a party from its production obligations where the party is itself to blame for the inaccessibility of its ESI, courts have been similarly unwilling in such cases to shift the costs of production of such ESI to the requesting party. *See, e.g., Escamilla v. SMS Holdings Corp.*, No. 09-2120, 2011 U.S. Dist. LEXIS 122165, at *16 (D. Minn. Oct. 21, 2011) (quoting *Quinby v. WestLB AG*, 245 F.R.D. 94, 104-05 (S.D.N.Y. 2006) (noting that where a "party creates its own burden or expense by converting into an inaccessible format data that it should have reasonably foreseen would be discoverable material at a time when it should have anticipated litigation, then it should not be entitled to shift the costs of restoring and searching the data").

As noted at the outset of this article, *Adair* and *Adkins* addressed a somewhat novel[2] issue, namely, whether the costs associated with the *review* of ESI that is otherwise accessible may be shifted to the requesting party. Previously, courts had principally held that "*accessible* data must be produced at the cost of the producing party" and that "cost shifting does not even become a possibility unless there is first a showing of inaccessibility." *Peskoff v. Faber*, 240 F.R.D. 26, 31 (D.D.C. 2007). While Judge

[2] Courts have previously considered shifting the cost of review in cases where ESI is not reasonably accessible. In *United States ex rel. Ifrah v. Cmty. Health Ctr. of Buffalo, Inc.*, for instance, the Western District of New York held that ESI, found on defendants' back-up tapes during plaintiff's review of the tapes, was "not reasonably accessible," and denied the plaintiff's request to shift the cost of its review to defendants where the plaintiff had merely "formed the unsupported conclusion that [defendants'] failure to [find the ESI itself] represented sanctionable misconduct." *United States ex rel. Ifrah v. Cmty. Health Ctr. of Buffalo, Inc.*, No. 05-cv-237, 2012 U.S. Dist. LEXIS 107686, at *15 (W.D.N.Y. Aug. 1, 2012).

Sargent did not ultimately order cost shifting in *Adair* and *Adkins*, her opinion suggests that, in the right circumstance, such costs may indeed be shifted.

VI. Preservation

As noted above, Rule 26(b)(2)(B) may relieve parties of their production obligations where ESI is not reasonably accessible *because of undue burden or cost*. Fed. R. Civ. P. 26(b)(2)(B) (emphasis added). Parties have argued that the preservation of such ESI for the duration of a case can impose similar burdens and costs, and have requested that the same principles of proportionality underlying Rule 26(b) be extended to address these parties' ongoing obligations with respect to preservation. This very recent development to use proportionality to apply to the preservation of data has the potential of relieving one of the key sources of cost in eDiscovery. However, to date the attempts to pull Rule 26 into preservation have not been very successful, mainly because the parties requesting relief have failed to provide the court with sufficient information on which to act. In this respect, it is critical to understand that the proportionality principle is a *balancing* of the relative burden versus the benefit of the information sought. Far too often parties focus solely on the burden and do not provide sufficient information regarding the potential benefit.

In a number of cases, courts have declined to so extend the Rule or its underlying principles to excuse a party's preservation obligations. In *Orbit One Commc'ns, Inc. v. Numerex Corp.*, for instance, the Southern District of New York noted that "[p]roportionality is particularly tricky in the context of preservation" and that "[i]t seems unlikely, for example, that a court would excuse the destruction of evidence merely because the monetary value of anticipated litigation was low." *Orbit One Commc'ns, Inc. v. Numerex Corp.*, 271 F.R.D. 429, 436 n.10 (S.D.N.Y. 2010) (further noting that the proportionality standard "may prove too amorphous to provide much comfort to a party deciding what files it may delete or backup tapes it may recycle.").

In another Southern District of New York case grappling with the same issue,[3] *Pippins v. KPMG LLP*, the court was similarly unmoved, noting that "[u]ntil discovery proceeds *and the parties can resolve what materials are contained on the hard drives* and whether those materials are responsive to Plaintiffs' document requests, it would be premature to permit the destruction of any hard drives." *Pippins v. KPMG LLP*, No. 11-cv-0377, 2011 U.S. Dist. LEXIS 116427, at *24 (S.D.N.Y. Oct. 7, 2011) (emphasis added). The court could not make a balancing determination regarding the benefit versus the burden of the information on the hard drives because KPMG had not provided the court with that information.

[3] The court explained: "KPMG seeks to reconcile its duty to preserve discovery material with the burden of that preservation by advocating a proportionality test. . . . This test, in effect, blends the protections afforded by Rule 26(b)(2), 'which permits the court to limit discovery if the burden or expense of production outweighs its potential benefits,' and Rule 26(c), 'which permits the issuance of protective orders, including by shifting the costs of unduly burdensome or expensive production." *Pippins v. KPMG LLP*, No. 11-cv-0377, 2011 U.S. Dist. LEXIS 116427, at *16 (S.D.N.Y. Oct. 7, 2011). KPMG complained that it was expensive to preserve all of the 1500 hard drives containing the subject ESI, and therefore sought a protective order allowing them to preserve only a random sampling of hard drives. *Id*. at *7-9.

This was a critical misstep. On appeal from the Magistrate Judge's opinion in *Pippins* to the District Court Judge, the court held similarly, noting that "[b]ecause proportionality is a 'highly elastic concept . . . [it] cannot be assumed to create a safe harbor for a party that is obligated to preserve evidence but is not operating under a court-imposed preservation order." *Pippins v. KPMG LLP*, No. 11-cv-0377, 279 F.R.D. 245, 255 (S.D.N.Y. 2012) (citing *Orbit One*, 271 F.R.D. at 436 n.10).

While courts may have stopped short of excusing the destruction of potentially relevant ESI based on the application of proportionality principles, they have in some cases applied such principles in deciding whether to grant a request to enter a preservation order. *See, e.g., Margolis v. Dial Corp.*, No. 12-cv-0288, 2012 U.S. Dist. LEXIS 92355, at *7-10 (S.D. Cal. July 3, 2012) (holding that because defendants had "instructed employees likely to have relevant documents to preserve them," because "documents on backup tapes [we]re duplicative of the documents individual custodians [we]re saving in active storage locations," and because "preserving backup data on a going-forward basis" would have been costly, court declined plaintiffs' request for a preservation order").

Proportionality principles have also been applied by courts in the context of preservation where the question is one of compliance in retrospect. In *Rimkus Consulting Group, Inc. v. Cammarata*, for instance, the Southern District of Texas held that "whether preservation or discovery conduct is acceptable in a case depends on what is reasonable, and that in turn depends on whether what was done – or not done – was proportional to that case and consistent with clearly established applicable standards." *Rimkus Consulting Group, Inc. v. Cammarata*, 688 F. Supp. 2d 598, 613 (S.D. Tex. 2010) (further noting that this analysis "depends heavily on the facts and circumstances of each case and cannot be reduced to a generalized checklist of what is acceptable or unacceptable"). Similarly, in *Victor Stanley, Inc. v. Creative Pipe, Inc.*, the District of Maryland called *Rimkus* "highly instructive" and stated that an "assessment of reasonableness and proportionality should be at the forefront of all inquiries into whether a party has fulfilled its duty to preserve relevant evidence." *Victor Stanley, Inc. v. Creative Pipe, Inc.*, 269 F.R.D. 497, 522-23 (D. Md. 2010).

At least some judges and scholars believe that the notion of proportionality may be considered in assessing parties' ongoing preservation obligations. *See, e.g., Pension Comm. of the Univ. of Montreal Pension Plan v. Banc of Am. Sec., LLC*, 685 F.Supp.2d 456, 479 n.99 (S.D.N.Y. 2010) (citing Rule 26(b)(2)(B) and noting that where backup tapes "are the *sole* source of relevant information . . . then such backup tapes should be segregated and preserved" but that "[w]hen accessible data satisfies the requirement to search for and produce relevant information, there is no need to save or search backup tapes")[4]; Paul W. Grimm, Michael D. Berman, Conor R. Crowley, Leslie Wharton, *Proportionality in the Post-Hoc Analysis of Pre-Litigation Preservation Decisions*, 37 U. Balt. L. Rev. 381, 405 (2008)) ("[T]he

[4] The court in *Pension Committee* ultimately concluded that the discovery efforts of many of the plaintiffs were "grossly negligent," and included the destruction of "backup data potentially containing responsive documents of key players that were not otherwise available." *Pension Comm. of the Univ. of Montreal Pension Plan v. Banc of Am. Sec., LLC*, 685 F.Supp.2d 456, 479 (S.D.N.Y. 2010).

scope of preservation should somehow be proportional to the amount in controversy and the costs and burdens of preservation.").

Still, the considerations and concerns noted by the *Orbit One* court remain. As that court noted, "[u]ntil a more precise definition is created by rule, prudence favors retaining all relevant materials." *Orbit One Commc'ns, Inc. v. Numerex Corp.*, 271 F.R.D. 429, 436 (S.D.N.Y. 2010) (citing *Zubulake IV*, 220 F.R.D. at 218).

VII. Conclusion

The proportionality principle can be a powerful means to reduce the sometimes significant burden of eDiscovery. Courts are increasingly employing it in creative and adept ways, especially in phasing discovery into iterative steps. This developing facility by the bench and the bar provides significant opportunity for obtaining some measure of relief from expensive eDiscovery. It is important, however, to understand what factors the courts look to in balancing the relative benefit versus burden of the sought ESI and providing the court with clear and provable (non-exaggerated) facts to support each factor.

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Databases: Roadblock or Fork in the Road?

By Chioma Deere

Often the unseen repositories for user-friendly reports, databases are everywhere. Databases have proved to be often overlooked sources of highly relevant information in litigation. When databases are not incorporated in meet and confer discussions or added to eDiscovery protocols, difficulties may arise. In addition, requesting parties seeking propounding broad discovery requests may request entire databases, which may bring electronic discovery to a screeching halt. All is not lost, however, because depending on the relevancy value of the information, databases can provide efficient, pointed, and usable evidence in litigation. As best practices and relevant case law on the topic continues to evolve, databases have become powerful and increasingly common sources of electronic discovery. This article attempts to address some problem areas, case law, and strategies for seeking and producing database e-Discovery.

Most organizations use databases for various business functions. Databases can present a roadblock to electronic discovery or a simple sidetrack, or even shortcut, to the production of relevant discovery. Due to their amorphous and unwieldy presence in the universe of possible relevant discovery, litigants often mistakenly either lump the database and its contents with the rest of the electronic discovery sought or ignore this avenue for relevant evidence – both avenues defeat the purpose of Federal Rule of Civil Procedure 1.

What are Databases? Databases consist of structured data organized for easy retrieval with multiple pieces of data, sorted into fields, and stored in a common format such as a field delimited file – a .csv or comma delimited file is a common example. Databases also are a collection of data that can be shared by different application systems including complex systems created for large organizations. Databases can be tables or spreadsheets, flat file databases such as Concordance, relational databases which incorporate multiple tables that may or may not be related to each other to provide different reports, and enterprise databases that handle extremely large and complex data such as a Microsoft SQL Server®. The unique feature of databases is that in order to convey information, all of the singular data items in the database must be brought together in specified ways to be meaningful.

Roadblocks – Challenges to Database e-Discovery

Database challenges can occur in all aspects of e-Discovery – preservation, collection, review, culling, and production. Preservation can be the first stumbling block. When litigants fail to agree what to preserve, it can lead to spoliation allegations, repeated preservation and production efforts, and dramatically increased costs. Do you preserve the entire database or only those tables, items relevant to the litigation or responsive to a keyword search? Discovery of databases require clear and strategic communication between litigants. A request to produce “the customer complaints database” may be

difficult if not impossible depending on how the database exists in the organization. While the Federal Rules and case law have evolved from the one-dimensional discovery world view of "document," databases are in a distinct group that fails to fit a defined e-discovery production format. Production from databases can be in many forms; from unique reports created from the preserved raw database items to printouts from the live SQL Server databases that allow witnesses to identify a business-based report that is familiar.

Requesting parties may object to the production of the reports, spreadsheets, or other format for producing specific items from databases. Due to the varying sizes and functionality of databases, printing may be impossible. Production in native format may also be impossible unless the requesting party has access to the same software to view the structured data in a meaningful way. This may not be possible as many databases are proprietary systems, created for a specific business and interwoven with other non-relevant databases on a relational level. Depending on the nature of the litigation, the requesting party may request that the producing party share proprietary software or create specific queries to allow searching relevant to the case.

Sedona Conference Database Principles – a Recipe for Cooperation.

In April 2011, the Sedona Conference answered the call for standards regarding the preservation and production process for databases by publishing its "Database Principles Addressing the Preservation and Production of Databases and Database Information in Civil Litigation."[1] The Database Principles focuses on the importance of the meet and confer exchange of information with the basic premise of cooperation to ensure efficient, relevant production that reduces the overall cost of ESI production from database sources. The six database principles are:

> 1. Absent a specific showing of need or relevance, a requesting party is entitled only to database fields that contain relevant information, not the entire database in which the information resides or the underlying database application or database engine.
>
> 2. Due to differences in the way that information is stored or programmed into a database, not all information in a database may be equally accessible, and a party's request for such information must be analyzed for relevance and proportionality.
>
> 3. Requesting and responding parties should use empirical information, such as that generated from test queries and pilot projects, to ascertain

[1] The Sedona Conference® Database Principles Addressing the Preservation and Production of Databases and Database Information in Civil Litigation, April 2011; http://www.thesedonaconference.org/content/miscFiles/publications_html

> the burden to produce information stored in databases and to reach consensus on the scope of discovery.
>
> 4. A responding party must use reasonable measures to validate ESI collected from database systems to ensure completeness and accuracy of the data acquisition.
>
> 5. Verifying information that has been correctly exported from a larger database or repository is a separate analysis from establishing the accuracy, authenticity, or admissibility of the substantive information contained within the data.
>
> 6. The way in which a requesting party intends to use database information is an important factor in determining an appropriate format of production.

There is a dearth of case law addressing the various ways that courts have treated parties database preservation, review, and production, or the lack thereof, in electronic discovery. There are a few courts that have opined, even before the Sedona Conference issued its Databases Principles, regarding electronic discovery from databases. Those courts recognized that certain limitations may be necessary to reduce delay and inefficiency in litigation while protecting privileged materials.[2]

In addition to the solutions in Sedona Conference Database Principles, there are additional best practices that should be implemented, preferably during the meet and confer or similar process, to avoid the Database Roadblock in e-Discovery.

- Consider preservation of entire database or relational databases for safe manipulation during e-Discovery. A written e-Discovery protocol or stipulation on this and other issues will alleviate the need to re-perform preservation of the subject database(s).
- Identify the database system(s) on both side of the litigation.
- Determine the nature of the database from which information is sought. Is the database a flat file, relational, or part of more complex enterprise systems? This knowledge will also assist in vendor selection and litigation budget strategies.
- Gain an understanding of the basic structure of the database, i.e., fields in the database, query forms that exist, and how reports are generated.

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[2] *Robert Osbourne and Marina Bay Transportation, L.L.C. v. C.H. Robinson Company*, Memorandum Opinion and Order, Case No. 08C50165 October 25, 2011(N.D. Ill. 2011). Refers to the Seventh Circuit's Electronic Discovery Committee's proposed standing order regarding the discovery of ESI based on the Sedona Principles and includes discussions on how filter and query databases during the meet and confer process; see *also*, *US ex rel Joe Liotine v. CDW Government, Inc.*, Opinion and Order, Case No. 3:05-cv-33-DRH-DGW April 26, 2011(S.D. Ill. 2011) (required responding party to search database for keywords and produce in usable format.)

- How big is the database?
- When necessary, request an on-site review and query to determine the database structure.
- Produce database information in an agreed upon format that is usable under the Federal Rules and most state rules.[3] The parties should also agree how to redact and produce redacted items or fields.
- Producing parties need to employ proportionality strategies to ensure costs, such as creating a new query for a specific report requested, are compelled or awarded accordingly.

Conclusion

Databases will continue to be a significant part of electronic discovery; the equally sought after but not as glamorous cousins of unstructured data files like word and excel documents. The Sedona Conference Database Principles provide concrete guidelines on how to tackle databases in all stages of the electronic discovery process. Without early assessment and agreements in place, the discovery process of databases can be a difficult hurdle to overcome in the litigation process. Requesting and producing parties should craft early measures and agreements regarding the preservation, review and production of database information. With clear agreements in place, relevant production from databases can lower the cost and speed up the efficiency of this portion of electronic discovery process.

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[3] F. R. Civ. P. 26(f)(c)

iDiscovery: Collecting Documents from Apple's Mac Computers and iOS Mobile Devices

By Jihad F. Beauchman and Edward H. Rippey


eDiscovery has largely subsisted in a Microsoft Windows environment since its inception. From collection to review, many of the e-discovery tools and services are designed for Windows systems to collect documents from Windows computers for review on Windows computers. But, like all things, this chain of services and tools is evolving. With the number of Apple's Mac computers and iOS mobile devices being employed by Fortune 500 companies growing, legal practitioners will need to be prepared to perform eDiscovery in the Mac/iOS environments.

This article looks at the issues that legal practitioners need to be aware of when conducting document collection for clients utilizing Apple computing and mobile devices. Conversely, this information is also helpful in situations where opposing parties employ Apple products and important information may be located on these devices.

Document collection from (1) Mac computers, (2) iOS mobile devices, (3) third-party applications, and (4) iCloud each present unique issues that will need to be addressed when drafting and implementing document collection plans.

In order to properly conduct an efficient document collection, legal practitioners need to know the types of devices employed by the client and how employees use each of these devices. Awareness of the various issues related to collection from Macs and iOS devices and proper preparation can minimize obstacles and bottlenecks in getting documents collected and ready for review.

Apple Business Adoption

Apple has, of course, enjoyed considerable recent consumer demand for its mobile products, mainly the iPhone and iPad. Sales of these mobile devices are responsible for nearly 75% of Apple's revenues.[1]

However, in recent quarters, it is not just consumers that have driven Apple's growth. During their Fiscal Q3 2012 call with analysts on July 24, 2012, Apple executives reported that the number of iPhones in the Fortune 500 has more than doubled and the number of iPads in the Fortune 500 has

[1] Apple Inc. Q3 2012 Unaudited Summary Data. [Accessed on Sept 1, 2012 at http://images.apple.com/pr/pdf/q3fy12datasum.pdf]

more than tripled in the past year.[2] With such growth occurring in the business sector, the point has been reached that document collection tools and services must be prepared to address Apple's Mac computers and iOS mobile devices.

Macs

Nearly 50% of businesses in North American and Europe are issuing Macs to their employees at some level.[3] In this environment, legal practitioners must be informed about the differences between Macs and Windows PCs and how this impacts collection of documents from clients that have issued Mac computers to their employees.

At a basic level, Macs are very different from Windows PCs. Newer Mac computers generally run a version of Apple's OS X operating software and not Windows, though Windows can be launched on Mac computers using 3rd party software. Macs use an HFS or HFS Plus file system while Windows PCs generally employ FAT or NTFS file systems.[4] Individual files on Macs may also be stored in a "bundled" format (depending on the filetype), which can cause the individual file to appear as multiple files when loaded onto a Windows system.[5]

At the same time, there are some aspects of document collection from Mac computers that are identical to collecting documents from Windows machines. Primarily, email set up using Microsoft Exchange and Outlook on Mac computers will be accessible and can be collected using similar methods as used for Windows systems. Microsoft Outlook on Macs and Windows PCs creates ".pst" files that should render full access to all emails contained in the files regardless of operating system.

Yet, the technical differences make it difficult to adequately implement a thorough document collection plan on Macs using only Windows tools. Using Windows tools to perform collection on Macs can lead to corrupted or unreadable files and inaccurate metadata.[6] For example, when analyzed by a Windows machine, a single Keynote file (similar to PowerPoint) may appear as a folder with multiple subfolders containing numerous corrupted files that do not accurately reflect the content as it existed on the Mac computer. Without proper Mac-specific tools and services, such inaccurate rendering can be expected.

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[2] Peter Burrows and Danielle Kucera. *Apple as Most Valuable U.S. Company Ever Has Room to Grow.* Bloomberg. [Accessed on September 1, 2012 at http://www.bloomberg.com/news/2012-08-22/apple-as-most-valuable-u-s-company-ever-has-room-to-grow-more.html]

[3] Sean Ludwig. *Forrester: Nearly 50% of businesses now issuing Macs, 27% support the iPad*. Venture Beat. [Accessed on September 1, 2012 at http://venturebeat.com/2012/01/26/50-percent-businesses-issue-macs-research/]

[4] Apple OS X Mountain Lion Core Technologies Overview June 2012. [Accessed on September 1, 2012 at http://movies.apple.com/media/us/osx/2012/docs/OSX_MountainLion_Core_Technologies_Overview.pdf at 8]

[5] Maureen O'Neil. *Mac E-Discovery in a Windows World: Apples to Apples?*. Discover Ready. [Accessed on September 1, 2012 at http://discoverready.com/blog/mac-e-discovery-in-a-windows-world-apples-to-apples/]

[6] Id.

Therefore, it is important to work with vendors and consultants that have experience performing collection of electronically stored information on Mac computers as well as Windows machines. These vendors and consultants employ software specifically designed to collect electronically stored information from Apple computers.

When selecting a vendor or consultant, legal practitioners should ensure that electronically stored information is collected natively and that properly formatted drives are used to collect the information. External drives formatted for Windows machines may not retain essential metadata and could corrupt certain file types. Clients that utilize the FileVault encryption feature of Apple's OS X operating system will need to decrypt all drives prior to imaging the drive. Because this can take as long as 24 hours for larger drives, practitioners should provide clients with sufficient notice to complete this step prior to the vendor's arrival on site.

Finally, checks should be in place to confirm that the documents being produced to opposing counsel are identical to the documents that appear on users machines natively. Improper formatting or corrupted files can signify sloppy collection and could lead to further scrutiny of the document collection efforts.

iOS

In large civil litigation cases, parties may agree on the types of documents that will be reviewed and produced to opposing counsel prior to undertaking the document collection process. This planning often limits discovery to emails and other types of documents that contain relevant information. Traditionally, parties have avoided collecting mobile device information except when absolutely necessary. Yet with the growing penetration of mobile devices at all levels of the work force, the necessity of collecting from mobile devices has become more frequent.

Though some efforts have been made to push back against collecting electronically stored information from mobile devices, increased mobile capabilities and adoption suggest Courts will increasingly require the collection of documents from mobile devices because their use has become pervasive in business and society in general.[7]

Apple iOS mobile devices, like the iPhone and iPad, are among the most secure devices available on the market. A recent review of iOS device security noted that "[t]echnologies the company has adopted

[7] See "*E-Discovery's New Frontier: What the Increase in Portable Corporate Communication Means for E-Discovery.*" By Skye L. Perryman, Alexander B. Hastings, and Edward H. Rippey. EDDE JOURNAL. Summer 2012 Volume 3 Issue 3.

protect Apple customers' content so well that in many situations it's impossible for law enforcement to perform forensic examinations of devices seized from criminals."[8]

Businesses covet this level of security for their mobile devices to protect business secrets and client information. However, this also means that extracting data from iOS mobile devices can be difficult. Without access to a user's PIN or password, extracting data is essentially impossible, as noted above. The device itself can be imaged, but the Advanced Encryption Standard algorithm system implemented by Apple prevents the data from being decrypted without the user's PIN or password.

If provided full-access to an iOS device, extraction of the relevant data is possible, but should be conducted by a vendor with experience working with iOS devices. Experienced vendors will likely have a long record working with Apple products, but practitioners should confirm their experience with each iOS device and the specific types of collection the vendor has performed on those devices.

Emails, documents and other common file types can be extracted just as they would from a Mac computer or other computing device. Like documents collected from Mac computers, practitioners should ensure that vendors perform collection using tools and drives that are designed and formatted specifically to collect data from Apple products. This will safeguard against possible file corruption at the collection stage.

However, there are additional file types and communications that are specific to mobile devices that may need to be copied as part of a thorough collection of all relevant or responsive information from the iOS device. As part of the initial agreement between parties, it may be decided that text messages (or iMessages) stored on iOS devices contain relevant information related to the matter and need to be collected and produced. Although each text may appear to be a separate communication on the iOS device, each message is stored in a larger SMS database that is extracted as a whole and not as individual messages. This database file is rendered as an Excel or HTML file for review. The HTML file is more visually accessible, but can produce timing inaccuracies and omissions. Therefore, using the Excel format is generally recommended for SMS messages. Using the excel format also allows for manipulation of the data for internal review purposes.

Third-Party Application Data

Applications have become an integral part of doing business on both Mac computers and iOS devices. From Box to Evernote to WhatsApp, business users are utilizing software applications to more effectively create documents and communicate on their Macs and iOS devices. When collecting information about how employees use their devices, legal practitioners should place an emphasis on inquiring about third-party application usage. Though too numerous to cover each individually, there

[8] Simson Garfinkel. *The iPhone Has Passed a Key Security Threshold* . Technology Review. [Accessed on September 1, 2012 at http://www.technologyreview.com/news/428477/the-iphone-has-passed-a-key-security-threshold/]

are three types of apps that contain electronically stored information that may need to be collected if utilized by a client's employees.

Document Storage Applications

The services provided by document storage applications vary widely. While some only allow access to files stored on the application's servers (in the cloud), others permits users to sync files between multiple devices and collaborate with colleagues on documents stored either locally or in the cloud. While the features may differ, the underlying concept of these applications is to provide access to files from any location, including on a computer, on a mobile device, or via the web. Applications such as Box, Google Drive, and Dropbox permit users to store documents in the cloud, and may also permit users to store a local copy of the files on the individual's hard drive or mobile device.

In order to efficiently collect documents that may be stored using these applications, practitioners should consult individual users about how they use these services, and the specific features enabled for each user. If documents are stored in multiple locations, consultation with a vendor or consultant should quickly determine the most efficient method for collecting the documents. Collecting directly from a computer's hard drive will often be the most efficient and defensible method, but many online hosting applications also provide a bulk export method that provides an alternative means of collection worth considering.

Note-Taking Applications

With the advancement of mobile devices and computing, users are increasingly utilizing note-taking applications and other applications that create electronically stored information inside the application environment. These apps, like Evernote, do not create separate documents on the users system, but rather create a database file that may contains multiple pages or notes stored on the users system. For Evernote, a popular note/thought collection application, the user created content is stored in a single ".exb" file. These ".exb" files are specific to Evernote and other note-taking applications will store information differently.

If a client is likely to have unique information stored in these types of applications, it is important that the vendor or consultant is informed and the information is extracted from the proprietary file. Should the vendor lack the capability to properly extract and convert the proprietary files into a producible format, practitioners should consult opposing counsel to determine how collection should proceed, if at all.

Communication Applications

In addition to text messages and emails sent via Macs and iOS native applications, third-party communication applications are increasingly being utilized by consumers and business users alike. These applications provide additional services and cross-platform communication abilities that are not present in Apple's native "Mail" and "Messages" applications, frequently at no cost to the business or user.

Depending on the application, extracting communications contained in third-party applications can be difficult. Some applications like WhatsApp Messenger provide an integrated export feature that allows users to create text files of their conversation history on a contact-by-contact basis. While other applications may not contain a similar feature, practitioners should consult their vendor to determine if other measures can be used to extract the communications data contained in third-party applications should they contain relevant or responsive information.

iCloud

The final location that practitioners should be aware of when collecting documents from clients using Mac computers and iOS devices is the cloud. iCloud is Apple's cloud-based storage system for backups and other electronically stored information. iCloud mainly utilized by iOS devices, but some Mac computer applications also back-up information on iCloud. iOS users are provided 5GB of free storage in iCloud.[9]

The electronic discovery of backup tapes is generally limited as data on these tapes may not be "reasonably accessible because of undue burden or cost."[10] But with iCloud, the information can be retrieved at little cost, if any. The restoration of an iOS device using data already uploaded to iCloud only requires a "wiped" iOS device and the iCloud account username and password. With that equipment and information, the iOS device can be restored and will contain the information previously backed up on iCloud.

Collection from iCloud should be used primarily as a last resort to obtain communications and other electronic information stored in iOS mobile device backups. By default, backups stored on iCloud will contain an iOS device's communications, photos, settings, and configuration. A user may also store contacts, calendars, and other personal data in the cloud, but this is not typical for business users who import contacts and calendars using Microsoft Exchange.

Some business users do not enable iCloud. These users' backup files will be located on the hard drive of the computer used to sync the iOS device with iTunes.

[9] iCloud Features Website. [Accessed on September 1, 2012 at http://www.apple.com/icloud/features/]
[10] Fed.R.Civ.P. 26(b)(2)(B).

Conclusion

As Apple penetrates the corporate world, legal practitioners will need to be aware of the features of Apple computers and mobile devices, and how to employ the Apple-specific tools and services necessary to collect documents from these devices. When selecting a vendor, the vendor should have experience collecting from various Mac computers and all iOS devices. When collecting information about how clients utilize Apple products, it is important to be thorough about specific application usage and methods of communications. Understanding how Apple products operate and how they are utilized by clients will streamline the collection process and reduce the likelihood of errors while implementing document collection plans that include Mac computers and iOS mobile devices.

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High Stakes Cross-Border and Domestic Trade Secret Investigation

By Eamonn Markham

In this particular litigation there was an interesting combination of cross-border and domestic issues in a bet-the-company case.

The company involved is a major manufacturer of microprocessors. One particular chip, a significant product for this Company, contains software (firmware) which is a combination of persistent memory and program code and data stored on the chip. That chip together with firmware is used in many different devices and plays a significant role in the company's roster of products. An employee brought to a Company attorney's attention that a competitor's code may have been incorporated into that chip's firmware. If true, the potential exposure could have been in the order of tens, if not hundreds of millions of dollars. The time frame involved prohibited a lengthy review of documents. This was a true find the "needle-in-the-haystack" and find-it-now problem. Hence the focus of the investigation turned to one of data analysis: what was the most cost effective way to analyze the significant amounts of data – on the order of 2TB – and determine the company's exposure? This analysis needed to occur in a very short time frame as there were serious ramifications to the company's core business and downstream clients who actually used that chip.

This context for an investigation into a variety of data sources available to the Company, how that data was accessed and analyzed, and how the data was subsequently coded for the company so that a significant amount of data – on the order of 2TB or 15MM documents – subsequently resulted in attorneys reviewing less than 3,000 documents. A true victory for the teams working in the background to find the documents. This is not a story of brute force, but finesse. It is also not a story of technology assisted review: the tools used are common to the industry. What makes this situation unique was the amalgamation of people, process and technology to drive a successful result in a very short period of time. This is a victory for a variety of groups working in tight integration developing efficient repeatable process to achieve true efficiency: collections teams in multiple jurisdictions, forensic analysis teams in multiple jurisdictions, a central team of in-house and outside counsel providing direction. However the stalwarts did not come from the legal team but rather from forensic consultants, collections experts, project managers, and search strategy consultants that delivered this result for the company.

The word came down on Christmas Eve: "Houston, we have a problem." Despite the season, a team was activated to assist with the identification of potential custodians in the United States and abroad that would require collections. As noted above, there were significant issues associated with cross-border analysis.[1] It became apparent that processes and protocols developed in the United States

[1] For a discussion regarding navigating cross-border eDiscovery issues, see *U.S. E-Discovery and Data Privacy: Solutions for Navigating Cross-Border Conflicts*, By Alexander B. Hastings and Edward H. Rippey, EDDE Journal, Spring 2012, Volume 3, Issue 2.

would have to be applied abroad, providing U.S. counsel with the comfort they needed that the process would be followed, and effectively insulating them from privacy and related considerations. (Although some data from the foreign custodians was reviewed by attorneys in the applicable jurisdiction, the use of analytical tools rendered the need for a detailed analysis mostly moot.)

The collections process was routine from an expert's perspective. Some custodian's data was collected remotely (under the supervision of a collections expert), others were collected in-person, while other data was aggregated from servers, or source code compilers under expert supervision.

Once the data was collected, custodian interviews were conducted as in any trade secret misappropriation case. These interviews occurred over a period of weeks. Each custodian's computer was imaged at the beginning of the interview stage.

Parallel to these interviews a forensic analysis of the custodial data was begun to determine what information was contained on a custodian's personal computer and what had been deleted on their computer. Using a variety of forensic tools together with custom scripting and expert analysis, we looked at live documents and also documents and artifacts that existed in a number of locations on an imaged drive:

1. Documents that had been placed in the Outlook Deleted Items folder but had not been deleted
2. Documents that had been placed in the Outlook Deleted Items folder and had actually been deleted ("double deleted email")[2]
3. Remnants of documents that had been deleted yet parts of which still existed in, and could be retrieved from, unallocated space

Although it is easy to encapsulate what occurred, a significant number of forensic expert hours were invested in performing each of these steps. Once the forensic analysis was performed, with potentially relevant documents and document artifacts retrieved, these documents and artifacts were added to the population of documents for analysis.

As a result of the collections and forensics work, approximately 2TB of user generated content was created. Given the time issues, the sensitivity and especially urgency, a typical workflow of KW searching/linear review and analysis would not work.

Instead, the majority of data stayed in forensic land where significant analysis occurred: forensic experts performed an analysis of the data using specialized forensic tools together with some custom scripting that allowed an analysis of the data using KW searching and source code identification. However, this method to analyze data applied only to user generated content which was not email which required an additional process.

[2] Once the Outlook Deleted Items folder is "emptied" the contents of that folder are still available forensically provided the Outlook PST has not been compacted. (And even then, it may be possible to retrieve some of remaining artifacts.)

Email typically has to be flattened in order for the information contained in it to be appropriately identified and searchable. Here, approximately 500GB of email had to be processed and analyzed effectively. Once basic processing occurred, the metadata and text (and only the metadata and text) were loaded into a hosted review tool – in this case kCura's Relativity – to allow for additional KW searching, additional custom scripting and analysis of that data. Facilitating that process was a team of six search consultants and linguists whose sole function was to narrow the scope of documents to be analyzed. It was also during this stage that attorneys and experts began their review of data and documents that had met certain criteria.

The result? Less than three thousand documents were ultimately reviewed by attorneys. However, and more importantly, the company had daily visibility and control over a process during a particularly sensitive time.

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Editor's Message

Now completing our third year of publication, this issue of the *EDDE Journal* presents articles from lawyers in various-sized law firms and in corporations. The first article is from Bennett Borden and Neil Magnuson of Williams Mullen, both writing here for the first time, describing how to leverage proportionality. The second article is from Chioma Deere of Justus Reid & Associates, also for the first time, writing about databases and e-discovery. The third article is from the lawyers at Covington & Burling, LLP led by Edward Rippey, authoring with Jihad Beauchman. This discusses getting documents from Mac computers and iOS devices for discovery purposes. The fourth article is from Eamonn Markham of SFL Data, with his first article in the *EDDE Journal*. This article covers trade secret investigations in cross-border and domestics situations. Thank you to all of the authors for their submissions.

The ABA's Center for Professional Development (formerly Center for Continuing Legal Education) would like to announce that the ABA Section of Science and Technology Law is hosting the "E-Discovery Information Governance" National Institute on January 23 to 25, 2013 in Tampa, FL. The link to the website: http://www.ambar.org/eig2013.

The EDDE committee's e-discovery workshops, pre-RSA meetings, the webinars, other face-to-face meetings, and other educational and professional activities are best located on the committee's website and listserv. You will also find the prior issues of this publication there. Please join the committee and volunteer for one of its many activities if you have not already done so.

I continue to ask that all readers of the *EDDE Journal* to share with their fellow professionals and committee members by writing an article for this periodical. Our next issue (Winter 2013) will come out in December, 2012. There are many of you who have not yet been able to share your experience and knowledge through publishing an article here but please consider doing so to widen the understanding of all of our readers. Every qualified submission meeting the requirements explained in the Author Guidelines will be published, so please feel free to submit your articles or ideas, even if you are not quite ready for final publication. The issue after Winter (Spring 2013) will be published in March 2013. Until then.