

**DISCOVERY, EVIDENCE, CONFIDENTIALITY,  
AND SECURITY PROBLEMS ASSOCIATED  
WITH THE USE OF COMPUTER-BASED  
LITIGATION SUPPORT SYSTEMS**

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I. INTRODUCTION

Problems arise when a computer is used to organize and retrieve evidence in the form of documents, deposition testimony, or prior trial testimony during trial preparation and the trial itself; when it is used to generate indexes and summaries of evidence; and when it is employed to analyze evidence for trial.

Computer input may be in the form of traditional written documents entered by keyboard and transformed into machine-readable form, in electrical impulses transformed by a telephone line from a remote location, or in computer-readable magnetic tapes, discs, or cards generated in the course of business. Thus, the original documents may not be "documents" at all, in the traditional sense.

Because of these pragmatic differences, traditional evidentiary rules create conceptual difficulties. This Article focuses on the problems of admissibility of computerized records in general, and the specific admissibility, confidentiality, and security problems which relate to computerized litigation support systems.

II. EVIDENTIARY PROBLEMS

A. *Hearsay Objection—Business Records Exception*

Two types of computerized records present admissibility problems: those generated in the ordinary course of business, and those produced specifically for use in litigation. The principal objection to their admis-

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sibility is based on the hearsay rule.<sup>1</sup> Hearsay is a statement, made by someone other than a witness testifying at the trial or hearing, that is offered to prove the truth of the matter asserted.<sup>2</sup> In the criminal context, strict application of the hearsay rule may violate an accused's due process right to call witnesses in his own behalf. In *Chambers v. Mississippi*,<sup>3</sup> the trial judge excluded testimony by three witnesses that a third party had confessed to the crime for which the defendant was being tried. The Supreme Court reversed, holding that the rejected testimony "bore persuasive assurances of trustworthiness" and that "[i]n these circumstances, where constitutional rights directly affecting the ascertainment of guilt are implicated, the hearsay rule may not be applied mechanistically to defeat the ends of justice."<sup>4</sup>

Although the proponent of computer-generated records may argue that they are admissible under the business records exception to the hearsay rule,<sup>5</sup> computerized records differ from traditional, manually generated records in many respects. Computer data may be in the form of electrical impulses on magnetic tape or disc, or in magnetic core or semiconductor. They may be organized according to one scheme (*e.g.*, by employee number), but printed out in a different order (*e.g.*, a report showing total dollar compensation by employee classification). Thus the "record," as printed, may be completely different from any "record" stored in the computer. Nevertheless, under

1. Fed. R. Evid. 802.

2. FED. R. EVID. 801(c). See generally C. MCCORMICK, HANDBOOK OF THE LAW OF EVIDENCE § 244 (2d ed. E. Cleary 1972).

3. 410 U.S. 284 (1973).

4. *Id.* at 302. Note that the hearsay rule has been relaxed in complex cases. See *United States v. United Shoe Mach. Corp.*, 89 F. Supp. 349, 355 (D. Mass. 1950), *final judgment*, 110 F. Supp. 295 (1953), *aff'd per curiam*, 347 U.S. 521 (1954).

5. FED. R. EVID. 803:

The following are not excluded by the hearsay rule, even though the declarant is available as a witness:

. . . .

(6) Records of regularly conducted activity. A memorandum, report, record, or data compilation, in any form, of acts, events, conditions, opinions or diagnoses, made at or near the time by, or from information transmitted by, a person with knowledge, if kept in the course of a regularly conducted business activity, and if it was the regular practice of that business activity to make the memorandum, report, record, or data compilation, all as shown by the testimony of the custodian or other qualified witness, unless the source of information or the method or circumstances of preparation indicate lack of trustworthiness.

the liberal Federal Rule,<sup>6</sup> and cases in some other jurisdictions,<sup>7</sup> a record in machine-readable form is a "record" for purposes of the business records exception.

Federal Rule of Evidence 803(6) provides that the foundation necessary to admit a business record can be provided by the testimony of the "custodian or other qualified witness . . . ."<sup>8</sup> The foundation evidence must disclose that the record is based upon the first-hand observation of someone whose job it is to know the facts recorded.<sup>9</sup> The testimony of more than one knowledgeable person is unnecessary when a party introduces business records that are generated by a system involving several persons working according to set procedures.<sup>10</sup> Thus, in *Massachusetts Bonding & Insurance Co. v. Norwich Pharmacal Co.*,<sup>11</sup> tabulations of sales orders were admitted to prove the amount of embezzled stamp money on the testimony of one clerk who had participated in the tabulations and was familiar with the procedures. The court noted that greater reliability would not be achieved by requiring testimony from each clerk involved in the tabulation; they could not be expected to have a recollection of the particular transactions involved.<sup>12</sup>

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6. See 56 F.R.D. 183, 311 (1972): "The expression 'data compilation' is used as broadly descriptive of any means of storing information other than the conventional words and figures in written or documentary form. It includes, but is by no means limited to, electronic computer storage."

7. See *People v. Cohen*, 59 Cal. App. 3d 241, 130 Cal. Rptr. 656, cert. denied, 97 S. Ct. 748 (1977); *Transport Indem. Co. v. Seib*, 178 Neb. 253, 132 N.W.2d 871 (1965). The evidentiary rules in both of these jurisdictions were taken from the UNIFORM BUSINESS RECORDS AS EVIDENCE ACT [hereinafter cited as UBREA] (superceded by FED. R. EVID. 803(6)), cited in 13 UNIFORM LAWS ANNOTATED 245 (1975). The Nebraska court stated: "No particular mode or form of record is required. The statute was intended to bring the realities of business and professional practice into the courtroom and the statute should not be interpreted narrowly to destroy its obvious usefulness." 178 Neb. at 259, 132 N.W.2d at 875.

8. See note 5 *supra*.

9. See *MacLean v. City & County of San Francisco*, 151 Cal. App. 2d 133, 143, 311 P.2d 158, 164 (1957) (citing *C. McCORMICK*, *supra* note 2, § 286 at 602); *Johnson v. Lutz*, 253 N.Y. 124, 170 N.E. 517 (1930); Advisory Committee's Note to FED. R. EVID. § 803(6), 56 F.R.D. 183, 308-09 (1972).

10. As a California court pointed out, UBREA "is based on the recognition that records made and relied upon in the regular course of business may be regarded as trustworthy without verification by all the persons who contribute to them." *People v. Gorgol*, 122 Cal. App. 2d 281, 296, 265 P.2d 69, 78 (1953). See *Tapper, Evidence from Computers*, 4 *RUTGERS J. COMPUTERS & L.* 324, 372 (1975).

11. 18 F.2d 934 (2d Cir. 1923).

12. *Id.* at 937-38.

Rule 803(6) also requires that the record be "made at or near the time" of the act, event, or condition.<sup>13</sup> This has been interpreted to mean that the data must be put into the computer and recorded in computer-readable form within that time frame; it does not, however, preclude the hard copy printout being made at a later date. In *Transport Indemnity Co. v. Seib*,<sup>14</sup> the printout was admitted even though it was retrieved from the taped records and printed for the purposes of trial. The court concluded that the taped record had been made at or near the time of the events. In *United States v. Russo*,<sup>15</sup> the defendant challenged the admissibility of a computer printout because it had not been prepared at or near the time of the acts which it purported to describe.<sup>16</sup> The court admitted the printout, however, finding that it was a presentation in "structured and comprehensible form of a mass of individual items," which had been recorded contemporaneously on reels of magnetic tape.<sup>17</sup>

The element of unusual reliability of business records is supplied by "systematic checking, by regularity and continuity which produce habits of precision, by actual experience of businesses in relying on them, or by a duty to make an accurate record as part of a continuing job or occupation."<sup>18</sup> The computer provides much greater reliability than a manual system employing experienced clerks; once a program is debugged, operation of the computer is virtually free from mechanical and electronic error. The accuracy and trustworthiness of the sys-

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13. See note 5 *supra*.

14. 178 Neb. 253, 132 N.W.2d 871 (1965).

15. 480 F.2d 1228 (6th Cir. 1973), *cert. denied*, 414 U.S. 1157 (1974).

16. Defendant's challenge was premised on the Federal Business Records Act, 28 U.S.C. § 1732(a) (1970) (amended 1975), which is very similar to FED. R. EVID. 803(6), note 5 *supra*.

17. It would restrict the admissibility of computerized records too severely to hold that the computer product, as well as the input upon which it is based, must be produced at or within a reasonable time after each act or transaction to which it relates.

The Federal Business Records Act was adopted for the purpose of facilitating the admission of records into evidence where experience has shown them to be trustworthy. It should be liberally construed to avoid the difficulties of an archaic practice which formerly required every written document to be authenticated by the person who prepared it. The Act should never be interpreted so strictly as to deprive the courts of the realities of business and professional practices.

480 F.2d at 1240 (citations omitted).

18. See Advisory Committee's Note to FED. R. EVID. 803(6), 56 F.R.D. 183, 308 (citing C. McCORMICK, *supra* note 2, §§ 281, 286-87).

tem, including program and hardware, can be determined by running test data. Because the computer's treatment of data is absolutely uniform, reliability of all future transactions can be assumed from this test run. It is far safer, therefore, to assume that a computerized system will process data in a reliable and trustworthy manner, than it is to conclude the same of a manual processing system. The systematic checking, regularity, and continuity of a manual system are replaced by the absolute uniformity of a computer that performs repetitious transactions. For these reasons, businesses rely upon computer output more than manually generated reports.

In *King v. State ex rel. Murdock Acceptance Corp.*,<sup>19</sup> the accounting manager who supervised the maintenance of the computerized accounting records supplied the foundation testimony for the admission of printouts which indicated the balances due on conditional sales contracts. Noting that businesses normally rely upon the sort of records offered by the proponent, the court stated:

[T]here cannot profitably and sensibly be one rule for the business world and another for the courtroom. The merchant and the manufacturer must not be turned away remediless because methods in which the entire community places a just confidence are a little difficult to reconcile with technical judicial scruples on the part of the same persons who, as attorneys, have already employed and relied upon the same methods. In short, courts must here cease to be pedantic and endeavor to be practical.<sup>20</sup>

The court admitted the printouts without requiring the testimony of individuals who made the entries in the regular course of business, once it was shown:

(1) that the electronic computing equipment is recognized as standard equipment, (2) the entries are made in the regular course of business at or reasonably near the time of the happening of the event recorded, and (3) the foundation testimony satisfies the court that the sources of information, method and time of preparation were such as to indicate trustworthiness and justify its admission.<sup>21</sup>

In *Olympic Insurance Co. v. H. D. Harrison, Inc.*,<sup>22</sup> an action by an insurance company against its agent for not paying over premiums

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19. 222 So. 2d 393 (Miss. 1969).

20. *Id.* at 398 (quoting *Grenada Cotton Compress Co. v. Atkinson*, 94 Miss. 93, 100-01, 147 So. 644, 646 (1908)).

21. *Id.*

22. 418 F.2d 669 (5th Cir. 1969).

which he had collected, the Court of Appeals for the Fifth Circuit held that printouts indicating the amount of the account were properly admitted. Because they had been generated in the ordinary course of business, the court concluded that the printouts had "a prima facie aura of reliability."<sup>23</sup>

In *United States v. DeGeorgia*,<sup>24</sup> a car rental company's computer printouts showing the *absence* of rental transactions during the relevant period were admitted to prove that the defendant had stolen a car. The rental company's regional security manager relied upon information he obtained from the firm's home office to provide the foundation evidence. Affirming the admissibility of the computer records, the court stated:

[I]t is immaterial that the business record is maintained in a computer rather than in company books, this is on the assumption that: (1) the opposing party is given the same opportunity to inquire into the accuracy of the computer and the input procedures used, as he would have to inquire into the accuracy of written business records, and (2) the trial court, as in the case of challenged business records, requires the party offering the computer information to provide a foundation therefor sufficient to warrant a finding that such information is trustworthy.<sup>25</sup>

It is especially significant that the computer-generated record was admitted in *DeGeorgia*; it was a criminal case and the evidence was directed against a stranger to the business transaction.

In *D & H Auto Parts, Inc. v. Ford Marketing Corp.*,<sup>26</sup> computer printouts that disclosed fraudulent parts purchases were admitted under the Federal Business Records Act.<sup>27</sup> The Assistant Comptroller of defendant-corporation testified about his department's procedures for checking the data from the central data processing department. The court noted that the documents were routinely prepared for business purposes rather than for litigation, were prepared from facts supplied by the plaintiff, and were capable of verification by the plaintiff. It disposed of plaintiff's objection to the adequacy of the witness' knowledge of Ford's procedures, by acknowledging that although testimony from other Ford personnel, including the data processing manager,

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23. *Id.* at 670.

24. 420 F.2d 889 (9th Cir. 1969).

25. *Id.* at 893 n.11.

26. 57 F.R.D. 548 (E.D.N.Y. 1973).

27. 28 U.S.C. § 1732(a) (1970) (amended 1975).

might be shown to affect the weight of the offered evidence, it did not threaten its admissibility.<sup>28</sup>

### B. *Other Objections*

Under the Federal Rules of Evidence, a computer printout is regarded as an original.<sup>29</sup> Some state rules, however, are not so explicit. The California rule, for example, provides that "no evidence other than the writing itself is admissible to prove the content of a writing,"<sup>30</sup> and a "writing" is defined to include "handwriting, typewriting, printing, photostating, photographing, and every other means of recording upon any tangible thing any form of communication."<sup>31</sup>

In *King v. State ex rel. Murdock Acceptance Corp.*,<sup>32</sup> the defendant-appellant objected to the introduction of computer printouts. The court responded that records stored on magnetic tape by data processing machines were useless except in the form of printouts, such as those introduced as evidence. In admitting the printouts, which reflected the record stored on the tape, the court said that it was actually following, rather than departing from, the best evidence rule by extending its application to electronic record keeping.<sup>33</sup> If the court held that a printout was a copy, the only admissible evidence would be the machine-readable tape or cards, which are incomprehensible to a human reader.

The Federal Rules provide for admission of summaries in lieu of voluminous records as long as the underlying records are admissible.<sup>34</sup>

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28. *Id.* at 551. See also *Merrick v. United States Rubber Co.*, 7 Ariz. App. 433, 440 P.2d 314 (1968); Annot., 11 A.L.R.3d 1377 (1967); Tapper, *Evidence From Computers*, 4 RUTGERS J. COMPUTERS & L. 324 (1975).

29. FED. R. EVID. 1001 provides:

(3) *Original.* An 'original' of a writing or recording is the writing or recording itself or any counterpart intended to have the same effect by a person executing or issuing it. An 'original' of a photograph includes the negative or any print therefrom. If data are stored in a computer or similar device, any printout or other output readable by sight, shown to reflect the data accurately, is an 'original.'

30. CAL. EVID. CODE § 1500.

31. CAL. EVID. CODE § 250. There is, however, no definition of "original" or case interpretation of whether a printout is the "writing itself" or a copy. It seems likely that if the issue is ever raised, the California courts will take the federal approach.

32. 222 So. 2d 393 (Miss. 1969).

33. *Id.* at 398.

34. FED. R. EVID. 1006:

The contents of voluminous writings, recordings or photographs which cannot conveniently be examined in court may be presented in the form of a chart, summary, or calculation. The originals, or duplicates, shall be made available

In the interest of fairness, and to facilitate admission at trial, the underlying data and all relevant computer input and output should be made available to the opposing party far in advance of trial. In this way, both the adverse party and the court can examine the data and resolve all objections in advance. Even if the litigants fail to agree, the summaries will be admitted if supported by testimony from the data supervisor or expert which validates the methods used.<sup>35</sup>

In *Exclusive Florists, Inc. v. Kahn*,<sup>36</sup> the court admitted a summary prepared by plaintiff's vice president which established the cost of work and materials supplied to defendant. The summary was based upon plaintiff's purchase orders to, and invoices from, suppliers. The court admitted the purchase orders as straightforward business records. The invoices were admissible because they were part of plaintiff's system of maintaining its business records: they were regularly used in checking shipments for completeness and accuracy, and were checked against plaintiff's purchase orders at the same time.<sup>37</sup> The court did not require that the source documents actually be admitted.

In *Associated Metals & Minerals Corp. v. Dixon Chemical and Research, Inc.*,<sup>38</sup> the court affirmed the admission of a summary of machine-prepared accounting records which had been prepared by the plaintiff's employee for purposes of the litigation because the underlying records were kept in the ordinary course of business and qualified as plaintiff's business records. The court emphasized, however, that the underlying records had been made available to the defendant for a year before the trial and were available in court for its inspection.

### C. *Expert Testimony*

The rule that expert opinion must be based on *evidence in the case*

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for examination or copying, or both, by other parties at a reasonable time and place. The judge may order that they be produced in court.

See also FED. R. EVID. 901(b)(9), providing for authentication of a process or system to show that it produces an accurate result.

35. See 1 Pt. 2 MOORE'S FEDERAL PRACTICE ¶ 2.711, at 93 (2d ed. 1976).

36. 17 Cal. App. 3d 711, 95 Cal. Rptr. 325 (1971).

37. CAL. EVID. CODE § 1509 also permits admission of summaries of voluminous writings:

Secondary evidence, whether written or oral, of the content of a writing is not made inadmissible by the best evidence rule if the writing consists of numerous accounts or other writings that cannot be examined in court without great loss of time, and the evidence sought from them is only the general result of the whole; but the court in its discretion may require that such accounts or other writings be produced for inspection by the adverse party.

38. 82 N.J. Super. 281, 197 A.2d 569 (Super. Ct. App. Div. 1963).



has been abrogated by the Federal Rules:

The facts or data in the particular case upon which an expert bases an opinion or inference may be those perceived by or made known to him at or before the hearing. If of a type reasonably relied upon by experts in the particular field in forming opinions or inferences upon the subject, the facts or data need not be admissible in evidence.<sup>39</sup>

The new rule broadens the basis for expert opinion by recognizing that experts, when not in court, base conclusions on information from numerous sources that would be inadmissible in evidence, or admissible only at the expense of great time and effort.<sup>40</sup> The best evidence rule does not apply to an expert's testimony which is based on examination of documents not in evidence.<sup>41</sup> In addition, the Federal Rules deviate from most modern authority in not requiring that the underlying documents be made available.<sup>42</sup>

One interpretation of the Federal Rules suggests that inadmissible materials and information underlying the opinion testimony of an expert may be brought out on direct examination.<sup>43</sup> Under Federal Rule 705, however, the court has discretion to require disclosure of the matter upon which the opinion is based, prior to admitting the testimony. If the data used by an expert are "of a type reasonably relied upon by experts in a particular field," the fact that the underlying data were processed by computer does not, by itself, require its exclusion. The Advisory Committee's Note to Rule 703,<sup>44</sup> however, expressly warns against the admission of expert opinion evidence which is *not* based on data reasonably relied upon by experts in the field.<sup>45</sup>

*Coppolino v. State*<sup>46</sup> may provide the basis for admitting expert testimony where the expert relies upon a computer program that embodies

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39. FED. R. EVID. 703.

40. See Advisory Committee's Note to FED. R. EVID. 703, 56 F.R.D. 183, 283 (1972).

41. The Advisory Committee's Note to FED. R. EVID. 1002, provides that Rule 703, by allowing an expert to give an opinion based on matters not in evidence, limits the application of Rule 1002. See 56 F.R.D. 183, 343 (1972).

42. See P. ROTHSTEIN, UNDERSTANDING THE NEW FEDERAL RULES OF EVIDENCE 86-87 (1973).

43. *Id.* at 82-83.

44. 56 F.R.D. 183, 283 (1972).

45. Thus the Advisory Committee noted that Rule 703 "would not warrant admitting in evidence the opinion of an 'accidentologist' as to the point of impact in an automobile collision based on statements of bystanders . . ." *Id.* at 284.

46. 223 So. 2d 68 (Fla. 1969).

an analytical technique not yet generally accepted by the relevant community of scientific experts. In that case, the court exercised its discretion to admit evidence of a newly devised chemical test that detected the presence of a rare poison in the deceased's body tissues. The foundation was laid by the extensive testimony of the doctor who devised the test.<sup>47</sup>

The fact that a newly devised test or procedure is performed by a computer should not in itself create a new problem. The computer is distinguishable from other devices such as the polygraph or a voice print machine: The latter are essentially analog devices which purport to detect physical phenomena and convert them to objective measurements. Such devices have been challenged both on their ability to detect and to convert information to objective data.

The digital computer, on the other hand, merely performs more rapidly operations which can be performed manually. The input data along with the program or a description of it, the program documentation, and the conclusions reached by running the data against the program, can usually be provided to the adversary. With this information, the opponent may check the accuracy of the computer program by running test data and comparing the results with those obtained by manual computation. In addition, unlike the polygraph and voice print machine, there is no substantial question of the digital computer's reliability.

### III. DISCOVERY

Under the Federal Rules of Civil Procedure, records in computer-readable form and those generated by a computer are discoverable to the same extent as are manual records.<sup>48</sup> The respondent may be required to translate the data into a usable form—*i.e.*, by supplying a printout of the data—when discovery would be impossible otherwise; the court, however, may protect the respondent from undue burden and expense by restricting discovery or allocating costs.<sup>49</sup> Where the discovering party must have access to the machine-readable records,

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47. *Id.* at 69-70; see Younger, *Computers and the Law of Evidence*, N.Y.L.J., Feb. 25, 1975.

48. FED. R. CIV. P. 34, governing production of documents, expressly applies to electronic data compilations from which data can be obtained only by the use of detection devices.

49. See FED. R. CIV. P. 26(c).

the court may protect the other party by requiring measures to preserve the records, ensure their confidentiality, and limit costs.<sup>50</sup>

The decisions are unclear as to when a party will be required to process information into the form requested by his opponent.<sup>51</sup> Some authorities suggest that the respondent be required to provide a print-out, subject to the court's discretion to ensure confidentiality and limit costs, where it has a program to perform that function.<sup>52</sup> Authorities have also suggested that in certain cases the examining party must be allowed to develop his own programs to analyze the responding party's data, and to run those programs on the respondent's computer.<sup>53</sup> This procedure might result in destruction or alteration of machine-readable records and must, therefore, be closely supervised; for security purposes, the examining party may be required to bear the cost of duplicating the records.

In *Lodge 743, International Association of Machinists v. United Aircraft Corp.*,<sup>54</sup> the defendant delivered 120,000 photocopies of computer-generated records, ostensibly in compliance with the court's order to answer plaintiff's interrogatories. The court ordered the defendant to analyze the records at its own expense, in order to make them intelligible to the plaintiff.<sup>55</sup>

In *Greyhound Computer Corp. v. IBM*,<sup>56</sup> defendant answered plaintiff's interrogatories by directing plaintiff to materials which contained the relevant information. Plaintiff's counsel reported that defendant's "materials" were a room full of documents and, despite his attempts, he had been unable to secure the information sought in his

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50. See Advisory Committee Note to Proposed Amendment to FED. R. CIV. P. 34, 48 F.R.D. 487, 527 (1970).

51. Compare *United States v. United States Alkali Export Ass'n*, 7 F.R.D. 256, 259 (S.D.N.Y. 1946) ("Rule 34 is to be used to call for the production of documents already in existence, and in the possession or control of an adverse party, and not to require an adverse party to prepare a written list to be produced for inspection."), with *Van Wagner v. National Container Corp.*, 16 Fed. Rules Serv. 460 (S.D.N.Y. 1952) (defendant required to produce list of its customers in three states even though he must prepare a document to comply and notwithstanding the information could be obtained from testimony by defendant's president).

52. 1 Pt. 2 MOORE'S FEDERAL PRACTICE ¶ 2.715, at 103 nn.120-22 and accompanying text (2d ed. 1976).

53. *Id.* at 102. See 8 C. WRIGHT & A. MILLER, FEDERAL PRACTICE & PROCEDURE § 2218 (1970).

54. 220 F. Supp. 19 (D. Conn. 1963), cert. denied, 380 U.S. 908 (1964).

55. *Id.* at 21.

56. 3 Computer L. Serv. Rep. [C.L.S.R.] 138 (D. Minn. 1971).

interrogatories. The defendant also produced, at plaintiff's request, the information contained on magnetic tapes, but the printout was expressed in symbols that were not understandable. The court noted its duty "to strike a balance between requiring a party defendant to make compilations and tabulations and do extensive research to make answers and exhibits for his opponents, and the deliberate employment of delaying tactics on the part of a defendant designed to impede the progress of discovery."<sup>57</sup> In striking this balance the court denied plaintiff's motion for more specific answers, but ordered the defendant to provide the plaintiff with someone familiar with the material to guide, aid, and assist him, and to furnish printouts of taped material which would aid in securing the answers.

Federal Rule of Civil Procedure 26(b)(3) provides protection for materials prepared in anticipation of litigation, rendering them discoverable "only upon a showing that the party seeking discovery has substantial need of the materials in the preparation of his case and that he is unable without undue hardship to obtain the substantial equivalent of the materials by other means." The rule also recognizes a second level of materials which contain the "mental impressions, conclusions, opinions, or legal theories of an attorney or other representative of a party concerning the litigation," and provides that "the court *shall* protect against disclosure" of such second level information. (emphasis added).

Federal Rule of Civil Procedure 26(b)(4) provides for discovery of facts known and opinions held by experts who will testify at trial. Thus, an expert who is not expected to testify at trial may not be deposed nor can information be discovered from him except upon a showing of exceptional circumstances that render it impractical for the party to obtain discovery or obtain facts or opinions on the same subject by other means. Exceptional circumstances existed in *Pearl Brewing Co. v. Jos. Schlitz Brewing Co.*<sup>58</sup> The plaintiff in that case commissioned a complex computer simulation econometric model, the results of which were to form the basis of expert testimony. The court permitted discovery of both the results of the simulation, and the underlying program and data. In addition, the court authorized the defendants to depose plaintiff's designated trial expert and two "non-trial" computer experts who had designed the program because "only these two men appear

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57. *Id.* at 139-40.

58. 415 F. Supp. 1122 (S.D. Tex. 1976).

to be adequately conversant in technical information to explain this computer operation.”<sup>59</sup>

In *Bituminous Coal*,<sup>60</sup> before the Interstate Commerce Commission, a party challenged the admission of cost data developed by an expert through the use of a computer program, alleging that it did not comply with the appropriate test of admissibility for machine-run products: the computer results may be introduced only if the program has been made available to opposing parties for cross-examination purposes. The Commission adopted a broad definition of “program” and held that the introducing party had complied with the rule by permitting the objector to study the source language explanation which enabled it to conduct a manual computation. Indeed, the reliability of the program could be tested by manual computation in far less time than is required to analyze the logic of the program.

In *United States v. Dioguardi*,<sup>61</sup> the court held that reversal of a conviction was not required where a prosecution witness instructed a computer to prepare figures which were used to establish the defendant’s violation of the bankruptcy laws. Although defendant was entitled to the program, the court concluded that the data were so limited that defense counsel could easily have manually checked the computer program’s correctness. Similarly, in *Perma Research & Development v. Singer Co.*,<sup>62</sup> the Second Circuit held that the trial judge did not abuse his discretion by allowing an expert witness to give an opinion based on results of a computer simulation prepared specifically for litigation even though the opposing side did not have access to the underlying data and program. The court agreed that “[w]hile it might have been better practice for opposing counsel to arrange for the delivery of all details of the underlying data and theorems employed in these simulations in advance of trial to . . . avoid unnecessarily belabored discussion of highly technical, tangential issues at trial,” the opposing side nonetheless did have an adequate basis on which to cross-examine the expert.<sup>63</sup>

Under prior case law it was uncertain whether computer programs and indexes prepared by someone other than the attorney for use in

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59. *Id.* at 1138.

60. 325 I.C.C. 548 (1965).

61. 428 F.2d 1033 (2d Cir.), *cert. denied*, 400 U.S. 825 (1970).

62. 542 F.2d 111 (2d Cir.), *cert. denied*, 429 U.S. 987 (1976).

63. *Id.* at 115.

litigation were protected by Rule 26(b)(3). In *Allmont v. United States*,<sup>64</sup> however, the Third Circuit clarified this issue and the result is embodied in Rule 26(b)(3). The Rule provides protection for materials prepared in anticipation of litigation or for trial by another party or by the party's representative, including his attorney, consultant, surety, indemnitor, insurer, or agent.<sup>65</sup> The burden rests on the party seeking to invade the other's privacy to justify production;<sup>66</sup> neither relevance<sup>67</sup> nor an assertion that the information would be helpful to the discovering party is a sufficient justification.<sup>68</sup> If the index or program contains the mental impressions, theories, or opinions of the attorney, it will receive the more stringent, second level, protection provided by Rule 26(b)(3).<sup>69</sup>

In *Montrose Chemical Corp. v. Train*,<sup>70</sup> the court confronted the issue of when indices and factual compilations prepared for use in litigation are entitled to protection. Disclosure of factual summaries which had been prepared to assist an administrator in making a complex decision, the court held, would be an "improper probing of the mental processes behind a decision of an agency."<sup>71</sup> The summaries were compilations of facts introduced in evidence at the hearings and were thus a matter of public record. The court concluded, however, that

64. 177 F.2d 971 (3d Cir. 1950).

65. *Allmont* thus extended work product protection, first enunciated in *Hickman v. Taylor*, 329 U.S. 495 (1947), to materials prepared by an agent of the attorney. See 4 MOORE'S FEDERAL PRACTICE ¶ 26.64[3], at 26-416 (2d ed. 1976) ("Under the new ¶ 26.64[3], at 26-416 (2d ed. 1976) ("Under the new language . . . there will be no language . . . there will be no technical distinction between materials prepared by the attorney in the case and those prepared by a claim agent, insurer, or other agent of the party or by the party himself.")

66. See *Hickman v. Taylor*, 329 U.S. 495, 512 (1947).

67. See Advisory Committee's Note to Proposed Amendments to FED. R. CIV. P. 26(b)(3), 48 F.R.D. 487, 500 (1969) (Advisory Committee's Note).

68. See *Republic Gear Co. v. Borg-Warner Corp.*, 381 F.2d 551, 557 (2d Cir. 1967).

69. It would not be unusual, at least for an index of information contained in the computerized data files, to be entitled to this protection. They are typically developed with the attorney's participation so that the words and word combinations contained therein will adequately express the issues and facts he expects will be significant in the case.

70. 491 F.2d 63 (D.C. Cir. 1974).

71. *Id.* at 68. The case arose in the context of a request for information under the Freedom of Information Act, 5 U.S.C. § 552 (1970), and the court interpreted exemption (5) under the Act as protecting the "deliberative process" in agency decision-making, using a standard analogous to the work product rule of FED. R. CIV. P. 26(b)(3).

summarizing and organizing facts was part of the deliberative process and revealed the mental process behind the decision.<sup>72</sup>

In another case,<sup>73</sup> plaintiffs attempted to compel the defendant to use its computerized document retrieval system to provide responses to interrogatories that sought identification of documents. The document retrieval system comprised digests of documents contained in a data base which were retrievable through the use of words or combinations of words contained in the index. Defendant convinced the court that granting the motion would permit plaintiffs to learn which key words and documents defendant believed to be significant. The judge noted that the material sought had been prepared for litigation and that putting it in the system did not render it unavailable to plaintiffs by other means. In addition, plaintiffs had not made a sufficient showing of substantial need or hardship to overcome the protection provided by Rule 26(b)(3).

It is interesting to note that if respondent employed a full text retrieval system and the opponent attempted to compel the respondent to use it to answer similar interrogatories, respondent would have had more difficulty arguing that opinions, theories, and mental impressions would be discovered. A full text system permits retrieval on the basis of any significant word or words in the full text of a document. Indeed, one strength of a full text system is that the selection of significant documents can be postponed until case issues are brought into sharp focus. Thus the system does not require the party to make any pre-supposition as to what the ultimate facts and issues will be, and the party may choose to make no significant screening of documents prior to introducing them into the data base. Even if the full text system were prepared in anticipation of litigation, however, the moving party would still have to show that it had a substantial need for the information and that it could not, without substantial hardship, obtain the materials by other means.<sup>74</sup>

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72. Even if they cited portions of the evidence verbatim, the assistants were making an evaluation of the relative significance of the facts recited in the record; separating the pertinent from the impertinent is a judgmental process, sometimes of the highest order; no one can make a selection of evidence without exercising some kind of judgment, unless he is simply making a random selection.

491 F.2d at 68.

73. *In re IBM Peripheral EDP Devices*, No. MDL 163-RM (N.D. Cal.) (unpublished opinion).

74. A court might hold that this burden was met by a party that could not sift

#### IV. CONCLUSION

The fact that evidence is in computer-readable form, or that a computer is being used to aid in litigation should not, in most cases, change the basic questions for the lawyer or the court. The computer simply performs faster and more accurately those operations formerly accomplished manually. The Federal Rules of Evidence and Civil Procedure, and the laws of some states, have been modified to provide sufficient discretion so that courts can adapt to problems presented by computerization. The reported cases indicate that courts have generally recognized that the computer's presence need not alter the basic rules of evidence, discovery, or confidentiality. Lawyers should inform themselves sufficiently about computers so that they will know when one can profitably be used in litigation. At the same time, lawyers must learn to distinguish between computer evidence and discovery questions which can easily be resolved by analogy to cases involving manually-generated evidence, and those which are unique and require special consideration.

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out significant documents from massive records in the case without the use of a computerized system, which it could not afford. See *Tinder v. McGowan*, 15 FED. RULES SERV. 2d 1608 (W.D. Pa. 1970).