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E-Discovery for Arbitrators

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Introduction

No citation is required to establish the principle that throughout the world today most information is stored electronically. It is no surprise, therefore, that everyone involved with dispute resolution – whether within a judicial system or arbitration – has an interest in rules governing the production of electronically stored information to comply with production obligations or orders of the tribunal.

In the United States, 'e-discovery' had been addressed ad hoc in the federal courts until the Civil Rules Advisory Committee of the United States Judicial Conference[1] adopted new rules for discovery of 'electronically stored information'. They became effective on 1 December 2006.[2] According to the Advisory Committee, the new rules are intended 'to be broad enough to cover all current types of computer-based information, and flexible enough to encompass future changes and developments'. What I will call the 'e-discovery

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1 See www.uscourts.gov/rules/proceduresum.htm for a description of the rule-making procedure.

2 The Advisory Committee report, dated 5 May 2005, can be found at www.uscourts.gov/rules/Reports/CV5-2005.pdf. The rules are applicable in the federal courts. State courts in the United States must develop their own rules, state by state, although the Conference of Chief Judges of the State Supreme Courts has issued guidelines on e-discovery which, for the most part, mimic the federal e-discovery rules. See Guidelines for State Trial Courts Regarding Discovery of Electronically-Stored Information (August 2006) which can be found at www.ncsconline.org/WC/Publications/CS_ElDiscCCJGuidelines.pdf. The Federal Rules of Civil Procedure were 'restyled' effective 1 December 2007. In some cases, rules have been renumbered. See www.uscourts.gov/rules/congress0407.htm to find the text of the new rules and supporting documentation. All cites below are to the restyled rules except, in some cases, for quotations from decisions.

rules' address, among other things, the obligations of lawyers to meet and confer to establish ground rules for the production of electronically stored information, the difference between 'accessible data' and data that are not accessible because of 'undue burden or cost', conditions for obtaining data that are not reasonably accessible because of undue burden or cost, forms of production of electronically stored information, sampling of inaccessible data to determine relevance, and devices for addressing attorney–client privileged information contained within electronically stored information.[3]

Many international arbitrators use Article 3 of the IBA Rules on the Taking of Evidence in International Commercial Arbitration (IBA Rules) to address the production of documents.[4] The preamble to the IBA Rules states that the rules are 'intended to govern in an efficient and economical manner' the taking of evidence in international arbitrations which 'shall be conducted on the principle that each Party shall be entitled to know, reasonably in advance of any Evidentiary Hearing, the evidence on which the other parties rely'.

The IBA Rules were adopted on 1 June 1999. Their authors anticipated electronic document production. Article 1 to the IBA Rules defines 'document' as a 'writing of any kind, whether recorded on paper, electronic means, audio or visual recordings or any other mechanical or electronic means of storing or recording information'. Beyond this reference, the IBA Rules offer no guidance on 'electronic documents'.

I first describe the IBA Rules. Then I describe the difference between the paper world and the electronic world and how the federal courts in the United States responded to those differences with the e-discovery rules. I next outline the 'duty to preserve' as interpreted by US courts because it takes on greater significance in the electronic world for reasons explained below. I then return to the IBA Rules to test their scope in relation to electronic document production and make suggestions for possible changes to the IBA Rules to account for electronically stored information or, at a minimum, research that could be conducted to evaluate the need for such changes.

The IBA Rules

Article 3.1 of the IBA Rules begins by stating that each party 'shall submit' to the tribunal and the other parties 'all documents available to it on which it relies'. Under Article 3.2, within the time provided by the tribunal, a party may also submit a request to produce. Under Article 3.3, the request 'shall contain':

3 See, generally, Barkett, *The Battle for Bytes: New Rule 26 and the Return of the Judges* (Shook Hardy & Bacon, 2007) available at www.shb.com/FileUploads/newrule26_1737.pdf.

4 See www.camera-arbitrale.com/upload/file/1234/617497/FILENAME/IBA%20Rules%20on%20Taking%20of%20Evidence%201999.pdf.

- a description of 'a requested document sufficient to identify it', or a description 'in sufficient detail (including subject matter) of a narrow and specific requested category of documents' that are 'reasonably believed to exist';
- a description of how the documents requested 'are relevant and material to the outcome of the case'; and
- a statement that the documents requested are not in the possession, custody or control of the requesting party, and the reason why the requesting party assumes the documents requested are in the possession, custody or control of the producing party.

Article 3.4 provides that within the time ordered by the tribunal, the producing party 'shall produce' to the tribunal and the other parties 'all the documents requested in its possession, custody, or control as to which no objection is made'.

If the producing party has objections, the objections are to be made in writing and within the time ordered by the tribunal. Article 3.5 provides that the 'reasons for such objections shall be any of those set forth in Article 9.2'.

Article 9.2 states in pertinent part that the tribunal shall exclude 'from evidence or production' any document 'for any of the following reasons':

'(a) lack of sufficient relevance or materiality;
(b) legal impediment or privilege under the legal or ethical rules determined by the Arbitral Tribunal to be applicable;
(c) unreasonable burden to produce the requested evidence;
(d) loss or destruction of the document that has been reasonably shown to have occurred;
(e) grounds of commercial or technical confidentiality that the Arbitral Tribunal determines to be compelling;
(f) grounds of special political or institutional sensitivity (including evidence that has been classified as secret by a government or a public international institution) that the Arbitral Tribunal determines to be compelling; or
(g) considerations of fairness or equality of the Parties that the Arbitral Tribunal determines to be compelling'.

After receipt of objections, under Article 3.6, the tribunal 'in consultation with the parties and in timely fashion', then considers the request and the objections. The tribunal 'may order' the producing party to produce the requested documents in its possession, custody or control 'as to which the tribunal determines' that (i) the issues that the requesting party 'wishes to prove are relevant and material to the outcome of the case', and (ii) 'none of the reasons for objections set forth in Article 9.2 apply'.

Under Article 3.7, in 'exceptional circumstances', if the 'propriety of an

objection' can only be determined by review of the document, the tribunal may determine that it should not review the document and instead may, after consultation with the parties, appoint an impartial expert 'bound to confidentiality' to review the document and report on the objection. If the objection is upheld, the expert 'shall not disclose' to the tribunal and the other parties 'the contents of the document reviewed'.

Article 3.8 provides that, to obtain documents from third parties, a requesting party may, within the time ordered by the tribunal, ask the tribunal 'to take whatever steps are legally available to obtain the requested documents'. The requesting party has to identify the documents 'in sufficient detail and state why such documents are relevant and material to the outcome of the case'. The tribunal then decides the request and 'shall take the necessary steps if in its discretion it determines that the documents would be relevant and material'.

Under Article 3.9, the tribunal has the right to ask a party to produce 'any documents that it believes to be relevant and material to the outcome of the case'. A producing party may object based on any of the reasons set forth in Article 9.2. The tribunal then must decide whether to order production for the reasons set forth in Article 3.6 using, if the tribunal considers it appropriate, the procedures set forth in Article 3.7.

Article 3.10 allows parties to submit additional documents 'which they believe have become relevant and material' as a consequence of the issues raised in documents, witness statements, or expert reports or in other submissions of the parties.

If copies are submitted or produced, under Article 3.11, 'they must conform fully to the originals'. In addition, the tribunal may request that 'any original must be presented for inspection'.

Article 9.4 addresses the adverse inference. If a party 'fails without satisfactory explanation to produce any document requested' in a request for production 'to which it has not objected in due time', or if a party 'fails to produce any document ordered to be produced' by the tribunal, the tribunal 'may infer that such document would be adverse to the interest of that party'.[5]

5 Article 9.5 parallels Article 9.4, but it applies to failures by a party without satisfactory explanation to make available 'any other relevant evidence, including testimony' requested by another party or ordered by the tribunal to be produced where there are no objections in due time. I do not discuss Article 9.5 separately because I have assumed that electronically stored information would be covered by the use of 'document' in Article 9.4 or the result would be the same under Article 9.5 if electronically stored information qualifies as 'any other relevant evidence'.

Electronically stored information versus paper

The digital world materially differs from the paper world.

Everyone is a file keeper

In the paper world, documents usually are given to members of staff for filing. In the digital world, every computer user who sends or receives e-mail, creates word-processed documents, prepares spreadsheets or information slides, or maintains databases decides whether to store files and has the ability to modify or delete a file. Even if the digital file keeper takes no action, eventually e-mail will likely move to backup tape and usually that backup tape will be overwritten after a period of time and the file may be lost for ever.[6]

In the paper world, when an employee leaves employment, the employee's documents, already archived, may remain in that state until record-retention schedules call for their destruction. In the digital world, when an employee leaves employment, the employee's desktop or laptop hard drive (or both) may be reformatted destroying all data on the drive(s) unless someone decides that there are litigation or business reasons to maintain that employee's digital status quo.[7]

In the paper world, when, say, a major construction project was completed, the paper associated with the project might be boxed and stored in a warehouse. In the digital world, the desktop and laptop computers used by everyone in the field will be moved to the next job and file management will be a function of project organisation or perhaps serendipity depending upon the individual file-keeping habits of each person on the job.

6 An individual user can archive an e-mail in local storage media and that may be the only place to find a document. See *Hynix Semiconductor Inc et al. v Rambus Inc*, 2006 US Dist LEXIS 30690, *27–8 (ND Calif 5 January 2006) (explaining that Rambus changed to a backup recycling schedule of three months and that employees should create their own archive copies of documents; for e-mail that meant printing them or keeping them 'on your hard drive').

7 See, eg, *Cache La Poudre Feeds, LLC v Land O'Lakes, Inc et al.*, 2007 US Dist LEXIS 15277 (D Colo 2 March 2007) (wiping clean the computer hard drives of former employees, among other conduct, was sanctionable in the circumstances, but since the prejudice was not substantial, sanctions were limited to US$5,000 and reimbursement of certain court-reporting costs).

Metadata

A second key difference is the existence of 'metadata'. The Sedona Glossary[8] defines metadata as 'information about a particular data set or document which describes how, when and by whom it was collected, created, accessed, modified and how it is formatted'. A pocket guide provided to federal judges in the United States by the US Judicial Conference gives this definition of metadata:

> 'Metadata, which most computer users never see, provide information about an electronic file, such as the date it was created, its author, when and by whom it was edited, what edits were made, and, in the case of e-mail, the history of its transmission.'[9]

Yet another description appears in *Williams v Sprint/United Mgmt Comp*, 230 FRD 640, 646 (D Kan 2005) (footnotes omitted):

> 'Some examples of metadata for electronic documents include: a file's name, a file's location (eg, directory structure or pathname), file format or file type, file size, file dates (eg, creation date, date of last data modification, date of last data access, and date of last metadata modification), and file permissions (eg, who can read the data, who can write to it, who can run it). Some metadata, such as file dates and sizes, can easily be seen by users; other metadata can be hidden or embedded and unavailable to computer users who are not technically adept.'

Deleted data that do not die

A third key difference is that digital data can survive deletion, while paper that is discarded is not likely to be found again. The Sedona Glossary (p 14) gives this definition of 'deleted data':

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8 This definition comes from *The Sedona Conference Glossary: E-Discovery & Digital Information Management*, p 33 (December 2007) available at www.sedonaconference.org/dltForm?did=TSCGlossary_12_07.pdf (Sedona Glossary). The Sedona Glossary continues by explaining that metadata can be 'altered intentionally or inadvertently'. It can be 'extracted when native files are converted to image'. Some metadata, such as file dates and sizes, 'can easily be seen by users'; other metadata 'can be hidden or embedded and unavailable to computer users who are not technically adept. Metadata is generally not reproduced in full form when a document is printed'. The Sedona Conference working group series 'is a series of think-tanks consisting of leading jurists, lawyers, experts and consultants brought together by a desire to address various "tipping point" issues in each area under consideration'. See www.thesedonaconference.org/. The Sedona Conference Working Group on Electronic Document Retention and Production has also published the second edition of *Best Practices Recommendations & Principles for Addressing Electronic Document Production* (June 2007). The document can be downloaded by going to the Sedona Conference website. See www.thesedonaconference.org/dltForm?did=TSC_PRINCP_2nd_ed_607.pdf.

9 *Managing Discovery of Electronic Information: A Pocket Guide for Judges* (Federal Judicial Center, 2007), p 3. The document is available at www.uscourts.gov/rules/eldscpkt.pdf.

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

So, for example, a computer user moves data to 'trash' or the 'recycle bin'. Until the trash or bin is emptied, the data remain fully restorable. Once the trash or bin is emptied, the data may be restored by forensic experts who may be able to reconstruct data fragments to recreate the deleted file, unless the storage media in question has been 'wiped', typically by software designed to achieve this aim.[10]

Multiple sources of data

A fourth key difference is the proliferation of data sources over paper. A 'key player' in a particular dispute may have information stored in a number of places. Consider these possibilities:

- Office desktop storage media
- Office backup storage media
- Office laptop storage media
- Optical discs like CDs (compact discs) or DVDs (digital video disc or digital

10 See, eg, *Kucala Enterprises, Ltd v Auto Wax Co, Inc*, 2003 US Dist LEXIS 8833 (ND Ill 2003). In the course of this patent infringement case, Kucala installed and used Evidence EliminatorTM software on a computer, just hours before it was to be examined by Auto Wax's computer specialist. The magistrate judge explained that 'Evidence Eliminator' is a program designed to clean computer hard drives of data that may have been deleted by the user but still remain on the hard drive. Kucala also threw two other computers away during the litigation. He did so, he said, because they had crashed and were of no use to him. Kucala also admitted destroying documents, contrary to his attorney's advice, because he was afraid the defendant would not honour a protective order that was in place. Auto Wax's computer specialist inspected the computer on which Kucala had installed Evidence Eliminator and confirmed that the software had been used to delete and overwrite more than 14,000 files. Auto Wax filed a motion for sanctions alleging prejudice as a result of Kucala's destruction of one computer and deletion of relevant discovery from two others. Auto Wax sought a default judgment, attorneys' fees, expert fees and costs. The magistrate judge found that Kucala had acted unreasonably, with gross negligence, and in flagrant disregard of the district court's order by deleting files just hours before Auto Wax's computer specialist was to inspect his computer. The magistrate judge recommended that the district court dismiss the action and require Kucala to pay the costs and attorney fees incurred by Auto Wax from the time Kucala deleted the files until the hearing.

versatile discs)
- Floppy discs
- Flash or 'thumb' drives
- Home computer storage media, including external hard drives and portable drives
- Personal laptop storage media
- Office or home voice mail
- Cellphone voice mail
- Personal digital assistants
- Web-based storage
- Home or personal e-mail systems
- Devices that send or receive instant messages
- Printers, scanners and copiers with computer memory
- Memory cards (eg, from cameras)
- In appropriate cases, global positioning devices

Backup tapes

Another key difference between the paper and electronic worlds is the existence of backup tapes,[11] typically used for disaster recovery purposes. Backup tapes contain extraordinary amounts of information. To illustrate, consider this explanation from the US Judicial Center's *Manual for Complex Litigation* on the volume of electronic information:

> 'The sheer volume of such data, when compared with conventional paper documentation, can be staggering. A floppy disk, with 1.44 megabytes, is the equivalent of 720 typewritten pages of plain text. A CD-ROM, with 650 megabytes, can hold up to 325,000 typewritten pages. One gigabyte is the equivalent of 500,000 typewritten pages. Large corporate computer networks create backup data measured in terabytes, or 1,000,000 megabytes: each terabyte[12] represents the

11 The Sedona Glossary (p 5) defines 'backup tape' as follows: 'Magnetic tape used to store copies of ESI [electronically stored information], for use when restoration or recovery ESI is required. ESI on backup tape is generally recorded and stored sequentially, rather than randomly, meaning in order to locate and access a specific file or data set, all ESI on the tape preceding the target must first be read, a time-consuming and inefficient process. Backup tapes typically use data compression, which increases restoration time and expense, given the lack of uniform standards governing data compression.'

12 A 'byte' is the basic measurement of 'most computer data and consists of 8 bits.' A 'bit' is a 'binary digit'. A bit consists of either a 0 or 1. Generalising, in computer code, for a word processing system, 0s and 1s (electronically switched off or on) are strung together to represent letters, numbers, and punctuation. There are eight bits in a byte. There are 1,024 bytes in a kilobyte, 1,048,576 bytes in a megabyte, 1,073,741,824 bytes in a gigabyte, and 1,099,511,627,776 bytes in a terabyte. See http://kb.iu.edu/data/ackw.html.

equivalent of 500 billion typewritten pages of plain text.' (*Manual for Complex Litigation (4th)*, ss 11.446.)[13]

One of the reasons backup tapes contain so much data is duplication. An entity that backs up daily, weekly and monthly will have 30 daily tapes, four or five weekly tapes and one monthly tape after a 30-day month. The tapes will contain all of the information stored as of the time of backup. Hence, a daily backup on a Tuesday will contain Monday and Tuesday's information. A weekly backup on a Friday will contain whatever information is stored since the last weekly backup plus all of the information contained on the prior weekly backup tape. The monthly tape will contain whatever has been stored since the prior month's backup tape and will duplicate much of the information on the daily and weekly backup tapes. Backup tapes are recycled after a period of time as well.

Backup tapes are typically not reasonably accessible, as compared to 'active data' which can be easily accessed by a user.[14]

Perhaps as significant as volume, backup tapes may be the only place that certain documents reside. Unless they were printed, prior versions of a document may only exist on backup because they would be overwritten each time a computer user edits the file contained in active data storage. An individual that does not archive an e-mail on his or her individual hard drive will lose that e-mail to backup after a period of time. Backup tapes may also reveal whether an individual has deleted an e-mail. For example, backup

13 See www.fjc.gov/public/home.nsf/autoframe?openform&url_l=/public/home.nsf/inavgeneral?openpage&url_r=/public/home.nsf/pages/470.

14 One court has described the difference between data that are 'accessible' and data which are 'inaccessible'. Data which are (1) 'online' or archived on current computer systems (such as hard drives); (2) 'near-line' such as that stored on optical disks or magnetic tape that is stored in a robotic storage library from which records can be retrieved in two minutes or less; or (3) 'off-line' but in storage or archives, such as removable optical disk (eg, CD-ROM or Digital Versatile Disc (DVD)) or magnetic tape media (eg, Digital Linear Tape (DLT) tape), are readily accessible using standard search engines because the data are retained in machine readable format. *Zubulake v UBS Warburg* LLC, 217 FRD 309, 318–20 (SDNY 2003). On the other hand, (4) routine disaster recovery backup tapes that save information in compressed, sequential, and nonindexed format; and (5) erased, fragmented, or damaged data, are generally inaccessible, because a time-consuming, expensive restoration process is required to obtain information (*ibid* at 319–20).

tapes will not capture an e-mail received by an individual and deleted the same day.[15]

Retrieval of information from backup tapes can also be costly. There are the costs of restoration, retrieval and review. Illustratively, in *Zubulake v UBS Warburg LLC*, 216 FRD 280 (SDNY 2003),[16] there was a battle over the production of 77 backup tapes. The district court ordered UBS Warburg to restore at its expense five tapes to give the district court an idea of both the cost to restore and the relevance of the information contained on the backup tapes. The cost to restore five backup tapes was US$19,003.43 which resulted in the production of 600 e-mails responsive to the plaintiff's request for production. UBS Warburg estimated that the cost to restore the remaining 72 tapes was US$273,649.39 and the cost to review the data before production would be US$107,694.72.

One of the many reasons that review costs can be so great is that backup data do not easily distinguish attorney–client privileged information. In-house counsel communications, where they have privileged status, as well as outside counsel communications with a client can be buried among millions of pages of documents on a backup tape. To identify privileged documents is both time-consuming and costly.

15 To illustrate, in *Zubulake v UBS Warburg* LLC, 217 FRD 309 (SDNY 2003), the district court explained UBS Warburg's electronic storage architecture: 'UBS backed up its e-mails at three intervals: (1) daily, at the end of each day, (2) weekly, on Friday nights, and (3) monthly, on the last business day of the month. Nightly backup tapes were kept for twenty working days, weekly tapes for one year, and monthly tapes for three years. After the relevant time period elapsed, the tapes were recycled' (*ibid* at 314). The district court also explained why backup tapes might not contain certain e-mails: 'Of course, periodic backups such as UBS's necessarily entails [sic] the loss of certain e-mails. Because backups were conducted only intermittently, some e-mails that were deleted from the server were never backed up. For example, if a user both received and deleted an e-mail on the same day, it would not reside on any backup tape. Similarly, an e-mail received and deleted within the span of one month would not exist on the monthly backup, although it might exist on a weekly or daily backup, if those tapes still exist' (*ibid* at 314, n 25).

16 Ms Zubulake alleged she was a victim of gender discrimination and was eventually terminated and then filed an additional claim that she was retaliated against for complaining about the employment practices of her supervisor (216 FRD at 281). The district court explained that under the Federal Rules of Civil Procedure, the presumption is that the producing party pays for production of accessible data. In addition, the district court held that the cost to review should always be borne by the producing party. With respect to the cost to retrieve, the district court evaluated each of seven factors identified by the district court as relevant to the determination of who should pay this cost, and decided to shift 25 per cent of the cost to the requesting party, Ms Zubulake (216 FRD at 283–90).

Key players

In the paper world, there is not necessarily a premium placed on the correct identification of persons with knowledge or information about a claim – 'key players' – because paper is kept for a long time by many companies. In the electronic world, the identification of key players is much more significant because delayed identification of key players can result in the loss of relevant information.

For example, in *Consolidated Aluminum Co v Alcoa*, 2006 US Dist LEXIS 66642 (ED La 19 July 2006), four key players initially were identified in November 2002 when Alcoa sent a demand letter to Conalco for costs associated with an environmental clean-up. Conalco then decided to sue in 2003 seeking a declaration of non-liability. In 2005, Conalco issued a request for production which prompted Alcoa to identify eleven more key players. In the interim, however, the e-mails of these eleven individuals had been erased because of Alcoa's e-mail backup retention protocol.[17] Conalco moved for sanctions. The district court refused punitive sanctions demands but required Alcoa to pay the reasonable costs and fees Conalco incurred to bring the motion for sanctions and also to pay the cost of redeposing up to 13 people, in addition to allowing Conalco to serve certain additional discovery requests.

Similarly, in *E*Trade Sec LLC v Deutsche Bank AG*, 2005 US Dist LEXIS 3021 (D Minn 17 Feb 2005), a defendant, NSI, in 2001, put a litigation hold on backup tapes but not e-mail messages because all e-mail messages were backed up. However, the backup tapes were recycled after three years, a policy that was never changed even though the litigation had continued more than three years beyond the date of the litigation hold. When it became clear in 2004 that additional e-mail boxes needed to be searched beyond those of the initial 'key' players, the e-mails were no longer available because of the three-year overwrite policy. An adverse inference instruction was approved as a sanction.

17 Alcoa submitted an affidavit describing the protocol: 'Once every week, all messages older than (30) days in a user's Exchange mailbox are moved to a "System Cleanup" folder. At the same time, all messages older than fifteen (15) days (forty-five (45) days total) in a user's System cleanup folder are deleted and are no longer directly recoverable by the user. ... In addition, Alcoa's disaster recovery system retains email for the trailing six (6) months' (2006 US Dist LEXIS at *19, n 12). That prompted the magistrate judge to say: 'Thus, it is possible that relevant emails for the six (6) months prior to November 2002 could have been retrieved, had Alcoa properly suspended its routine document destruction policy when it became aware of potential litigation with Consolidated in November 2002' (*ibid* at *19).

Forms of production

In the world of electronically stored information, there are also choices on the form of production. A requesting party may seek production in 'native' format: the file as it exists on the storage media on which it is stored with its associated metadata. A producing party may prefer to produce documents in 'Tagged Image File Format' (TIFF)[18] or 'Portable Document Format' (PDF)[19] in order to, among other reasons, bates-label the documents. Vendors should be able to link meaningful metadata to an associated TIFF or PDF image depending upon the agreement of parties or the scope of a court's order on production of electronically stored information.[20]

Of course, there is always paper. Electronic files might be printed for production in paper format.

Parties that want to be able to perform electronic searches will want data in a searchable format. In addition, there may be reasons to obtain electronically stored information in different formats. For example, word-processed documents could be imaged with word search capabilities while spreadsheets may be produced in native format to view the formulae used in the spreadsheet.

Against this windshield survey of the differences between paper and electronically stored information, the rules governing e-discovery in US federal courts were created.

The US e-discovery rules

Taking into account many of the differences between paper and electronically stored information, the US e-discovery rules emphasise the importance of communication between counsel and client, between counsel for opposing parties and between counsel and the court.

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18 The Sedona Glossary (p 51) defines TIFF as: 'A widely used and supported graphic file formats for storing bit-mapped images, with many different compression formats and resolutions. File name has .TIF extension. Can be black and white, gray-scaled, or color. Images are stored in tagged fields, and programs use the tags to accept or ignore fields, depending on the application.'

19 The Sedona Glossary (p 39) defines PDF as: 'An imaging file format technology developed by Adobe Systems. PDF captures formatting information from a variety of applications in such a way that they can be viewed and printed as they were intended in their original application by practically any computer, on multiple platforms, regardless of the specific application in which the original was created. PDF files may be text-searchable or image-only. Adobe® Reader, a free application distributed by Adobe Systems, is required to view a file in PDF format. Adobe® Acrobat, an application marketed by Adobe Systems, is required to edit, capture text, or otherwise manipulate a file in PDF format.'

20 According to the Sedona Glossary definition of 'native format' (p 35), 'static' formats such as TIFF or PDF 'are designed to retain an image of the document as it would look viewed in the original creating application but do not allow metadata to be viewed or the document information to be manipulated'.

Meet and confer

Rule 26 requires that counsel confer shortly after a lawsuit is filed to map out a discovery plan and otherwise agree on a pre-trial schedule that the district court can consider at the conference with the district court required under Rule 16. Rule 26(f) requires counsel to discuss: (1) 'any issues' relating to 'disclosure' of electronically stored information, 'including the form or forms in which it should be produced'; and (2) any issues relating to claims of privilege including assertion of privilege *after* production.[21]

The first change is critical because the lack of communication or miscommunication by counsel is a common cause of e-discovery controversy among parties. The requirement that lawyers discuss e-discovery issues up-front is intended to minimise the potential for later disputes.[22]

Dealing with privileged documents

The second change is critical because privilege review may be prohibitively expensive in a preproduction electronic document setting. Hence, the change in the rule contemplates the use of what are referred to as 'quick peek' and 'clawback' agreements where a producing party can produce electronic documents including privileged documents for a 'quick peek' by one's opponent, review files selected for copying by the requesting party and clawback privileged documents[23] under an order that provides that no

21 Proceeding sequentially to the Rule 16 scheduling order, paragraphs (b)(3)(iii) and (iv) in Rule 16 permit the district court's scheduling order to include in parallel provisions for 'disclosure or discovery of electronically stored information' and any agreements the parties reach for asserting claims of privilege or of protection as trial-preparation material after information is produced'.

22 Lawyers in US courts who fail to comprehend a client's electronic information system over the period of time relevant to the claims in question are treading in perilous waters. See, eg, *Evolution, Inc v The Suntrust Bank et al.*, 2004 US Dist LEXIS 20490 (D Ks 2004), where a special master had to be appointed to straighten out the parties' e-discovery disputes, generating a bill of US$52,140 which was allocated 70 per cent to the defendant, in part, because of defendant's lack of digital cooperation. See also *Tracy v Financial Ins Mngmnt Corp*, 2005 WL 2100261 (SD Ind 22 August 2005) (sanctioning a defendant for a belated electronic production that was 'not substantially justified'; the defendant had physically upgraded its computer system and had failed to produce e-mails in a timely manner because, due to the upgrades, the e-mails were stored in a different location that was not initially searched).

23 See, eg, *JC Assocs v Fidelity & Guaranty Ins Co*, 2005 WL 1570140 (DDC July 2005) (where the plaintiff sought claims files that the defendant estimated might total 1.3 million files, and the plaintiff then focused on a geographic subset of 448 files, the magistrate judge proposed a quick peek and clawback protective order and gave the defendant ten days to determine whether it would surrender the files on this basis).

waiver of the privilege has occurred despite the 'quick peek'.[24]

Subsection (B) in Rule 26(b)(5) addresses what a party who inadvertently produced privileged documents in the absence of a clawback agreement must do to attempt to protect the privilege. It must give notice and preserve the information until the claim of privilege is resolved. Once notice is received by the recipient of the documents, the recipient must, among other things, promptly return, sequester or destroy the information and any copies and not use or disclose the information until the claim of waiver of the privilege is addressed.

Documents not reasonably accessible because of undue burden or cost

Rule 26(b)(2)(B) addresses the distinction between 'accessible' and 'inaccessible' documents. It provides:

> 'A party need not provide discovery of electronically stored information from sources that the party identifies as not reasonably accessible because of undue burden or cost. On motion to compel discovery or for a protective order, the party from whom discovery is sought must show that the information is not reasonably accessible because of undue burden or cost. If that showing is made, the court may nonetheless order discovery from such sources if the requesting party shows good cause, considering the limitations of Rule 26(b)(2)(C). The court may specify conditions for such discovery.'

The Civil Rules Advisory Committee's Report gives examples of sources of electronically stored information that may qualify under this standard: backup tapes intended for disaster recovery purposes 'that are often not

24 The astute reader will immediately ask: what of privilege-waiver claims by third parties, such as government agencies, seeking the same documents? Without a court order this is a genuine risk. See *Hopson v Mayor and City Council of Baltimore et al.*, 232 FRD 228, 244 (D Md 2005) (an order preserving the privilege was essential to avoid waiver *vis-à-vis* third parties, but no such order would be issued until the producing party had first undertaken a preproduction privilege review that is reasonable under the circumstances unless 'it can be demonstrated with particularity that it would be unduly burdensome or expensive to do so' based on the cost-benefit balancing factors in current Rule 26(b)(2)) (*ibid* at 244). In May 2007, the United States Advisory Committee on the Federal Rules of Evidence proposed new Rule 502 which would protect the privilege and preclude waiver claims by third parties if production is made to an opponent in litigation under a 'quick peek' or 'clawback' agreement as long as there is a court order providing such protection. See www.uscourts.gov/rules/Reports/EV05-2007.pdf. The new Rule must be approved by the Congress of the United States before it can go into effect (*ibid*). S 2450 was introduced in the United States Senate to adopt Rule 502. See www.govtrack.us/congress/bill.xpd?bill=s110-2450.

indexed, organized, or susceptible to electronic searching'; 'legacy data' from 'obsolete systems and is unintelligible on the successor systems'; data that was deleted 'but remains in fragmented form, requiring a modern version of forensics to restore and retrieve'; and 'databases that were designed to create certain information in certain ways and that cannot readily create very different kinds or forms of information'.[25]

The producing party must 'identify' the sources of inaccessible electronically stored information because of 'undue burden or cost'. What does 'identify' mean? The Advisory Committee Note to 26(b)(2) provides that in response to a Rule 34 request for documents, a responding party 'must' identify:

> 'by category or type the sources containing potentially responsive information that it is neither searching nor producing. The identification should, to the extent possible, provide enough detail to enable the requesting party to evaluate the burdens and costs of providing the discovery and the likelihood of finding responsive information on the identified sources'.

An 'undue' burden is one determined by reference to the 'proportionality' limitations contained in Rule 26(b)(2)(C). If electronically stored information is inaccessible because of undue burden or cost, to evaluate good cause and to specify conditions for such discovery (eg, limits on the amount, type, or sources of information, cost-shifting, privilege protocols), Rule 26(b)(2)(C) provides this guidance to the district court:

> 'On motion or on its own, the court must limit the frequency or extent of the discovery otherwise allowed by these rules or by local rule if it determines that:
>
> (i) the discovery sought is unreasonably cumulative or duplicative, or can be obtained from some other source that is more convenient, less burdensome, or less expensive;
>
> (ii) the party seeking discovery has had ample opportunity to obtain the information by discovery in the action; or
>
> (iii) the burden or expense of the proposed discovery outweighs its likely benefit, considering the needs of the case, the amount in controversy, the parties' resources, the importance of the issues at stake in the action, and the importance of the discovery in resolving the issues.'

The Advisory Committee Note to Rule 26(b)(2) lists other 'appropriate considerations' that the district court may consider in evaluating whether the burdens and costs of discovery of electronically stored information that is not

25 www.uscourts.gov/rules/Reports/CV5-2005.pdf, p 42.

reasonably accessible 'can be justified in the circumstances of the case':

- the specificity of the discovery request;
- the quantity of information available from other and more easily accessed sources;
- the failure to produce relevant information that seems likely to have existed but is no longer available on more easily accessed sources;
- the likelihood of finding relevant, responsive information that cannot be obtained from other, more easily accessed sources;
- predictions as to the importance and usefulness of the further information;
- the importance of the issues at stake in the litigation; and
- the party's resources.[26]

Answering written questions with electronically stored information

Existing Rule 33(d) discusses the option to produce business records in lieu of answering an interrogatory, where the answer to the interrogatory may be derived or ascertained from business records and the burden of deriving or ascertaining the answer is substantially the same for the party serving the interrogatory as for the party served. Rule 33(d) now defines business records as 'including electronically stored information'. Access to hardware, software, technical support, passwords, source code or other assistance may have to be provided by the responding party, limiting, perhaps, the utility of this change.

The definition of documents

A significant change in Rule 34 is the distinction made between 'documents' and 'electronically stored information'. Rule 34 now provides that a party

26 In the end, an 'undue burden', of course, is whatever a tribunal decides it is. Counsel must comprehend a client's inaccessible sources of information early and thoroughly to be in the best position to educate a judge who will decide what is 'undue'. Marginal utility will be the focus of the balancing process: does the burden 'tilt' in favour of the requesting party (eg, because there is a strong likelihood that material information is located only on the inaccessible storage media) or the producing party (eg, if the overbreadth of the request for information is blatant) relative to the cost to obtain the information? Cf In Re: Priceline.Com Inc, 2005 US Dist LEXIS 33636, *11 (D Conn 8 December 2005) (where the district court set forth nine directives to manage e-discovery including one requiring that restoration of 223 backup tapes (estimated to cost US$200 to US$800 per tape in addition to the cost of searching the files, culling for duplicate files, and converting responsive files for production), the court saying discovery 'shall proceed on a measured basis, with cost-shifting determinations made at each step of the process').

may serve a request to any other party to produce 'any designated documents or electronically stored information'. Despite some fuzzy language in the Advisory Committee Note, under the revised rule, parties are expected to make specific requests for electronically stored information instead of relying on a broad definition of 'documents'.[27]

Sampling electronically stored information

As a means to control and estimate costs and to evaluate the likelihood that electronic storage media contain relevant information, Rule 34(a) incorporates a 'sampling' technique already employed by a number of courts.[28] Under Rule 34 (a) (1) (A), the producing party can now be asked to permit the requesting party 'to inspect, copy, test, or sample any designated documents or electronically stored information – including sound recordings, images, and other data or data compilations – stored in any medium from which information can be obtained, translated, if necessary, by respondent into a reasonably usable form'.

27 As noted above, the IBA Rules (Article 1) define 'document' as including a 'writing' or 'information' recorded or stored electronically.

28 See, eg, *Medtronic Sofamor Danek, Inc v Sofamor Danek Holdings, Inc*, 2003 US Dist LEXIS 8587 (WD Tenn 13 May 2003). The case involved 'trade secrets, patents, and trade information' in the field of spinal fusion medical technology (*ibid* at *4). At issue was the production of approximately 993 computer network backup tapes with 61 terabytes of data and electronic files of individuals that contained 300 gigabytes of data. The magistrate judge estimated the costs of restoring 996 tapes at between US$597,000 and US$1.1 million and the cost of searching the tapes in the range of US$3.2 million. These costs were about 2 per cent of the amount being claimed but were 'undue' 'primarily due to the requesting party's decision not to limit the scope of production' (*ibid* at *28). The magistrate judge set forth a detailed protocol that would govern electronic document production with respect to individual users' files and backup tapes as well as searches to be conducted and the costs of producing hard copy or electronic copies of the documents to be produced (*ibid* at *32–52. The magistrate judge required 30 per cent cost-shifting of the costs of restoring year-end backup tapes for 1997–2002 plus all backup tapes for the 30 days preceding the date of the order. The costs would cover extraction of data for 40 individuals identified by the magistrate judge, searching the data using keywords identified in an Appendix A to the magistrate judge's order, and de-duplicating the remaining data. 'All data that remains after this search will be converted to standard images and isolated' (*ibid* at *40–1). To assist the parties, the magistrate judge also ordered them to retain a neutral computer expert and to equally pay for the costs of the services of this expert (*ibid* at *50–1). For other examples, see *Zubulake v UBS Warburg LLC*, 216 FRD 280 (SDNY 2003); *Wiginton et al. v CB Richard Ellis, Inc*, 2004 US Dist LEXIS 15722 (ND Ill 9 August 2004); *Hagenmeyer North America, Inc v Gateway Data Sciences Corp*, 2004 WL 1810273 (ED Wis 12 August 2004).

Form of production

Under Rule 34(b), a requesting party may specify a form of production subject to objection by the producing party. If no form is specified by the requesting party, the producing party can produce electronically stored information in the form in which it is ordinarily maintained or in a form that is reasonably usable. And a producing party need only produce electronically stored information in one form. As explained earlier, if objection is made to the requested form of production and agreement is not reached on it, the district court must resolve the dispute and will almost certainly be guided by an evaluation of costs and benefits.[29]

Third-party production

Rule 45 addressing subpoenas was conformed to Rules 26 and 34.

There is no additional guidance in Rule 45 itself on how to protect third parties from the expense associated with e-discovery obligations, although the Advisory Committee Note alerts the district courts to be vigilant in enforcing the protective provisions of Rule 45(c).[30] Given this warning, one would expect that (a) issuers of subpoenas will tailor the breadth of the request[31] so that important information is being sought that will not be cost-prohibitive for the non-party to obtain, and (b) the likelihood that information will be found, the availability of other sources of the evidence, the amount in controversy and the burden of production will play prominent

29 This rule change will receive considerable judicial attention given developing case law involving metadata. See, eg, *Hagenbuch v 3b6 Sistemi Elettronici Industiali SRL, et al.*, 2006 WL 665005 (ND Ill 8 March 2006) (taking metadata into account, production in native format ordered over objections by producing party who wanted to produce documents in a TIFF format in part so that they could be Bates-numbered).

30 The Advisory Committee Note acknowledges that a subpoena asking a third party to permit testing or sampling 'may present particular issues of burden or intrusion' for the subpoena recipient. It then admonishes the district courts that the 'protective provisions of Rule 45(c) should be enforced with vigilance when such demands are made'. Rules App C-103. The force of this language suggests a need/burden scale will be developed by courts to determine whether testing or sampling should be ordered against a nonparty and to address the costs of such testing or sampling.

31 Rule 45(c)(1) directs a party serving a subpoena to take 'reasonable steps to avoid imposing undue burden or expense on a person subject to the subpoena'. Requesting parties who fail to heed this advice will not likely receive much sympathy from a district court. Cf *Quinby v Westlb AG*, 2006 US Dist LEXIS 1178, *3 (SDNY 11 Jan 2006) (magistrate judge quashed subpoenas to internet service providers for plaintiff's e-mails within a defined period of time because the subpoenas were 'clearly overbroad')

roles in whether the third-party subpoena recipient will even be required to respond.

Sanctions

Rule 37(e)[32] addresses the accidental loss of relevant electronic information by the operation of auto-delete or recycling programs *after* a duty to preserve arises. It provides:

> 'Absent exceptional circumstances, a court may not impose sanctions under these rules on a party for failing to provide electronically stored information lost as a result of the routine, good-faith operation of an electronic information system.'

This rule change raises a number of questions. What are 'exceptional circumstances'? They are not defined but a violation of a preservation order – perhaps even an internal litigation hold – would presumably satisfy this standard.[33]

The language 'routine, good-faith operation of an electronic information system' cannot be read in isolation. In a post-complaint setting, the loss of information – eg, the automatic deletion of certain employees' e-mail – can easily be routine if no changes are made in a litigant's electronic information system to control the loss. Can it be in 'good faith' if the duty to preserve is attached to those employees' e-mail?

At least one decision provides predictable answers to these questions. *Doe v Norwalk Community College*, 2007 US Dist LEXIS 51084 (D Conn 16 July 2007) involved, among other problems, an uncertain record-retention policy for electronically stored information and a failure to suspend backup tape recycling. A motion for sanctions was filed by the plaintiff. Defendant sought the protection of Rule 37(f). The district court rejected the argument:

> 'In addition, as the Commentary to Rule 37(e) indicates, the Rule only applies to information lost "due to the 'routine operation of an electronic information system' – the ways in which such systems are generally designed, programmed, and implemented to meet the party's technical and business needs." See Fed R Civ P 37(e) at Advisory Committee Notes to 2006 Amendment. This Rule therefore appears to require a routine system in order to take advantage of the good faith

32 With the 1 December 2007 amendments to the Federal Rules of Civil Procedure, former Rule 37(f) is now Rule 37(e).

33 The sanctions referenced are those 'under these rules'. Courts have 'inherent power' to issue sanctions irrespective of the rules so this power is unaffected by Rule 37(e). See, eg, *United Medical Supply Co, Inc v United States*, 2007 US Claims LEXIS 207, *263-4 (Ct Fed Claims 27 June 2007) and cases cited therein.

exception, and the court cannot find that the defendants had such a system in place. Indeed, testimony at the Hearings revealed that, after NCC shifted over to the Hartford server in August 2004, emails were backed up for one year; however, emails pre-dating this transfer were only retained for six months or less. Thus, the defendants did not appear to have one consistent, "routine" system in place, and Bissell admitted at Hearing II that the State Librarian's policy [two-year retention protocol for electronic correspondence] was not followed. Counsel for the defendants also indicated at Oral Argument that he was not aware that the defendants did anything to stop the destruction of the backup tapes after NCC's obligation to preserve arose.'

The duty to preserve

Rule 37(e) – indeed the entirety of the e-discovery rules – do not modify a litigant's duty to preserve. Understanding the scope of this duty is the last step in the process of comprehending the additional risks facing disputants in the electronic information world.

In the American judicial system, every litigant knows that once a complaint is filed, there is a duty to preserve relevant documents. But that duty usually arises earlier: a claimant or plaintiff must preserve relevant information once it decides it is going to pursue a claim and a respondent or defendant must preserve relevant information once it knows or reasonably anticipates that litigation is coming.[34]

In the paper world, the pre-litigation duty to preserve usually did not present a significant risk of sanctions. Most US companies keep most paper documents for at least seven years because of US income tax law requirements,

34 The federal circuit courts in the United States have characterised the triggering event for the pre-litigation duty to preserve in a variety of similar ways: (1) knowledge of potential relevance to the claim, *Testa v Wal-Mart Stores, Inc*, 44 F3d 173, 177 (1st Cir 1998); (2) awareness of circumstances likely to give rise to future litigation and destruction of potentially relevant records without particularised inquiry, *Blinzler v Marriott Int'l, Inc*, 81 F3d 1148, 1159 (1st Cir 1996); (3) a party should have known that the evidence may be relevant to future litigation, *Kronish v United States*, 150 F3d 112, 127 (2nd Cir 1998); (4) when a party reasonably should know that the evidence may be relevant to anticipated litigation, *Silvestri v General Motors Corp*, 271 F3d 583, 591 (4th Cir 2001); (5) destruction of evidence foreseeably pertinent to litigation, *Welsh v United States*, 844 F2d 1239, 1247–8 (6th Cir 1988); (6) being sensitive to the possibility of a suit, a company then destroys the very files that would be expected to contain the evidence most relevant to such a suit, *Partington v Broyhill Furniture Indus, Inc*, 999 F2d 269, 272 (7th Cir 1993); and (7) if the corporation knew or should have known that the documents would become material at some point in the future, *Lewy v Remington Arms Co, Inc*, 836 F2d 1104, 1112 (8th Cir 1988).

and many companies keep test data for ever. Most claims cannot be brought after periods of, typically, two to five years because of statutes of limitation. Hence, paper documents, usually, are available for production.

In the electronic world, as noted earlier, every company employee is in charge of his or her own e-mails and other electronically stored records. Executives or managers who, in the paper world, never worried about a document because it was filed by a secretary or assistant, in the electronic world have document preservation responsibilities that they were never trained to handle, nor to which they have had to pay attention.[35] In the electronic world, the pre-litigation duty to preserve poses danger because of routine electronic recycling programs for e-mail and backup tapes on the one hand, and individual document storage habits on the other. *When* the duty is triggered becomes particularly critical because electronic documents can disappear with a keystroke or auto-delete software.

Because electronic documents can disappear so rapidly, a litigant that reasonably anticipates litigation must take steps to preserve documents before a complaint is served or run the risk of an adverse inference or other sanctions.[36]

With this background, I now turn to the application of the IBA Rules to electronically stored information.

E-discovery for arbitrators under the IBA Rules

Let's examine the application of the IBA Rules to electronically stored information in various contexts and attempt to answer the question of whether they are up to the task as they presently read or whether they should be modified to address requests to produce electronically stored information. To the extent appropriate, I will use experience in American courts to illustrate the choices available to rule-making authorities or arbitrators.

35 See, eg, *United States v Philip Morris USA Inc*, 327 F Supp 2d 21, 25 (DDC 21 July 2004) Philip Morris USA Inc was ordered to pay US$2.75 million into the registry of the district court because 'employees at the highest corporate level in Philip Morris, with significant responsibilities pertaining to issues in this lawsuit, failed to follow Order #1, the document retention policies of their own employer, and, in particular, the "print and retain" policy, which, if followed, would have ensured the preservation of emails which have been irretrievably lost'. Order #1 was the first case management order in the matter and required preservation of documents which were 'potentially relevant' to the subject matter of the litigation. The district court also precluded every employee who failed to comply with Philip Morris's internal document program from testifying at trial.

36 See, generally, Barkett, *The Prelitigation Duty to Preserve: Look Out!* (Section of Litigation, ABA Annual Meeting, 5 August 2005, Chicago, IL) available at www.shb.com/FileUploads/prelitigationduty_1735.pdf.

The disengaged judge versus the engaged arbitrator

The e-discovery rules in the United States will work well only if judges become engaged. In cases of relatively small value, expensive e-discovery could easily dwarf the amount in controversy. The engaged judge will figure this out quickly and take control of the production of documents in ways commensurate with the value of the case. In cases of moderate value, the engaged judge will tailor the production to the needs of the case. In cases of high value, the engaged judge will manage an efficient production process while maintaining a level playing field. In 'asymmetric' cases – where one party has no electronically stored information and uses this status to seek to burden an opponent who has massive amounts of electronically stored information with large production costs – the engaged judge must be the gatekeeper or unfairness will likely result.

If all judges were engaged, discovery rules might not be necessary. Because not all judges are engaged – and that is in large part due to enormous case loads – discovery rules are necessary to make the judicial system function in a consistent, predictable manner for all litigants.

A thoughtful arbitrator, like an engaged judge, should manage the production of electronically stored information as fairly and efficiently as the production of paper documents. Article 3 of the IBA Rules contains sufficient flexibility to permit parties to confer with the tribunal, lodge objections, including 'lack of sufficient relevance or materiality', 'unreasonable burden', and 'considerations of fairness and equality', and offer a 'satisfactory explanation' of the nonexistence of electronically stored information. Arbitration in the Garden of Eden could work without rules and thoughtful tribunals which make good choices in managing requests to produce electronically stored information could function fairly under the current IBA Rules.[37]

37 Companies or governments face a number of difficulties in addressing information stored on backup. In the case of companies, mergers may result in changes in computer systems or databases. Some storage media may no longer be readable. In the case of both, storage media may not be indexed or labelled in any manner. Employees may be separated from employment, retire, take leaves of absence or transfer and that may cause a host of electronic records retention issues. Software and hardware changes can dramatically impact restoration, retrieval and review costs. Employee habits, for example, in the areas of voice mail retention or instant messaging, can raise difficult retention and cost of production issues. Retention of backup tapes not dedicated to the documents and e-mail of particular employees, as is frequently the case, is very costly. If an entity stores backup data using a storage system that stores data across a number of backup tapes, restoration costs can be expensive. If an entity facing one or more of these issues is involved in litigation or arbitration, engaged judges and thoughtful arbitrators will properly balance the rights and obligations of the parties to ensure fairness and the resolution of disputes on the merits.

Nonetheless, there may be reasons to modify the IBA Rules to achieve, at a minimum, greater consistency in treatment of parties who are similarly situated or to eliminate uncertainty that may be perceived to exist under the IBA Rules with respect to production of electronic records.

Forms of production

Under Articles 3.3–3.6, the IBA Rules contemplate the submission of a request to produce, and then production by the producing party unless there are objections by the producing party in which case the tribunal considers the request and the objections in consultation with the parties. The request to produce can be for individual documents or by category, as long as, in the latter case, the description is 'in sufficient detail (including subject matter) of a narrow and specific requested category of documents that are reasonably believed to exist'.

Under Article 3.11, 'If copies are submitted or produced, they must conform fully to the originals. At the request of the Arbitral Tribunal, any original must be presented for inspection.'

With respect to the form of production of electronic documents, does a requesting party have a right to demand production in native format? Is the right supported by a request to produce that identifies specific key words or concept search terms that will then be used with a search engine to locate electronically stored information?[38] Does Article 3.11's requirement that copies 'conform fully to the originals' support such a demand? May a tribunal demand production in native format under Article 3.11? If so, does an Article 9.2 objection apply to an Article 3.11 demand from a tribunal? Is Article 9.2(c)'s 'unreasonable burden' objection sufficient to protect a producing party's

38 One very large problem in data mining is the cost of reviewing electronically stored information. Human review time can be lengthy and therefore costly. Can machine review be done in a shorter period of time and more cheaply? That is the subject of a thoughtful article on search methodologies with an emphasis on promising artificial intelligence tools to perform search and retrieval of responsive electronically stored information with the potential to be as effective as human review but at a lower cost. *The Sedona Conference Best Practices Commentary on the Use of Search and Information Retrieval Methods of E-Discovery* (August 2007 Public Comment Version), 8 Sedona Conf J 189 (Fall 2007) available for download at: www.thesedonaconference.org/dltForm?did=Best_Practices_Retrieval_Methods___revised_cover_and_preface.pdf.

interests?[39] Suppose the ability to produce is not burdensome, but the cost to produce would be high. Does 'unreasonable burden' embrace cost?

Or suppose the request to produce specifies native format for documents that are relevant and material and the producing party wishes to produce documents in imaged format.[40] None of the objections in Article 9.2 appear to apply. It is typically easy to produce documents in native format[41] so there would not be an unreasonable burden, and it is likely less costly to do so as well. It is not readily apparent that considerations of fairness or equality would compel the tribunal to reject the request especially if the requesting party is willing to accept a 'boomerang' request and produce its electronically stored information in native format.

What if the requesting party does not specify a form of production in the request to produce and a producing party accepts the request without objection and produces documents in paper form? May the requesting party return to the tribunal to seek production in electronic format so it can search

39 Rule 34 of the Federal Rules of Civil Procedure provides that a party may serve a request to produce 'to inspect, copy, test, or sample' designated documents or electronically stored information 'translated, if necessary, by the respondent into a reasonably usable form'. This last clause is not new language but when juxtaposed with the newly added 'electronically stored information', it has the potential to produce outcomes not necessarily envisioned by the rules committee. See, eg, *Static Control Components, Inc v Lexmark International, Inc*, 2006 WL 897218 (ED Ky 5 April 2006) (where a database was maintained in a form that was not text-searchable, using software no longer commercially available, and was run on software modified for defendant's use, a magistrate judge ordered production in 'reasonably usable form'. 'The Federal Rules do not permit Lexmark to hide behind its peculiar computer system as an excuse for not producing this information' to plaintiff.) Under the IBA Rules, this kind of issue would presumably be addressed by Article 9.2 objections. The IBA Rules do not, expressly at least, provide relief for a requesting party if the producing party produces unreadable information because it is unreadable to the producing party in its original form, or if the producing party produces a large volume of electronically stored information (a 'data dump') that may be costly or time-consuming to review relative to the amount in controversy or the schedule for the proceeding. Requesting parties presumably will take this potential response into account in drafting a request to produce.

40 See, for example, *Hagenbuch v 3b6 Sistemi Elettronici Industiali SRL, et al.*, 2006 WL 665005 (ND Ill 8 March 2006) (taking metadata into account, production in native format ordered over objections by producing party who wanted to produce documents in a TIFF format in part so that they could be Bates-numbered); *Nova Measuring Instruments Ltd v Nanometrics, Inc*, 417 F Supp 2d 1121 (ND Calif 2006) (requiring production in native format with original metadata); *Treppel v Biovail Corp*, 233 FRD 363, 374 n 6 (SDNY 2006) where the producing party provided no substantive basis for objecting to the requesting party's demand for production in native format, the requesting party's designated form of production would be honoured).

41 Anyone who has copied a file to a flash drive or floppy disk or e-mailed a file to a home e-mail address knows this.

the documents electronically? Or is the producing party entitled to produce only in one form?

Article 3.5 provides that the 'reasons for' objections to a request to produce 'shall be any of those set forth in Article 9.2'. Article 9.2 does not appear to address the form of production of relevant and material electronically stored information except for the 'unreasonable burden' objection which would not likely have much application for accessible data. Article 3.11 might support a demand for 'originals' to verify that copies conform to the original. Read literally, the IBA Rules might permit a requesting party to dictate the form of production. Hence, the IBA Rules might be clarified to permit a request to produce to specify the form of production of electronically stored information but permit the producing party to propose production in a different form with appropriate justification leaving it to the tribunal to include this issue in the Article 3.6 consultation with the parties to resolve the issue.[42]

An alternative modification might be a provision that, where production of documents is going to be ordered, the tribunal address with the parties the issue of form of production of electronic documents early in the arbitral proceeding to minimise later debate. For example, the tribunal could provide in an initial order that to the extent a request to produce is permitted, electronic documents need only be produced in one form but the form of production should be the subject of discussion between the parties and if the parties are unable to agree on the form, then the form will be determined by the tribunal.[43]

Metadata

A request to produce could include a demand for 'metadata' associated with electronic documents related to a particular topic or authored or edited by a particular individual.

The case law in the United States is mixed and is intertwined with the issue of the form of production. For example, in *Williams v Sprint/United Management Company*, 230 FRD 640, 646 (D Kan 2005), the magistrate judge

42 If Article 3.11 allows a tribunal to demand electronically stored information in native format for 'inspection' then the application of Rule 9.2 to Article 3.11 may need to be reviewed.

43 Paragraph 2 to the Preamble to the IBA Rules invites parties and tribunals to adopt the IBA Rules 'in whole or in part, to govern arbitration proceedings, or they may vary them or use them as guidelines in developing their own procedures'. Parties who draft arbitration clauses that adopt the IBA Rules may wish to consider contractual clauses governing the production of electronically stored information if they are concerned about how tribunals may react to requests to produce such information.

held that production in native format means that metadata must also be produced unless objection is made. Despite explaining that '[e]merging standards of electronic discovery appear to articulate a general presumption against the production of metadata' (*ibid* at 651), the magistrate judge held:

> 'When the Court orders a party to produce an electronic document in the form in which it is regularly maintained, ie, in its native format or as an active file, that production must include all metadata unless that party timely objects to production of the metadata, the parties agree that the metadata should not be produced, or the producing party requests a protective order.'[44]

Wyeth v Impax Labs, 2006 US Dist LEXIS 79761 (D Del 26 October 2006) seized on the presumption in *Williams*, not the holding. The defendant in this patent dispute sought an order compelling Wyeth to produce its electronic documents 'in their native format, complete with metadata, and not in the Tagged Image File Format (TIFF) in which they were produced' (*ibid* at *3). The plaintiff responded that the defendant was not entitled to the electronic copies in their native form because the defendant had not made a 'particularized showing of need' for the data and the collection of the data in this format would be 'overly burdensome' (*ibid* at *4–5). The district court denied the defendant's request to compel production relying, in part, on *Williams*. The district court ultimately ruled that because the parties had not agreed in advance how the electronic documents were to be produced, Wyeth had 'complied with its discovery obligation by producing image files' (*ibid* at *5). The district court also reasoned that Impax had not demonstrated a 'particularized need for the metadata' (*ibid*).

Kentucky Speedway, LLC v Nat'l Assoc of Stock Car Auto Racing, Inc, 2006 US Dist LEXIS 92028 (ED Ky 18 December 2006) piggybacked on Wyeth. In

44 In a later opinion, the same magistrate judge refused to require production of metadata for certain electronically stored information where the requesting party could not justify a need for it. *Williams v Sprint/United Management Co*, 2006 WL 3691604, *14 (D Kan 12 December 2006): 'Previously, this Court has ordered Defendant to produce the Excel RIF spreadsheets in native format, but in that instance Plaintiffs provided valid reasons for the spreadsheets to be produced in their native format. Namely, that the contents of the spreadsheet cells could not otherwise be viewed as the cells contained formulas. Also, in many instances, the column width of the cells prevented viewing of the entire content of the cells. Here, other than arguing that ordering Defendant to reproduce the transmittal e-mails together with their attachments in native format would be more helpful to Plaintiffs in matching up the transmittal e-mails with their respective attachments, Plaintiffs fail to provide any other reason why they need the transmittal e-mails produced in their native format. For these reasons, the Court denies Plaintiffs' request for Defendant to produce all its RIF-related transmittal e-mails in native format with all attachments in native format and attached to the transmittal e-mails.'

this antitrust case, the plaintiff sought metadata for all of the records that were electronically produced in the case up to that point (*ibid* at *21). The district court explicitly rejected the holding in *Williams* finding its conclusion that a producing party should produce its electronic data with the metadata intact unpersuasive (*ibid* at *22). Instead the district court relied on *Wyeth*. The district court determined that because the plaintiff did not show a 'particularized need' and because the metadata would not have necessarily identified a document's author, the metadata was not necessarily relevant to the case (*ibid* at *23–4). The district court added that '[t]o the extent that plaintiff seeks metadata for a specific document or documents where date and authorship information is unknown but relevant, plaintiff should identify that document or documents by Bates Number or by other reasonably identifying features' (*ibid* at *24).

The US District Court for the District of Delaware has adopted default standards for e-discovery that are applicable where the parties cannot agree on e-discovery issues. For the 'Format' of production, the Delaware District Court default standards provide that, in the absence of agreement, metadata must be preserved but need not be produced unless a 'particularized need' is shown.[45] But consider *Celerity v Ultra Clean Holding, Inc et al.*, 2007 US Dist LEXIS 18307, *9 (ND Calif 28 February 2007), a patent infringement case. The defendant was relying on the opinion of non-infringement of outside counsel as a defence to the plaintiff's claim. The defendant had produced billing records with entries showing that there had been multiple revisions to the opinion. The defendant, however, had produced only the final version of the opinion. That prompted the magistrate judge to rule that the defendant should produce 'metadata which would reflect these earlier drafts' and if it did not exist, 'a sworn declaration to that effect shall be filed'.

Article 9.2's objections for relevance or materiality should be sufficient to address metadata. Whether 'particularized need' is a proper standard, the tribunal should have the discretion to consider requests for metadata and objections to such requests within the current parameters of Article 3 of the IBA Rules.

45 Default Standard 6 (D Del) provides: 'If, during the course of the Rule 26(f) conference, the parties cannot agree to the format for production of their electronically stored information, as permitted by Fed R Civ P 34, such information shall be produced to the requesting party as text searchable image files (eg, PDF or TIFF), unless unduly burdensome or cost-prohibitive to do so. When a text searchable image file is produced, the producing party must preserve the integrity of the underlying electronically stored information, ie, the original formatting, the metadata and, where applicable, the revision history. After initial production in text searchable image file format is complete, a party must demonstrate particularized need for production of electronically stored information in native format.' See www.ded.uscourts.gov/Announce/Policies/Policy01.htm.

Inaccessible data

In the abstract, the IBA Rules appear capable to address data that are not reasonably accessible because of, to cite the e-discovery rules, 'undue burden or cost'.[46] Article 9.2 in the IBA Rules contains a similar objection: 'unreasonable burden'.

If a request to produce is otherwise going to be granted under the IBA Rules, one way to address the issue of inaccessible data is to wait: permit production of documents from accessible sources and only then evaluate the need to look at inaccessible data. The IBA Rules currently can comfortably accommodate this so-called 'two-tiered' approach[47] if production is going to be permitted.

But what if the tribunal must face the issue of inaccessible data? Suppose relevant documents exist only on backup tapes? Is the producing party, realising this, going to spend the money to retrieve backed-up data without

46 The US Civil Rules Advisory Committee explains the problem with inaccessible data in its report on the e-discovery rules: 'Although computer storage often facilitates discovery, some forms of computer storage can be searched only with considerable effort. The responding party may be able to identify difficult-to-access sources that may contain responsive information, but is not able to retrieve the information – or even to determine whether any responsive information in fact is on the sources – without incurring substantial burden or cost. The difficulties in accessing the information may arise from a number of different reasons primarily related to the technology of information storage, reasons that are likely to change over time. Examples from current technology include back-up tapes intended for disaster recovery purposes that are often not indexed, organized, or susceptible to electronic searching; legacy data that remains from obsolete systems and is unintelligible on the successor systems; data that was "deleted" but remains in fragmented form, requiring a modern version of forensics to restore and retrieve; and databases that were designed to create certain information in certain ways and that cannot readily create very different kinds or forms of information. Such difficulties present particular problems for discovery. A party may have a large amount of information on sources or in forms that may be responsive to discovery requests, but would require recovery, restoration, or translation before it could be located, retrieved, reviewed, or produced.' www.uscourts.gov/rules/Reports/CV5-2005.pdf (p 42).

47 The US Civil Rules Advisory Committee explains: 'At the same time, more easily accessed sources – whether computer-based, paper, or human – may yield all the information that is reasonably useful for the action. Lawyers sophisticated in these problems are developing a two-tier practice in which they first sort through the information that can be provided from easily accessed sources and then determine whether it is necessary to search the difficult-to-access sources' (*Ibid*).

objection?[48] Or will the tribunal refuse to consider the producing party's cost of production because the producing party chose its storage method?[49] Do the concepts of 'unreasonable burden' in Article 9.2(c) and 'considerations of fairness' in Article 9.2(g) provide adequate tools to a tribunal to answer these questions?

In many cases, the answer should be 'yes'. If the tribunal crosses the threshold of allowing production, it must then be prepared to address the nuts and bolts of restoration, retrieval, and review of inaccessible data in ways that are fair to both sides. Specifically tailored requests for relevant information are already required under Article 3.3. Starting from that position, the IBA Rules appear currently to permit a reasonable balancing

48 See *Quinby v Westlb AG*, 2005 US Dist LEXIS 33583 (SDNY 15 Dec 2005). The plaintiff moved for sanctions because the defendant focused on backup tapes in responding to requests for production. The defendant had this focus because the backup tapes contained the most complete source of e-mails, and alternative sources (accessible files) 'only cover a narrow time frame, a limited number of users and the data on these sources can be incomplete' (*Ibid* at *25). The cost to restore the backup tapes and produce the information was estimated to be US$500,000. On the motion for sanctions, the magistrate judge found that the defendant's approach was reasonable saying that if the defendant had suggested using the accessible but incomplete data, the 'plaintiff would probably take defendant to task for limiting its search to a source that defendant knew was not the most complete' (*Ibid*). The court added that the fact that the 'defendant is producing e-mails from the most complete, but most expensive, source is compelling evidence of defendant's honesty and good faith' (*Ibid* at *28). That good faith, however, was apparently not going to result in a significant shift in the costs of production (the defendant had separately moved to shift the e-discovery costs to the plaintiff): 'Assuming for the purposes of the sanctions motion that defendant's cost-shifting motion is granted, defendant will likely have only a portion of the fees shifted to plaintiff' (*Ibid* at *28 n 11).

49 *AAB Joint Venture v United States*, 2007 US Claims LEXIS 56 (Ct Cl 28 February 2007) ('Defendant's decision to transfer the e-mails to back-up tapes does not exempt Defendant from its responsibility to produce relevant e-mails'); *In Re Brand Name Prescription Drug Litigation*, 1995 WL 360526 (ND Ill 1995). (In refusing a request by a producing party to have the requesting party pay for retrieval costs, the district court said: '[I]f a party chooses an electronic storage method, the necessity for a retrieval program or method is an ordinary and foreseeable risk'.)

of interests to produce a fair outcome.[50]

In the debate over the e-discovery rules there were two concerns expressed in comments made to the Civil Rules Advisory Committee that merit discussion here. I quote from the Committee Report:

> 'Two other areas of concern were expressed during the comment period. One is the relationship to preservation. A second, related concern is that this proposal would lead corporations to make information inaccessible in order to frustrate discovery. As to the first concern, the Note is revised to clarify that the rule does not undermine or reduce common-law or statutory preservation obligations. The Committee Note includes a reminder that a party may be obliged to preserve information stored on sources it has identified as not reasonably accessible, but in keeping with the approach taken in proposed Rule 37(e) does not attempt to state or define a preservation obligation. As to the second concern,

50 *In re: Priceline.Com Inc*, 233 FRD 88 (D Conn 2005) for one court's iterative process in handling production of electronic information. The district court set forth nine 'directives' to guide production. Among the directives, defendant was to retain possession of the original data through restoration, data management and document review. In another directive, the district court ordered that restoration of 223 backup tapes (estimated to cost US$200 to US$800 per tape in addition to the cost of searching the files, culling for duplicate files, and converting responsive files for production) 'shall proceed on a measured basis, with cost-shifting determinations made at each step of the process' (*ibid* at 90). The parties were ordered to meet and confer 'in an attempt to identify which backup tapes should be restored'. Defendants were to restore tapes agreed upon and were permitted to file a motion to shift the cost of restoration 'either once the restoration has been completed or once a firm estimate of the cost of doing so has been generated' (*ibid* at 90–1). Where the parties could not agree, the district court said it would resolve disagreements by motion. The district court indicated it would be guided by the 'justification' for restoring a particular tape. In a third directive, 'no party shall waive any privilege claims' by virtue of producing 'an inventory, spreadsheet, or other survey of the contents of an item upon which data is stored'. And in another directive, the district court directed that all electronically stored information should be produced by defendants in Tagged Image File Format (TIFF) or Portable Document Format (PDF) 'with Bates numbering and appropriate confidentiality designations'. Defendants also had to produce 'searchable metadata databases, and shall maintain the original data itself in native format for the duration of the litigation' (*ibid* at 91). This directive was applied to information from a snapshot (a backup of servers on a date certain), departed employee e-mail backup tapes and restored from backup tapes (*ibid*). Defendants were instructed to record their methodology for excising duplicate files, looking for responsive information, and reviewing responsive documents for privileged documents and to share it with plaintiffs who could argue for 'the inclusion of more data if appropriate' and should have input on search terms. 'The court will not dictate exactly how defendants should accomplish these tasks, but defendants' choices will be subject to review should they elect to seek cost-shifting relief' (*ibid*). The district court said that if any party seeks relief concerning the scope of information searched or produced, information that is not in dispute should be produced without delay; that status reports were to be filed monthly setting forth the status of production, and that cost-shifting would be governed by the standards contained in what was then 'proposed' Rule 26(b)(2) (*ibid* at 92).

> many witnesses and comments rejected the argument that the rule would encourage entities or individuals to "bury" information that is necessary or useful for business purposes or that regulations or statutes require them to retain. Moreover, the rule requires that the information identified as not reasonably accessible must be difficult to access by the producing party for all purposes, not for a particular litigation. A party that makes information "inaccessible" because it is likely to be discoverable in litigation is subject to sanctions now and would still be subject to sanctions under the proposed rule changes.'

Article 9.4 of the IBA Rules may be adequate to address the first problem. A tribunal confronted with a party that has destroyed relevant records despite proper notice of a claim must evaluate whether the adverse inference should be drawn under the circumstances of the spoliation.

But what if the requesting party claims that the producing party has, indeed, 'buried' information in backup to permit it to make an 'unreasonable burden' argument in response to a request to produce?[51] This would be unfair, but Article 9.2(g) applies to an objecting party, not a requesting party. Presumably a tribunal, facing a producing party's claim of 'unreasonable burden' could reject the objection and order production from inaccessible data if the tribunal believes that the producing party has engaged in improper 'burying' to backup.[52]

The e-discovery rules require a producing party to 'identify' inaccessible data in sufficient detail to allow the requesting party to test the producing party's claim of 'undue burden or expense' required to justify the label 'inaccessible'. The requesting party may then attempt to show 'good cause' to obtain the inaccessible electronically stored information. In certain cases, a trial court might appoint a forensic expert to review a producing party's storage media under strict procedures to protect confidentiality of

51 What kind of showing would be required to sustain such a claim? The ability to produce evidence on another party's electronic recordkeeping practices may be limited. Presumably, a requesting party would start by attempting to learn about the electronic records retention practices of a producing party and a tribunal would have to evaluate the propriety of production on this topic.

52 Article 9.4 would not be applicable to a document requested if a timely objection is made. Only if the objection is rejected may the tribunal infer under Article 9.4 that a document ordered to be produced but which was not produced would be adverse to the interests of the producing party.

the information.[53] The trial court must balance the interests of the parties and can condition production on payment of all or a portion of the costs of production. Parties that behave badly can be sanctioned by the trial court.

Under Article 3.3, the IBA Rules limit requests to produce to documents identified by the requesting party or to narrow and specific categories of documents described in sufficient detail by the requesting party. Under Article 3.7, in 'exceptional circumstances, if the propriety of an objection can only be determined by review of the document', the IBA Rules permit the tribunal to appoint an independent and impartial expert, bound to confidentiality, to review 'such document' and 'to report on the objection'. How have tribunals dealt with electronically stored information to date? Have forensic experts been appointed to retrieve information for review by the expert? Under Article 3.7, can they be appointed to retrieve information for review by the producing party where a demand is made to image an

53 See *Ameriwood Industries, Inc v Lieberman et al.*, 2007 US Dist LEXIS 93380 (ED Mo 27 December 2006), which involved, among other claims, breach of a duty of loyalty and misappropriation of trade secrets. The plaintiff produced an e-mail to one of its customers, Samsung, from one of the defendants while the defendant was still in the employ of the plaintiff. This defendant had not produced the outgoing copy of this e-mail in his production. That prompted the plaintiff to seek to image the drives of defendants' computers and the district court to say: 'In light of the Samsung email, the Court finds that other deleted or active versions of emails may yet exist on defendants' computers. Additionally, other data may provide answers to plaintiff's other pertinent inquiries in the instant action, such as: what happened to the electronic files diverted from plaintiff to defendants' personal email accounts; where were the files sent; did defendants store, access or share the files on any portable media; when were the files last accessed; were the files altered; was any email downloaded or copied onto a machine; and did defendants make any effort to delete electronic files and/or 'scrub' the computers at issue' (*ibid* at 11). Finding good cause, the district court permitted imaging of defendants' computers' hard drives using a third-party expert following a protocol which included the following: (1) the plaintiff's forensics expert had to execute a confidentiality agreement; (2) the expert will image the computers at defendant's place of business; (3) the expert will provide the parties with a report describing the equipment produced (by name, model, serial number, name of hard drive and model and serial number, and name of network card manufacturer and model and serial number) and the expert's actions with respect to each piece of equipment; (4) the expert will recover all available word-processing documents, incoming and outgoing e-mail messages, presentations, spreadsheets, and other files including 'deleted' files; (5) the recovered documents would be provided to defendants' counsel; and (6) defendants' counsel had 20 days to review the records for privilege and responsiveness and to update its response to plaintiff's request for production, including creation of a privilege log (*ibid* at *16–21).

opponent's computer storage media?[54] Research or surveys may be valuable to determine, among other issues, whether in international arbitrations (1) tribunals are ordering production of electronically stored media with any conditions; (2) documents ordered to be produced come primarily from active data or inaccessible data sources; (3) forensic experts are being used for any purpose; (4) the cost of producing inaccessible data is a concern to parties, or a non-issue; and (5) the ability to draw an adverse inference from non-production is adequate to address intentional efforts by a party to 'bury' documents in backup storage media. Short of the express power to order cost-shifting at the time of production, the IBA Rules may be sufficiently flexible to address all of these issues.[55] But that power may be inherent in the tribunal and the question then is whether the IBA Rules should list and weight factors beyond that of 'unreasonable burden' and 'fairness' and whether Article 3.7 needs to be broadened to permit imaging of a producing party's storage

54 Article 6 of the IBA Rules permits a tribunal, after consultation with the parties, to appoint an expert 'to report to it on specific issues designated by the' tribunal. The tribunal 'shall establish the terms of reference' for a tribunal-appointed expert after consultation with the parties. Objections can be made to the independence of an expert but not to the expert's appointment. Subject to the objections in Article 9.2, the expert may request that a party provide 'relevant and material documents, ... property or site for inspection'. The parties and their representatives 'shall have the right to receive any such information and to attend any such inspection'. Disagreements between the expert and a party 'as to the relevance, materiality, or appropriateness of' a request for information or access 'shall be decided' by the tribunal under Articles 3.5 through 3.7. If, to maintain the confidentiality of the producing party's data, a tribunal felt justified in appointing an independent expert for forensic electronic records recovery purposes, the right of the requesting party to be present and to receive information received by the expert under Article 6 would appear to eliminate the use of this article as an alternative to Article 3.7.

55 Even the e-discovery rules can produce a straightforward result. Consider the pithy opinion of the magistrate judge in *In Re Veeco Instruments, Inc Securities Litigation*, 2007 US Dist LEXIS 23926 (SDNY 2 April 2007). There was not an electronic discovery protocol agreed upon by the parties and plaintiff wanted e-mail on backup tapes ('all non-privileged documents of the Individual Defendants and other named individuals from August 2004 through March 2005'). The magistrate judge found good cause existed to require production: 'E-mails sent or received by Defendants relating to the issues herein could constitute important relevant evidence and are reasonably calculated to lead to admissible evidence. It has not been demonstrated that said information is reasonably available from any other easily accessed source. The discovery requests are specific. The resources of the parties are not an issue. Accordingly, the Court directs that the Defendant restore the backup tapes for the time period from August 2004 through March 2005 to produce the requested non-privileged documents.' The magistrate deferred the cost-shifting (which was estimated to cost something considerably less than US$124,000 before plaintiff tailored the discovery request) determination until after production: 'The Court directs that Defendant shall produce the electronic discovery set forth herein initially at its own expense. Defendant shall prepare an affidavit detailing the results of its search, as well as the time and money spent. The court will then conduct the appropriate cost-shifting analysis' (*ibid* at *7).

media in appropriate cases by an expert bound to confidentiality.[56]

Cost-shifting

Article 3 of the IBA Rules does not address costs. Read literally, if the tribunal rejects objections of the producing party, the cost of production is borne initially by the producing party. Particularly if production from backup tapes is involved, the costs to restore, retrieve and review data can be quite high.

One presumably could look to the rules of the governing body for the arbitration to evaluate how to apportion costs of production. Illustratively, Article 28.3 of the London Court of International Arbitration (LCIA)'s Arbitration Rules provides the tribunal with the power to award 'that all or part of the legal or other costs incurred by a party be paid by another party, unless the parties otherwise agree in writing'. Article 28.4 of the LCIA's Arbitration Rules adds:

> 'Unless the parties otherwise agree in writing, the Arbitral Tribunal shall make its orders on both arbitration and legal costs on the general principle that costs should reflect the parties' relative success and failure in the award or arbitration, except where it appears to the Arbitral Tribunal that in the particular circumstances this general approach is inappropriate. Any order for costs shall be made with reasons in the award containing such order.'

If an arbitration clause in an agreement provides that each side is to bear its own fees and costs of the arbitration including those of document production should it be ordered, a tribunal's decisions on the production of electronically stored information could dramatically increase the costs to

56 As a reminder since they are listed above, the discovery rules provide that a trial court must limit the frequency or extent of discovery 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, considering 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 discovery in resolving the issues' (FR Civ P 26(b)(2)(C)). The Advisory Committee added the following factors in a Committee Note to this rule: '(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'.

a participant if the information must be restored, retrieved, and reviewed from backup sources.[57]

If the agreement is silent on cost-shifting, then presumably cost-shifting can be made at the time of an award under the rules governing the arbitration (or under the law of the forum to the extent applicable) or in a separate award addressing costs if the matter is taken up after what would become a partial award. Then the remaining issue for producing parties is carrying those costs until the time of the award and, of course, winning.

Sampling

Where data on backup tapes are the subject of a request to produce, objections may be made as to the relevance and materiality of the request. Suppose the tribunal is uncertain how to proceed? As between a 'fishing expedition' on one end of the spectrum and a 'smoking gun' on the other end, there may be information of varying degrees of value to a requesting party. Sampling to evaluate the marginal utility of data retrieval from backup may be a useful tool to control costs while trying to ensure fairness in those situations where a tribunal had decided to honour a request to produce.

Article 3.6 of the IBA Rules allows the tribunal to order the producing party to produce requested documents where the tribunal determines that the issues that the requesting party wishes to prove are relevant and material to the outcome of the case and none of the reasons for objection set forth in Article 9.2 apply. Is this language broad enough to include sampling a subset of backup tapes to assist the tribunal in understanding the nature of the information contained on the tapes relative to the issues and amount in controversy? It would appear to be.[58]

However, to eliminate any doubt, Article 3.6 could be supplemented by a sentence that would permit the tribunal to order sampling of electronically stored information in a manner approved by the tribunal in consultation with the parties so that the merits and cost of a request to produce or objections to a request to produce based on relevance, materiality or unreasonable burden could be evaluated.

57 While the IBA Rules would not need to be modified, it remains to be seen whether contracting parties begin to consider the issue of electronic production protocols or costs if such foresight is even possible in the negotiation of an arbitration clause.

58 Paragraph 2 in the Preamble to the IBA Rules explains that the Rues 'are not intended to limit the flexibility that is inherent in, and an advantage of, international arbitration, and Parties and Arbitral Tribunals are free to adapt them to the particular circumstances of each arbitration'.

Key players

It would appear that Articles 3.3(a) and (b) and 9.2(c) are sufficient to ensure that documents are limited to key players and that the number of key players identified is manageable.

But what happens if key players are identified at two different times and the passage of time has resulted in the loss of material information because of movement of e-mail to backup tape and electronic auto-recycling of such tapes?[59] Should the requesting party suffer because it failed to identify the key players at the time it submitted its Article 3.2(a) request to produce? Can a producing party show that the loss or destruction of the document was 'reasonable' within the meaning of Article 9.2(d) or is the use of 'reasonably' in Article 9.2(d) limited to the nature of the showing that the document has been destroyed as opposed to the circumstances that gave rise to the destruction? If Article 9.2(d) does not protect a producing party, does the passage of time in making the request and the subsequent loss of information by the routine operation of the electronic information storage system represent a 'satisfactory explanation' under Article 9.4? Or should the producing party suffer an adverse inference under Article 9.4? While the scope of Article 9.2(d) could be clarified, it would seem the IBA Rules contain sufficient flexibility now to permit tribunals to address these questions on the specific facts of each matter.

Privileged information

If a production involves massive amounts of data in which privileged information is intertwined, what should the tribunal do? Article 9.2(b) contains an objection for 'legal impediment or privilege under the legal or ethical rules determined' by the tribunal to be applicable. That objection should protect the producing party from having to produce

59 See the discussion above of *Consolidated Aluminum Co v Alcoa*, 2006 US Dist LEXIS 66642 (ED La 19 July 2006) and *E*Trade Sec LLC v Deutsche Bank AG*, 2005 US Dist LEXIS 3021 (D Minn 17 Feb 2005) (sanctions awarded where late identification of key players resulted in loss of electronically stored information).

privileged information, but who will pay for the review to extract privileged documents?[60]

If the documents believed to be privileged represent communications involving only in-house counsel and, unlike in the United States, the applicable law does not recognise the privilege for in-house counsel,[61] the high costs of review that generated 'quick peek' and 'clawback' agreements would not exist.

If communications with outside counsel are intermingled among large amounts of electronic data, and the tribunal is otherwise ordering production, it seems unlikely that the IBA Rules would need to be modified because this situation is no different from what might exist in the paper world: the producing party will need to find and extract the privileged documents.

Third-party production

Modifying the IBA Rules will not improve them with respect to production from third parties because an arbitral tribunal 'lacks power to order production of documents in the possession of a third party'.[62]

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60 Consider the dilemma in *Rowe Entertainment, Inc v William Morris Agency, Inc*, 205 FRD 421 (SDNY 2002). The magistrate judge recommended shifting 100 per cent of the cost of production to the requesting party who had not meaningfully tailored the discovery requests. But there were privileged documents scattered among the data that the defendant did not want the plaintiff to see. The magistrate judge proposed a 'clawback' procedure so that the privilege could be asserted by the producing party after production and review of electronic documents by the requesting party (*ibid* at 432–3). The producing party was not pleased with this approach, prompting the magistrate judge to write: 'Apparently, the defendants retained privileged or confidential documents in electronic form but failed to designate them to specific files. This situation is analogous to one in which a company fails to shred its confidential paper documents and instead leaves them intermingled with non-confidential, discoverable papers. The expense of sorting such documents is properly borne by the responding party, and the same principle applies to electronic data. Accordingly, if any defendant elects to conduct a full privilege review of its e-mails prior to production, it shall do so at its own expense.' A motion to reverse the magistrate judge's order on cost-shifting was denied by the district court (2002 US Dist LEXIS 8308 (SDNY 8 May 2002)).

61 Article 9.2(b) of the IBA Rules permits an objection for 'legal impediment or privilege under the legal or ethical rules determined by the Arbitral Tribunal to be applicable'. In *Akzo Nobel Chemicals Ltd et al. v Commission of the European Communities* (17 September 2000), the European Communities' Court of First Instance reaffirmed that communications to or from in-house lawyers are not entitled to the benefit of the 'legal professional' privilege. See http://curia.europa.eu/jurisp/cgi-bin/form.pl?lang=EN&Submit=rechercher&numaff=T-125/03. Both Article 9.2(b) and this ruling raise the question of whether parties can in the arbitration clause of their contract agree that, should an arbitral dispute arise, the privilege attaches to in-house communications.

62 A Redfern and M Hunter, *Law and Practice of International Commercial Arbitration* (4th edn) (Sweet & Maxwell, London 2003), p 303.

However, if the arbitration is in a country that permits the tribunal to subpoena a third party to testify at a hearing and to bring documents, what rules should govern reimbursement of costs for production of electronically stored information by the subpoena recipient?[63] Article 3.8 of the IBA Rules provides that the tribunal 'should take the necessary steps in its discretion' if it determines that documents from a third party would be 'material and relevant'. This language appears satisfactory to address this issue.

Sanctions

In American courts, sanctions are awardable for violation of discovery rules and, in the e-discovery arena, a number of litigants have been humbled by the failure to preserve electronic information and, what so often accompanies

63 Illustratively, in the United States, the Federal Arbitration Act, 9 USC s 7 provides: 'The arbitrators selected either as prescribed in this title or otherwise, or a majority of them, may summon in writing any person to attend before them or any of them as a witness and in a proper case to bring with him or them any book, record, document, or paper which may be deemed material as evidence in the case. The fees for such attendance shall be the same as the fees of witnesses before masters of the United States courts. Said summons shall issue in the name of the arbitrator or arbitrators, or a majority of them, and shall be signed by the arbitrators, or a majority of them, and shall be directed to the said person and shall be served in the same manner as subpoenas to appear and testify before the court; if any person or persons so summoned to testify shall refuse or neglect to obey said summons, upon petition the United States district court for the district in which such arbitrators, or a majority of them, are sitting may compel the attendance of such person or persons before said arbitrator or arbitrators, or punish said person or persons for contempt in the same manner provided by law for securing the attendance of witnesses or their punishment for neglect or refusal to attend in the courts of the United States.' It is far from settled who should pay for the costs of production of electronically stored information by a subpoena recipient under this provision, but presumably the tribunal would have to address this issue if it is raised by the subpoena recipient.

such conduct, misrepresentations to the court.[64]

As discussed above, assuming that Article 9.2(d) does not protect a producing party under the facts of the matter, under Article 9.4, the IBA Rules permit an adverse inference to be drawn from the non-production of documents 'without satisfactory explanation' where a party has not objected to the production 'in due time'. It also permits a tribunal to draw an adverse inference where a party fails to produce 'any document ordered to be produced' by the tribunal. The former presumes the existence of an identified document. Does it also embrace a 'specific requested category of documents'? Must the tribunal determine that a document or a category of documents exists before it orders production? If electronic records are moved to backup and not retained on active data storage media, and backup tapes are not ordered to be accessed, will the tribunal under Article 3.6 be able to identify and order a document produced so that the tribunal can consider the consequences of the failure to produce under Article 3.7? What if material records only exist on backup media and the backup media were recycled as part of the routine operation of an electronic records storage system? Depending upon the answers to these questions, the right to draw an adverse inference under Article 9.4, combined with the tribunal's decision-making

64 An example of an extraordinarily costly sanction is *Coleman (Parent) Holdings, Inc, v Morgan Stanley & Co, Inc*, Case No 502003 (1 March 2005 15th Jud Cir Fla) and the later decision of the same court dated 23 March 2005, www.lexisnexis.com/applieddiscovery/lawlibrary/Order.pdf. Plaintiff claimed that Morgan Stanley, a financial adviser to Sunbeam, had made material representations in connection with plaintiff's sale of its 82 per cent interest in Coleman to Sunbeam in 1998 in exchange for Sunbeam stock. Sunbeam later filed for bankruptcy. The 1 March 2005 decision resulted in an adverse instruction (among other sanctions). The 23 March decision resulted in entry of a default judgment with the circuit court directing that the liability allegations of the complaint 'shall be read to the jury and the jury instructed that those facts are deemed established for all purposes in this action'. Both decisions were based on extensive findings of fact made by a very upset circuit court judge ('*The judicial system cannot function this way*'. 23 March Order, p 16 (emphasis in the original)). Morgan Stanley had not only failed to locate and search all of its backup tapes in a timely fashion, but had untruthfully certified compliance with an order that it had found them all. Then, based on the circuit court's findings, Morgan Stanley engaged in deliberate efforts to mislead the plaintiffs and the court about compliance with its electronic and non-electronic discovery compliance. Given the sanctions, it was no surprise that the jury awarded the plaintiff US$604,334,000 in compensatory damages and US$850,000,000 in punitive damages. www.lexisnexis.com/applieddiscovery/lawlibrary/CHP_MorganStanley_VerdictForm.pdf. On appeal, the case was reversed on other grounds (there was no consideration of the sanctions issue which Morgan Stanley did not seriously contest in oral argument). (*Morgan Stanley & Co, Inc v Coleman (Parent) Holdings, Inc*, 955 So 2d 1124 (Fla 4th DCA 2007)).

power in making an award, may be sufficient to deal with the unavailability of electronically stored information.[65]

Conclusion

Production of documents in the electronic world presents problems not faced in the paper world. Apart from issues of volume, metadata, form of production and ease of deletion, electronic production can be more costly, especially if data must be restored, retrieved and reviewed to determine relevance and privilege status. The American e-discovery rules were adopted in part to create consistency and predictability in the federal courts and to re-engage the judge in controlling the scope and cost of e-discovery. Indeed, if judges fail to involve themselves in e-discovery disputes, the rules will result in more costly and less efficient resolution of disputes.

The IBA Rules place the handling of production of documents in the hands of the tribunal. A thoughtful tribunal may need no rules: common sense and a good sense of fairness might be enough to manage production of electronic documents that is going to be permitted by the tribunal.

If a request to produce is granted by a tribunal, the IBA Rules appear to contain sufficient flexibility to manage most electronic document issues that were addressed by the American e-discovery rules. The areas of form of production; access to documents that are inaccessible because of 'unreasonable burden'; use of impartial experts in connection with document restoration, retrieval and review; sampling of inaccessible data; cost-shifting; the possible need to clarify the scope of the word 'reasonably' in Article 9.2(d); and the potential addition to the list of objections in Article 9.2 are candidates that might be considered if any changes are going to be made to the IBA Rules to account for issues unique to electronic production.[66]

Before undertaking change, research may be worthwhile. Among the research questions that arbitrators and disputants and their counsel may be asked (subject to confidentiality obligations of the process) are:

(1) Have you ordered the production of, or been ordered to produce, electronic documents in an arbitration?

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65 Whether arbitration clauses should be drafted to give a tribunal the authority to sanction (apart from an adverse inference if one can call that a 'sanction' in an arbitration setting) or whether the inability to award sanctions might impact a decision to include an arbitration clause in an agreement are matters for parties to consider if electronically stored information is going to play a material role in the outcome should a dispute arise.

66 The creation of a separate set of rules or, perhaps, 'guidelines', to assist arbitrators in addressing electronic production and to provide predictability or certainty to disputants about how electronic records production will be handled is, of course, an alternative to modifying the existing IBA Rules.

(2) What were the electronic production issues presented by the requesting party and producing party?
(3) Was cost raised as a reason to oppose production? How were the cost issues addressed?
(4) Was form of production, including metadata, the subject of contention? What were the arguments and how were they resolved?
(5) Have you faced the issue where relevant and material documents were available or primarily available only on backup tapes? How was the issue addressed?
(6) Have you been involved in a proceeding where sampling of data was ordered? What were the circumstances?
(7) Has the use of an impartial expert been considered in connection with electronic records? What was the outcome?
(8) Have you faced the issue of cost-shifting for production of electronic records either at the time of production or the time of the award? How was the issue addressed?
(9) Have you been involved in a proceeding where an adverse inference was sought or drawn because of the failure to produce electronic records, and, if so, what were the circumstances?

What deficiencies, if any, existed in the IBA Rules (or the rules under which the tribunal was acting in addressing requests to produce electronic records) not addressed by the prior questions, and how would you address the rules to eliminate these deficiencies?

The Preamble to the IBA Rules states: 'These IBA Rules on the Taking of Evidence in International Commercial Arbitrations are intended to govern in an efficient and economical manner the taking of evidence in international commercial arbitrations, particularly those between Parties from different legal traditions.' In the end, good communication, meaningful and early attentiveness, and reasonableness will determine whether the arbitral battle for bytes achieves this goal.