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Why Electronic Documents Trump Paper Documents

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There is ample case law that stands for the proposition that under Federal Rule of Civil Procedure 1 and state equivalents (requiring discovery to be "just, speedy, and inexpensive"), a party can be ordered to produce documents in electronic format even if it has previously provided those documents in paper form.[1] The reasons for this judicially approved preference for the production of electronic documents are numerous, but chief among these are:

1. It is easier and more efficient to search for relevant and privileged documents using digital data. You know how much quicker it is to search for cases using WestLaw rather than looking through the law books, one page at a time. Nevertheless, some lawyers believe looking at the paper documents one at a time is the only thorough way to go. But compelling studies show that people often miss relevant documents even when they're looking right at them. A relevant paper document erroneously put in an "irrelevant" pile is lost forever. In electronic environments the document is never lost; a different search or searcher, or the emergence of a new issue in the case changing the definitions of relevance, can revive the document in the data pool.

   There are also the phenomena of coder fatigue, leading to mistakes, and "code creep" (coders change perspective and judgment as they learn more about the case over time but seldom realize it, tending to lead to inconsistent coding). Further, issues tend to shift focus or change in the course of litigation, but people rarely go back to re-code documents accordingly.

   State-of-the-art digital data processing, however, is done all at once, with not only all the words indexed, but indexed in matrices of context, i.e., the relationship of each word is mapped against every other word in the data set so that semantic patterns emerge, providing a means by which documents (or even document paragraphs) can be matched with others according to linguistic content. This is revolutionary. Semantic profiling offers a statistically reliable way to avoid page-by-page document review altogether, and it greatly enhances text searching for relevant documents (i.e., use of keywords or combination of keywords in Boolean searches à la WestLaw). One could go so far as to say that this new "content matching" (using advanced

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[1] See, for example*: Nat'l Union Elec. Corp. v. Matsushita Elec. Indus. Co*., 494 F. Supp. 1257 (E.D. Pa. 1980); *Anti-Monopoly, Inc. v. Hasbro, Inc*., 94CIV.2120, 1995 WL 649934 (S.D.N.Y. Nov. 3, 1995); *Storch v. IPCO Safety Products Co. et al*., 1997 U.S. Dist. LEXIS 10118 (E.D. Pa.).

fuzzy logic) supplants the old hit-and-miss approach to text searches.

2. According to an October 2000 UC Berkeley study, 95% of all information is digital in origin, but up to half of that is never printed out (a recent white paper by John Tredennick, CEO of CaseShare, suggests it is more like 70%[2]), especially emails (where the unprinted population surely exceeds 90%), a unique means of communication where often the most candidly stated and important information can be found. All business records generated in the normal course of business these days come out of computers, so why not take advantage of that fact? If one concentrates on paper only, one can miss at least half the available evidence. That is ethically and professionally unacceptable. A number of commentators have opined that failure to do e-discovery is tantamount to malpractice.

3. Electronic files come embedded with "metadata," i.e. "data about the data," such as date and time when the electronic document was created, the date and time it was last modified, who authored it, to whom copies and blind copies were sent (in the case of email), how many times the document was edited, and the identify of the precise computer at which the file was created. It is easy to extract this data and make a database that links the data to the electronic documents. With that you can create a spreadsheet in Excel, for example, that gives you a complete chronology of all your documents. You cannot do that with paper.[3] Also, there is software available that will show an audit trail for emails, helping to show who knew what, when and where, a task that is virtually impossible with printouts of emails (which, again, creates an added expense for printing to paper, as well as moving and storing it, since 90+% of emails are never printed out in the ordinary course of business).

4. Using special software in conjunction with third-party services, it is possible to quickly identify whole populations of irrelevant documents and focus on just those that are potentially relevant. The relevant documents can always be printed to paper for convenience of reading, but that is the end product, not the starting one. With review programs using Web-hosted repositories where anybody in the world can review and annotate the documents, you can use support staff to code and categorize the documents and have them readily available to export to evidence presentation software such as PowerPoint, Trial Director or Sanction II, the result of which is that trials run more smoothly and you have more visual and persuasive impact with the jury. Also, I have had great success in being able to take digital data involving thousands of documents or spreadsheet cells and being able to generate graphic summaries on one page or slide that can be dramatic and compelling, all admissible as summaries under Federal Rule of Evidence 1006.

5. Reviewing and managing electronic documents is cheaper than reviewing and managing paper. Indeed, looking at all the costs in the e-discovery process, it has been claimed that the cost of manual review of documents averages $2.20 per page, scanning and coding $1.34 per page,

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[2] John C. Tredennick, Jr., "Moving From 'BC to AD'", Law Practice Management, May/June, Vol 29, Issue 4.

[3] Thus, for example, the court in *Armstrong v. Executive Office of the President, Office of Admin.*, 1 F.3d 1274, (D.C. Cir. 1993) stated that paper documents were not even "kissing cousins" to electronic documents due to the presence of useful metadata in the latter. Printouts of emails were thus substandard and did not justify the failure to preserve them in electronic format, resulting in a civil contempt order.

and electronic discovery at less than 25 cents per page.[4] Our experience confirms that fact; though vendor prices can vary widely from job to job, often based on confusing or somewhat arbitrary pricing structures, invariably the cost of digital document review and production of responsive documents is dramatically cheaper than the paper or scanning/coding alternatives, not to mention the added costs of storage, copying and transport of paper vs. the same costs for digital data.

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[4] Greg McPolin , "E-Discovery: A Common Term That is Little Understood," *New York Law Journal*, January 27, 2002.