Summary

In the past two decades, computers have taken over business, government, and even personal lives. This fundamental change in the way we record our thoughts and deeds (and communicate them to others) is becoming evident in civil litigation. More and more disclosure and discovery involves data that were originally generated on computers, are stored on computers, or can only be manipulated and understood with the aid of computers. Conventional paper disclosure is in danger of becoming irrelevant. However, the disclosure and discovery of computer data in civil litigation presents unique problems of scope, volume, intrusiveness, privilege, costs, and judicial management. In this presentation, current research on computer-based discovery in American civil litigation being conducted at the Federal Judicial Centre in Washington DC is presented. Possible implications for civil justice in the UK are explored, and areas where further research is needed on both sides of the Atlantic are identified. Finally, the presenter discusses efforts to educate the American judiciary.
about computer technology and its impact on disclosure, discovery, and the changing nature of evidence.

**Background Resources**

The presenter has written three articles on this topic, the full texts of which are available on the Web at the following URLs:


Other articles and seminar presentations by the presenter on related topics may be found at [http://www.kenwithers.com/articles/].

A short bibliography, list of leading cases, and links to related resources on computer-based disclosure and discovery may be found at [http://www.kenwither.com/links/].

**Outline**

The following outline follows the PowerPoint slides drafted for this presentation as of 9 March 2001. The actual slides presented on 9 April 2001 may not reflect this outline exactly.

1 **Introduction**

1.1 According to researchers at the University of California, 93 per cent of all information created during 1999 was in digital form. Only seven per cent was created using non-computerized media, such as paper. Lyman P. and Varian, H. (2000) `How Much Information?' [http://info.berkeley.edu/how-much-info/].

1.2 American lawyers (and most likely their British counterparts) are generally unfamiliar with electronic records management practices and unprepared to conduct disclosure or discovery of computer-based records. Smedinghoff, T (1998) `ANA/ACCA Survey of Electronic Commerce Practices' (Chicago: American Bar Association and American Corporate Counsel Association); PricewaterhouseCoopers/American Bar Association Section of Litigation (2000) `Digital Discovery and its Importance on the Practice of Litigation' (Chicago: American Bar Association).

1.3 The question is whether for the purposes of disclosure and discovery, is digital really different? And if we conclude that it is, do those differences necessitate any changes in the rules of civil procedure, strategies of judicial management, or conduct of the lawyers?

2 **The Applicable Rules of Civil Procedure**

2.0 While there are procedural and cultural differences between the United States and the United Kingdom in regards to disclosure and discovery, the principal common to both legal systems is that the parties to civil litigation are under an obligation to disclose the relevant facts known to them, and their opponents have the right to conduct an investigation under the rules of civil procedure to
discover relevant facts for themselves. Distinct from Continental legal systems, disclosure and discovery in both the United States and United Kingdom are conducted primarily by the lawyers themselves, following the rules of civil procedure.

2.1 United States


2.1.2 The primary rule governing disclosure and discovery is FRCP 26. The discovery of documents, in particular, is governed by FRCP 34. Since 1970, FRCP 34 has defined `documents' as including `data compilations from which information can be obtained, translated, if necessary, by the respondent through detection devices into reasonably useable form.'

2.1.3 On December 1, 2000, a set of amendments went into effect that significantly changed the conduct of discovery, bringing it much closer to the British model, but with some significant differences.

2.2 United Kingdom

2.2.1 Civil litigation in the courts of England and Wales is governed by the Civil Procedure Rules (CPR), <http://www.open.gov.uk/lcd/civil/procrules_fin/crulesfr.htm>, which went into effect in April of 1999.

2.2.2 The primary rules governing disclosure and discovery are found in CPR Part 31. Rule 31.4 defines a `document' as `anything in which information of any description is recorded.' Rule 31.6 requires disclosure of documents on which the party relies or which `adversely affect his own case.' It is possible under the Rule 31.12 for a party to ask the court to order `specific disclosure,' a process similar to court-managed discovery in the United States under FRCP 26(b)(1).

2.3 Cultural Differences

2.3.1 The scope of disclosure and discovery in the United Kingdom is both broader and narrower than in the United States. Disclosure in particular is broader in that it requires the lawyer to disclose documents that he or she may not plan to use, and indeed, that may be viewed as detrimental to the case. In the United States, the notion that a lawyer may be under an obligation to disclose documents adverse to his or her client's interests, absent a specific request under Rule 34 backed by the power of a court to compel production, is considered anathema.

2.3.2 There is a significant way in which British disclosure and discovery has traditionally been narrower than American discovery: it is limited to documents, which has the effect of narrowing the scope of disclosure to matters that are documented.

2.3.3 In the United Kingdom, extensive American-style discovery is viewed a cultural anomaly and a wasteful extravagance. Computer-based discovery is viewed as particularly obtrusive. Carlin, J. `Lawyers get the message about abusive email,' Independent, 20 July 1997, at 14.

2.3.4 However, there is nothing in the United Kingdom's civil procedure rules to limit or prevent electronic disclosure and discovery. And the digital revolution, in which email, digital voice mail, and electronic chat rooms are routinely recorded and documented, has the potential to increase the scope of disclosure and discovery in the United Kingdom dramatically.
3 Is Digital Different?

3.0.1 Until fairly recently, computers in the office environment were viewed as tools to create paper documents. In the 1970's the computers emerged out from the corporate finance office. The 1980's the 'killer application' was word processing, which virtually eliminated the typewriter as the principal means of creating documents and communications. Other applications controlled by end users, such as spreadsheets and databases, transformed the routine conduct of business.

3.0.2 In the 1990's, connectivity was added to this process. The word processing documents, spreadsheets, and databases could now be cheaply and efficiently communicated and shared without printing. In the United States, email surpassed the telephone as the most common form of business communication.

3.0.3 By the beginning of the 21st century, paper documents were no longer the intended product of computer technology, but an increasingly superfluous by-product. When those documents and communications become the subject of disclosure and discovery in civil litigation, the differences between the conventional, paper-based environment and the new computer-based environment become apparent.

3.1 Volume and Proliferation

3.1.1 To the lawyer getting involved in computer-based disclosure and discovery, the most obvious difference from conventional disclosure is that there are far more digital documents than there ever were paper documents, and they are located in many more places.

3.1.2 Every time a digital document is shared or exchanged, a copy is created.

3.1.3 Digital documents are virtually invisible and take up no discernable space.

3.1.4 Networked computers are routinely backed up, a process that involves making copies of all the files that exist on an entire network at a given moment.

3.1.5 The advent of the desktop personal computer started a process of decentralization and proliferation of devices that routinely hold documents subject to disclosure and discovery.

3.2 Deletion and Preservation

3.2.1 Paper documents are routinely destroyed in the normal course of business, and that destruction is usually quite efficient and complete.

3.2.2 Digital documents, on the other hand, are virtually impossible to eliminate entirely.

3.2.3 While digital documents are difficult or impossible to destroy, they are easy to alter or damage, even inadvertently.

3.3 New `Documents'

3.3.1 When a conventional paper document is created, there is very little evidence of its actual creation, absent the document itself.

3.3.2 The creation of a computer-based document, on the other hand, leaves an extensive and
permanent trail of evidence in the computer's or network's internal transaction records.

3.3.2 These computer-generated records are subject to disclosure and discovery in civil litigation, just as paper documents such as a telephone bill, hotel register, or taxi receipt may be used as evidence of other activity. Unlike such conventional evidence, computer records lead to more documents, as opposed to activities, which are in their turn subject to disclosure or discovery.

### 3.4 Hidden and Embedded Data

3.4.1 In well-organized conventional files, paper documents may have attachments, which provide information about the document itself, such as an envelope with a return address and postmark, or a cover memo with a routing list.

3.4.2 The existence of such `metadata,' or information about information, is much more common with computer-based documents. This metadata takes many forms, mostly invisible to the user.

3.4.3 Word processed documents may have a hidden profile, which may record the author, editor, and when the document was created, edited, and last accessed. It may contain all the editorial changes and when they were made, so that past versions of the document may be reconstructed.

3.4.4 Computer spreadsheets and databases are valuable because of hidden their information. Each cell of a spreadsheet and field of a database is actually the manifestation of an opaque process, such as a formula or data obtained from a related source. Email messages contain a wealth of routing information, most of which is never seen by the casual user.

3.4.5 Because hidden and embedded data is important to understanding a computer-based document, and it is seldom, if ever, translated onto the printed page, paper copies of computer-based documents do not accurately reflect their originals.

### 3.5 Backups

3.5.1 The routine backup is designed for system-wide disaster recovery, and it not designed to be a useable archive from which individual files may be recovered.

3.5.2 Despite the awkwardness of backups and the inability to recover individual documents from them reliably and easily, many enterprises have abandoned conventional records management and archiving procedures in favour of the relatively cheap and fast backup procedure.

3.5.3 Faced with disclosure obligations and the prospect of discovery in civil litigation, an enterprise that may have saved some money by not instituting a records management program will quickly sink far more resources into a costly and time-consuming search for, and review of, possibly relevant computer-based documents in hopelessly disorganised backups.

### 3.6 Legacy Data and Systems

3.6.1 Computer applications are upgraded constantly. They quickly become obsolete. Operating systems come and go about every three years. Computer hardware is also superseded at an alarming rate.

3.6.2 While we can easily read business records from the 18th century, anyone who created a document in a popular word processing program ten years ago and stored it on a standard five-and-a-quarter-inch floppy disk of the period will be hard pressed to find the computer, floppy disk drive,
operating system, and application software necessary to open and read it.

### 3.7 Digital Culture

#### 3.7.1 The emergence of email as the dominant form of business communication is the changing culture.

#### 3.7.2 Messages are exchanged at a rapid pace, using very informal language and a frank, sometime rude, tone. Thoughts that used to be carefully committed to paper, often after several drafts and reviews by several people, are now expressed bluntly with little or no self-censorship. More importantly for disclosure and discovery purposes, thoughts that never were committed to paper previously are recorded routinely now by computers and turned into retrievable documents.

#### 3.7.3 What may be a great advantage for the enterprises of the 'new economy' can become a distinct disadvantage in civil litigation. United States v. Microsoft Corporation, 98-1232 (TPJ) (District Court for the District of Columbia, 12 November 1999) (Findings of Fact); Western Provident Association v. Norwich Union Healthcare (1997) (unrep.)

#### 3.7.4 Employees have routinely used email to communicate with friends and relatives, and used the Internet for shopping and entertainment. Some activities have surfaced, and been publicized, involving office romances, gambling, harassment, and more.

#### 3.7.5 Although these personal activities are seldom relevant to civil litigation, the existence of sensitive, confidential, and occasionally embarrassing records and communications, intermingled with the routine business documents that an enterprise must disclose, adds another complication to the process. The possibility of inadvertent disclosure or production may become a danger for employee relations or a violation of data protection laws.

### 3.8 Opportunities for Innovation

#### 3.8.1 The disclosure and discovery of computer-based information presents some unique advantages over paper. These advantages are often overlooked as layers and judges dwell on the costs and dangers, but they should not be discounted entirely.

#### 3.8.2 Most lawyers and judges who are involved in legal technology believe that computer-based trial presentation techniques save substantial court time, and therefore money. It stands to reason that computer-based disclosure and discovery, leading to a computer-based trial preparation tools and a computer-based trial, would save even more money by reducing the cost of computer-based trial preparation.

#### 3.8.3 Documents and business records that are in digital form to begin with, and stay in digital form throughout the litigation, are far cheaper and easier to transport, store, and use than paper documents.

#### 3.8.4 Handled properly, digital documents can become self-authenticating.

#### 3.8.5 Some evidence is only available in computer-based form.

#### 3.8.6 Computer-based disclosure and discovery is inevitable. While lawyers may be averse to it, and judges may dread having to manage the pre-trial disputes they anticipate arising, sooner or later it will have to be faced squarely.

### 4 Future Directions
4.0.1 If computer based discovery is necessarily more expensive, time-consuming, and disputatious than conventional discovery, if it is becoming more common, and if it will spread inevitably to all types of cases in which there is disclosure and discovery, a possible conclusion is that the cost of litigation will escalate rapidly in a few years, unless alternatives are found.

4.0.2 On the other hand, if the problems currently associated with computer-based discovery are overstated, self-inflicted, or solved as technology and business practices evolve, and the fruits of computer-based discovery can be used to reduce the costs of trial preparation and presentation, a possible conclusion is that we simply need to brace ourselves for a bumpy transition period.

4.0.3 It is also possible that the truth lies somewhere in between. In that case, the situation needs to be studied closely and the possible responses measured. In the United States, the judicial system has taken a pro-active view of the problem, involving research, judicial education, and some consideration of rules reform.

4.1 Research

4.1.1 During the summer of 2000, the Federal Judicial Centre contacted more than 400 magistrate judges and administered a Web or faxed-based survey.

4.1.3 The FJC is conducting a study of approximately 20 civil cases involving computer-based discovery.

4.2 Technological Advances

4.2.1 One of the more significant developments is the speed at which computer hard drives can now be reliably copied to meet evidential standards. This means that future disclosure and discovery projects will be less obtrusive, and the resulting evidence more reliable.

4.2.2 A second important development is in electronic file analysis. Procedures and technologies are being developed that can quickly reduce large collections of electronic documents by locating individual files or portions of files containing key words, names, dates, or other criteria, exporting them to a litigation support database, and generating images of these data for review by counsel prior to disclosure or production.

4.2.3 Other technologies, as well as the constant increase in computer processing speed and data storage capacity, may reduce the costs, delays, and procedural disputes associated with computer-based disclosure and discovery.

4.3 Judicial Education

4.3.1 During 1999 and 2000, the FJC sponsored a number of educational workshops for federal judges at which procedural rules, case law, technology, and judicial management strategies for computer-based disclosure and discovery were addressed. Several more educational conferences are planned for 2001.

4.3.2 In the fall of 2000, the Federal Courts Law Review, the online publication of the Federal Magistrate Judges Association, published an article by a member of the FJC staff, `Computer-based Discovery in Federal Civil Litigation', <http://www.fclr.org/2000fedctslrev2.htm>.

4.3.3 A forthcoming publication, `The Civil Litigation Manual,' to be published by the Judicial Conference's Court Administration and Case Management Committee and authored by the FJC and
the Administrative Office of the United States Courts, will include a chapter on computer-based
discovery.

4.3.4 The FJC will be publishing a judicial reference manual on courtroom technology, in co-
operation with the National Institute for Trial Advocacy, which will include extensive discussion of
computer-based disclosure and discovery issues.

4.4 Possible Rules Amendments in the United States

4.4.1 Judge James Rosenbaum of the District of Minnesota, a member of the Judicial Conference,
has weighed in with two short articles expressing his concern over the scope of computer-based
discovery, particularly where it touches on personal privacy. Rosenbaum, J. (2000)`In Defense of the
Delete Key,’ 3 Green Bag 2d 393; Rosenbaum, J. (2001) `In Defense of the Hard Drive,’ 4 Green
Bag 2d 157.

4.4.2 Judge Shira Scheindlin of the Southern District of New York, a member of the Civil Rules
Advisory Committee, published a comprehensive article on computer-based discovery in which she
advanced two amendment proposals. Scheindlin, S. and Rabkin J. (2000), `Electronic Discovery in
Federal Civil Litigation: Is Rule 34 Up To the Task?' 41 Boston College Law Review 327.

4.4.3 The Discovery Subcommittee has also received correspondence from the public urging
consideration of a civil procedure rule recently adopted in the Texas state courts. That rule would
limit the scope of discovery, without a specific court order, to computer data `reasonably available to
the responding party in its ordinary course of business,' which presumably excludes deleted files,
backup tapes, and legacy data. Further discovery would be ordered by the court only if costs are
borne by the requesting party. Texas Rules of Civil Procedure 196.4 (effective January 1, 1999).

4.4.4 The Discovery Subcommittee held two public meetings during 2000, one in San Francisco in
March, and one in New York in October. Although the Subcommittee took no official position on
any proposed amendment, it heard from several judges who expressed the view that the civil
procedure rules had only recently been amended, technology was evolving faster than the rules
process could anticipate, and that the wisest course of action in the short term would be to avoid any
further rules reform and continue to study the situation.

5 Conclusion

5.0.1 Computer-based discovery and disclosure has surfaced as a major issue in American civil
litigation. It has the potential to dramatically increase the cost, delay, and contentiousness of civil
litigation, although it holds out the promise of streamlining trial preparation and presentation.

5.0.2 In the United Kingdom, the same concerns have not surfaced in case law, professional
literature, or rules reform. This may be due to differences in the existing civil procedure rules or
differences in the legal culture. But it also may be simply a matter of time before British lawyers and
judges begin struggling with the same problems that threaten to bog down American courts.

5.0.3 Further research is needed to study the issue as it develops. In the meantime, judicial education
on information technology and computer-based evidence may be the best use of available resources.