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sonally before trial. Clearly this supposition is valid were there an absolute privilege to discharge counsel for purposes of substituting another. Such a privilege might easily be abused and continuances and mistrials made necessary in order not to violate the highly-regarded right to effective counsel.[70] But it is less clear that discharge of one's attorney in order to defend personally would necessarily yield the same result because this right, unencumbered by the constitutional policy attaching to the right to counsel, might be conditioned precisely to that extent rather than disallowed altogether.[71] Should the defendant's attempt to defend personally prove confusing to the jury, the defendant, not the prosecution, likely would be prejudiced. When the court is confronted with an unruly and contemptuous defendant, the contempt power, judiciously exercised, should prove a sufficient tool for preserving order and decorum.

One thing for certain can be said about the "absolute-discretionary" dichotomy. As currently enunciated, it imparts to the right to defend *pro se* an evanescent quality not entirely consistent with the actual and alleged constitutional underpinnings of the right, nor with notions of individual autonomy.

RICHARD A. LEIPPE

Evidence—Admissibility of Computer Business Records As an Exception to the Hearsay Rule

Modern businesses have begun increasingly to rely on the electronic digital computer[1] as in integral part of their regular operations.[2] Computers are used to make numerical calculations, to store and process information on business transactions, to keep personnel records, to perform various accounting tasks, and to summarize many types of information needed for management decisions—in short, they are admirable receptacles for all types of traditional business records.

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[70] United States v. Mitchell, 137 F.2d 1006 (2d Cir. 1943).

[71] *Id.* at 1011-12 (dissenting opinion). *Cf.* United States v. Abbamonte, 348 F.2d 700 (2d Cir. 1965); Relerford v. United States, 309 F.2d 706 (9th Cir. 1962); United States v. Arlen, 252 F.2d 491 (2d Cir. 1958); United States v. Paccione, 224 F.2d 801 (2d Cir. 1955).

[1] For a general discussion of the admission of computer business records into evidence, see Annot., 11 A.L.R.3d 1377 (1967). The admission of ordinary business records into evidence is dealt with in Annot., 21 A.L.R.2d 773 (1952).

[2] Freed, *Computer Print-Outs as Evidence*, in 16 AM. JUR. PROOF OF FACTS § 1, at 274 (1965) [hereinafter cited as Freed].

Inevitably, printed-out business records are offered as evidence in litigation. A recent example is *King v. State ex rel. Murdock Acceptance Corp.*[3] King, a notary public, was sued for damages because of his false notarial certificate of acknowledgment to a deed of trust.[4] To establish damages, the plaintiff corporation had to prove the balance due on certain conditional sales contracts and a note. This proof was made by introducing both the original contracts and computer print-outs showing the payments made and the balance due on the contracts and the note. The original records of payments were made in the branch offices of the plaintiff and then forwarded to the home office where the information was fed into a computer.[5] The court found that the computer records were "originals" sufficient to satisfy the best evidence rule even though the real "original" records of the transactions were available in the branch offices.[6] The court, without benefit of a statute on the subject, admitted the computer records as business records:

> In sum, we hold that print-out sheets of business records stored on electronic computing equipment are admissible in evidence if relevant and material, without the necessity of identifying, locating, and producing as witnesses the individuals who made the entries in the regular course of business if it is 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 its trustworthiness and justify its admission.[7]

The leading case admitting computer business records into evidence is *Transport Indemnity Co. v. Seib*,[8] in which plaintiff insurer used a computer to calculate premiums due on an insurance contract made with the defendant. The formula used for fixing the premiums was contained in the contract between the parties; one component of the formula considered claims made by the defendant for earlier losses. Plaintiff proved the amount of these prior claims by computer records printed out especially for the litigation. Defendant argued that the original claim

[3] 222 So. 2d 393 (Miss. 1969).
[4] *Id.* at 394.
[5] *Id.* at 396-97.
[6] *Id.* at 397-98.
[7] *Id.* at 398.
[8] 178 Neb. 253, 132 N.W.2d 871 (1965).

files and reports should have been produced. The court held the computer evidence was properly admitted since the reports had been made to plaintiff and fed into the computer in the regular course of business.[9] The decision is sound: there is no reason to compel production of the original claim files unless defendant proposed to prove the inaccuracy of a particular loss figure, in which case he could produce his own records on the claim.

Computer records such as those in *King* and *Transport*, if offered to prove the truth of the statements contained therein, are hearsay[10] because they are extra-judicial assertions whose reliability cannot be checked by cross-examination. The primary reason for the hearsay rule is to exclude evidence of the assertions of an absent declarant, whose perceptive skill, memory, and sincerity are not subject to cross-examination. Of course, a business record cannot be cross-examined, but it is admissible without that imagined safeguard because of a presumed inherent trustworthiness due to internal business reliance on its accuracy.[11]

The common-law exceptions to the hearsay rule for the admission of business records was quite narrow;[12] it is unlikely that most of today's computer records would qualify. But most states, faced with contemporary commercial reality, desired to amplify statutorily the miserly common-law exception; businessmen needed a reasonable means of proving debts owed them.[13] Several "uniform" codfiications evolved. In 1927, the Model Act for Proof of Business Transactions was proposed;[14] it has been

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[9] *Id.* at 259, 132 N.W.2d at 875.

[10] *See* Transport Indem. Co. v. Seib, 178 Neb. 253, 259, 132 N.W.2d 871, 875 (1965). See also the definition of hearsay in the PROPOSED RULES OF EVIDENCE FOR THE UNITED STATES DISTRICT COURTS AND MAGISTRATES rule 8-01(c), at 159 (Prelim. Draft March 1969).

[11] The real guarantee stems from the nature of business operations themselves: Modern business and professional activities have become so complex, involving so many persons, each performing a different function, that an accurate daily record of each transaction is required in order to prevent utter confusion. An inaccurate and false record would be worse than no record at all.

Sims v. Charlotte Liberty Mut. Ins. Co., 257 N.C. 32, 35, 125 S.E.2d 326, 329 (1962).

[12] For a discussion of common-law rules and exceptions, see 5 J. WIGMORE, EVIDENCE §§ 1517-1519, at 347-61 (3d ed. 1940) [hereinafter cited as WIGMORE].

[13] The business-record exception to the hearsay rule is a manifestation of judicial conformity to sound business practice. *Cf.* Transport Indem. Co. v. Seib, 178 Neb. 253, 259, 132 N.W.2d 871, 875 (1965). Thus, the guarantee of trustworthiness may not be the only reason for the exception.

[14] 5 WIGMORE § 1520, at 362 (footnote omitted). The Commonwealth Fund subsidized a committee to draft the Model Act, and its report is contained in Morgan,

adopted by Congress and the legislatures of several states.[15] In 1933, the Uniform Business Records as Evidence Act emerged;[16] it has been adopted in several states.[17] Besides the Model Act and the Uniform Act, the admissibility of business records has been provided for in the Model Code of Evidence,[18] the Uniform Rules of Evidence,[19] and the proposed federal rules of evidence.[20]

The Model Act and the Uniform Act have produced the same standards of admissibility for both computer and conventional business records.[21] Computer records, just as other business records, must

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The Law of Evidence: Some Proposals for Reform (1927). Green, *The Model and Uniform Statutes Relating to Business Entries as Evidence*, 31 TUL. L. REV. 49 n.9 (1956).

[15] 28 U.S.C. § 1732 (1964) is the federal statute. Connecticut, Georgia, Maryland, Massachusetts, Michigan, Nebraska, New Mexico, New York, and Rhode Island have passed statutes based on the Model Act. Green, *The Model and Unifrom Statutes Relating to Business Entries as Evidence*, 31 TUL. L. REV. 49 n.9 (1956). The text of the Model Act provides:

> Any writing or record, whether in the form of an entry in a book or otherwise, made as a memorandum or record of any act, transaction, occurrence or event shall be admissible in evidence in proof of said act, transaction, occurrence, or event, if the trial judge shall find that it was made in the regular course of any business, and that it was the regular course of such business to make such memorandum or record at the time of such act, transaction, occurrence or event or within a reasonable time thereafter. All other circumstances of the making of such writing or record, including lack of personal knowledge by the entrant or maker, may be shown to affect its weight, but they shall not affect its admissibility. . . .

Reprinted in 5 WIGMORE § 1520, at 362.

[16] The Uniform Act reads in part as follows:

> A record of an act, condition or event shall, in so far as relevant, be competent evidence if the custodian or other qualified witness testifies to its identity and the mode of its preparation, and if it was made in the regular course of business, at or near the time of the act, condition or event, and if in the opinion of the Court, the sources of information, method and time of preparation were such as to justify its admission.

Reprinted in 5 WIGMORE § 1520, at 363.

[17] California, Delaware, Florida, Hawaii, Idaho, Minnesota, Missouri, Montana, New Jersey, North Dakota, Ohio, Oregon, Pennsylvania, South Dakota, Vermont, Washington, and Wyoming have passed the Uniform Act. Misc. Acts, 9 UNIFORM ACTS ANNOT. 506 (1951). *See, e.g.*, DEL. CODE ANN. tit. 10, § 4310 (1953); N.J. STAT. ANN. §§ 2A:82-34 to -40 (1952); WASH. REV. CODE ANN. §§ 5.45.010-.920. (1963).

[18] MODEL CODE OF EVIDENCE rule 514 (1942).

[19] UNIFORM RULES OF EVIDENCE rule 63(13).

[20] PROPOSED RULES OF EVIDENCE FOR THE UNITED STATES DISTRICT COURTS AND MAGISTRATES rule 8-03(b)(6) (Prelim. Draft March 1969).

[21] North Carolina is one of the states that has adopted neither the Model nor the Uniform Act. A law review writer recommended that North Carolina adopt the Model Act in *Proposals for Legislation in North Carolina*, 9 N.C.L. REV. 1, 47 (1930). However, by judicial decision North Carolina appears to have accom-

meet the basic requirements of the act in question. The record must be made in the regular course of business at or near the time of the act or transaction recorded, or within a reasonable time thereafter.[22] The Uniform Act specifies further that the custodian of the record, or some other qualified witness, must testify as to its identity and mode of preparation and that the circumstances must justify to the court its admission.[23] The regular course of business must require the making of such records even though the record sought to be admitted was, in fact, made in the regular course of business.[24] Some jurisdictions may require satisfaction of the best evidence rule, but at least one federal court of appeals has eliminated any such requirement in applying the federal business records statute.[25] In New York the best evidence rule is satisfied by non-original records if the originals were destroyed in the usual course of business.[26]

A record may be denied admissibility because of a lack of assurance that sources of information for it are accurate.[27] The source may have had

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plished virtually the same result as the Model and Uniform Acts. *See* Sims v. Charlotte Liberty Mut. Ins. Co., 257 N.C. 32, 125 S.E.2d 326 (1962); Smith Builders Supply, Inc. v. Dixon, 246 N.C. 136, 97 S.E.2d 767 (1957); Dairy & Ice Cream Supply Co. v. Gastonia Ice Cream Co., 232 N.C. 684, 61 S.E.2d 895 (1950). D. STANSBURY, THE NORTH CAROLINA LAW OF EVIDENCE § 155, at 390 (2d ed. 1963) states:

> It is no longer necessary that the person making the entries be dead, or even that he be identifiable, and he need not have had personal knowledge of the transaction entered. If the entries were made in the regular course of business, at or near the time of the transaction involved, and are authenticated by a witness who is familiar with the system under which they were made, they are admissible.

(Footnote omitted.)

North Carolina has adopted the UNIFORM PHOTOGRAPHIC COPIES OF BUSINESS AND PUBLIC RECORDS AS EVIDENCE ACT. N.C. GEN. STAT. §§ 8-45.1 to -45.4 (1953). *See* State v. Shumaker, 251 N.C. 678, 111 S.E.2d 878 (1960).

[22] *See* the text of the Model and Uniform Acts, notes 15 & 16 *supra.*

[23] 5 WIGMORE § 1520, at 363. *See* Transport Indem. Co. v. Seib, 178 Neb. 253, 132 N.W.2d 871 (1965).

[24] Palmer v. Hoffman, 318 U.S. 109 (1943); Comment, *Computer Print-Outs of Business Records and their Admissibility in New York,* 31 ALBANY L. REV. 61, 63-64 (1967). *See also* Johnson v. Lutz, 253 N.Y. 124, 170 N.E. 517 (1930).

[25] United States v. Kimmel, 274 F.2d 54 (2d Cir. 1960). The proposed federal rules of evidence would confer the status of an original record upon any computer print-out. PROPOSED RULES OF EVIDENCE FOR THE UNITED STATES DISTRICT COURTS AND MAGISTRATES rule 10-01(c), Comment (Prelim. Draft March 1969).

[26] Comment, *Computer Print-Outs of Business Records and their Admissibility in New York, supra* note 24 at 70 (footnote omitted) (original emphasis deleted).

[27] *Cf.* Owens v. City of Seattle, 49 Wash. 2d 187, 194, 299 P.2d 560, 564 (1956).

to make subjective and now unknown judgments about objective data. In such a situation the business record is inadmissible without his testimony.[28] A business record may also be excluded from evidence because sources of information are insufficient to make a reliable record.[29] The business record may be denied admissibility because the information therein was haphazardly collected from random sources whose reliability is difficult to evaluate.[30] But the lack of a motive by any of the sources to falsify may justify admissibility.[31]

Although a series of business records may not be complete enough to prove the non-occurrence of a certain event,[32] when considered together, they may be complete enough to prove a positive fact.[33] A record such as that in *King* would, for example, be complete enough to prove both the absence of a particular payment and that certain other payments were made.

Business records will not normally be excluded for the reason that they are "self-serving."[34] Indeed, their presumed trustworthiness is based on the self-interest of the businessman in the systematic and accurate compilation of his record.[35] A more worthy inquiry is whether the preparation of the record was "inner-directed" or "outer-directed"; that is, whether the nature of it is such that the business must rely on its accuracy in its daily transactions.[36]

The record must, of course, be relevant to an issue involved in the

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[28] *Cf.* Hartzog v. United States, 217 F.2d 706 (4th Cir. 1954).

[29] Allen v. St. Louis Pub. Serv. Co., 365 Mo. 677, 681 n.1, 285 S.W.2d 663, 666 n.1 (1956); Watson v. Clutts, 262 N.C. 153, 161, 136 S.E.2d 617, 622 (1964).

[30] United States v. Grayson, 166 F.2d 863, 869 (2d Cir. 1948).

[31] Freedman v. Mutual Life Ins. Co., 342 Pa. 404, 21 A.2d 81 (1941); *cf.* Woodward v. United States, 185 F.2d 134 (8th Cir. 1950), *aff'g* 88 F. Supp. 152 (S.D. Mo. 1949). *But cf.* Taylor v. B. Heller & Co., 364 F.2d 608 (6th Cir. 1966).

[32] Bowman v. Kaufman, 387 F.2d 582, 587-88 (2d Cir. 1967).

[33] *See* Doyle v. Chief Oil Co., 64 Cal. App. 2d 284, 292, 148 P.2d 915, 919 (Dist. Ct. App. 1944). In some cases, incompleteness of the record may go to weight rather than to admissibility. United States v. Kimmel, 274 F.2d 54, 57 (2d Cir. 1960).

[34] New York Life Ins. Co. v. Taylor, 147 F.2d 297, 306 (D.C. Cir. 1945); Owens v. City of Seattle, 49 Wash. 2d 187, 190, 299 P.2d 560, 564 (1956). But conceivably there are cases in which such an objection might legitimately be raised. *See, e.g.*, Douglas Creditors Ass'n v. Padelford, 181 Ore. 345, 182 P.2d 390 (1947).

[35] *See* Weis v. Weis, 147 Ohio 416, 425-26, 72 N.E.2d 245, 250 (1947).

[36] As the size of a business increases, the necessity of an accurate record for internal reliance increases. But the possibility of error also increases if the record is the product of several human sources. Of course, it only takes one person who is careless or of bad motive to make an inaccurate entry, and the likelihood of his doing so unnoticed increases as the size of the business increases.

litigation.[37] Even if the business record is admissible, parts of it may not be[38] because they contain information that is not trustworthy, such as unsubstantiated subjective opinions.[39] There may also be reason to suspect the trustworthiness of records when they deal with loans or payments of money[40] or when the first entry on a balance sheet is a statement of money owed with no itemization or other indication of the origin of the stated figure.[41]

Even if the business record otherwise qualifies under the Uniform or Model Act, the trial court must still determine whether the record appears accurate and trustworthy.[42] In making this determination, the court should insist on some underlying guarantee in the record-making process that the data is trustworthy.[43]

Occasionally, the party against whom a business or computer record is offered may be estopped by his conduct to object to its admission, or he may be deemed to have admitted the truth of its contents by his silence in an out-of-court situation. In *State v. Veres*[44] the defendant was charged with passing checks while having insufficient funds to cover them. The trial court over the defendant's objection admitted bank records that were inadequately qualified because the qualifying witness testified that he was not familiar with the mechanical operation of the automatic machine

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[37] Hancock v. Crouch, 267 S.W.2d 36, 40-41 (Mo. App. 1954); Freedman v. Mutual Life Ins. Co., 342 Pa. 404, 414, 21 A.2d 81, 86 (1941). *See also* Ostrov v. Metropolitan Life Ins. Co., 260 F. Supp. 152, 168 (E.D. Pa. 1966), *vacated on other grounds*, 379 F.2d 829 (3d Cir. 1967).

[38] Maggi v. Mendillo, 147 Conn. 663, 667, 165 A.2d 603, 605 (1960).

[39] *See* New York Life Ins. Co. v. Taylor, 147 F.2d 297, 299-303 (D.C. Cir. 1944). *But see* Allen v. St. Louis Pub. Serv. Co., 365 Mo. 677, 681-83, 285 S.W.2d 663, 666-67 (1956).

[40] The reason is that the payee has it within his power to take a note or receipt for the money as independent evidence of the transaction. Douglas Creditors Ass'n v. Padelford, 181 Ore. 345, 357, 182 P.2d 390, 396 (1947). However, under modern business statutes it now appears that evidence of loans or payments of money are usually admissible just as any other business entry. Annot., 13 A.L.R.3d 284 (1967). *See* Olson v. McLean, 132 Mont. 111, 313 P.2d 1039 (1957); Mahoney v. Minsky, 39 N.J. 208, 188 A.2d 161 (1963).

[41] This problem was presented in Merrick v. United States Rubber Co., 7 Ariz. App. 433, 440 P.2d 314 (1968), in which the court held that the stated unproven balance and subsequent transactions must constitute separate counts and could not be joined in the same action. At first blush this holding may seem unrealistic, but it has the merit of providing protection for the businessman while encouraging the jury to evaluate separately the proof of each count. *But cf.* Thompson v. Machado, 78 Cal. App. 2d 870, 178 P.2d 838 (Dist. Ct. App. 1947).

[42] Bowman v. Kaufman, 387 F.2d 582, 587 (2d Cir. 1967).

[43] *See* United States v. Grow, 394 F.2d 182, 205 (4th Cir. 1968); Hartzog v. United States, 217 F.2d 706, 710 (4th Cir. 1954).

[44] 7 Ariz. App. 117, 436 P.2d 629 (1968).

making the records.[45] On appeal, admission of the evidence was upheld on the ground that the defendant had testified both that his bank account was not in good condition and that at the time of the writing of the checks he had requested that they not be negotiated.[46] This holding is unsound. The state had the burden of proof and should have had to qualify the record *regardless* of the defendant's testimony.

In *Thompson v. Machado*,[47] a suit on an open-book account, plaintiff-businessman had repeatedly mailed to the defendant monthly statements of an amount due. The plaintiff's original business records had been detroyed in a fire, and the trial court admitted "secondary" records.[48] The appellate court affirmed, saying that the defendant could not deny the truth of the amount due because he could not prove that he had protested the accuracy of the monthly statements after he received them.[49] The application of estoppel or admission by silence is more justifiable in this case: the defendant's objections were more properly directed to the weight to be given the "secondary" records, not to their admissibility.

Computer print-outs as business records lead to unique evidentiary problems. Qualification of computer records is one. The witness qualifying computer records should have a substantial knowledge of the equipment used and the ability to explain its operation in detail.[50] He should testify as to the procedure of the business[51] in using the equipment and explain just how the record in question was made. Any deviation from the usual practice of the business in making the record should be disclosed. In particular, a witness should describe any procedures—computer or human—used to check for error in the record-making process.[52]

The opponent of the evidence's introduction may attack the equipment or "hardware" and show, if possible, that it is unreliable. This attack may be accomplished by testimony regarding the malfunctions of the specific machine that made the record or the general unreliability

[45] *Id.* at —, 436 P.2d at 637.

[46] *Id.* at —, 436 P.2d at 638.

[47] 78 Cal. App. 2d 870, 178 P.2d 838 (Dist. Ct. App. 1947).

[48] *Id.* at —, 178 P.2d at 841.

[49] *Id.*

[50] But business records have been qualified even though the witness admitted a lack of familiarity with the electronic equipment. Merrick v. United States Rubber Co., 7 Ariz. App. 433, —, 440 P.2d 314, 316 (1968).

[51] The procedures of the business at the time the record was made are the ones to which testimony ought to be directed. Mutual Fin. Co. v. Auto Supermarkets, Inc., 383 S.W.2d 296, 299 (Mo. Ct. App. 1964).

[52] Comment, *Computer Print-Outs of Business Records and their Admissibility in New York*, *supra* note 24 at 71.

of that brand or type of computer. The opponent might also assert that the controls over error were insufficient and seek to destroy any guarantee of trustworthiness.

Qualifying the "software" is equally essential; the witness supporting introduction of the records should explain the programming methods used[53] since the program furnishes the computer with its instructions. The opponent may attempt to show that the program was inadequate to make an accurate record. The opponent should be allowed to examine the program and present his own expert witness to challenge the program's reliability.

When computerized information is used at trial, normally it is a print-out from data fed earlier into the computer. The objection has arisen that the computer record was prepared for the litigation and hence is not to be trusted.[54] This argument is, of course, specious; the focal point of inquiry should be the initial making of the record rather than its appearance in printed form for trial.[55]

Both the Model Act and Uniform Act require the business entry to be made at or near the time of the event or transaction recorded.[56] A business record made years after the transaction or event that it seeks to prove does not qualify for admission.[57] The date of an entry in an account book can usually be determined by its relationship to other entries. In dealing with a computer, however, it is not usually possible to fix the date of the input of data. Such information would be available only in those rare cases in which the source of the input was saved, stored, and dated or the date of entry was entered with the other data fed into the computer. To require proof of the time between the transaction or event and the time of the computer input would be unrealistic. The business must still prove that the inputs were made as a part of its day-to-day operations[58] before computer records are admissible. Statutes based on the Model Act and Uniform Act should be amended or interpreted to allow the introduction as business records of undated and non-time sequenced computer data. If a business has switched from conventional to computer recordkeeping, its print-outs should be admissible even if

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[53] *Id.* "Faulty programming is [a] frequent source of inaccurate output." Freed, *supra* note 2, § 15, at 298.

[54] *See* Palmer v. Hoffman, 318 U.S. 109 (1943).

[55] Transport Indem. Co. v. Seib, 178 Neb. 253, 260, 132 N.W.2d 871, 875 (1965).

[56] See notes 15 & 16 *supra.*

[57] Fuller v. White, 33 Cal. 2d 236, 201 P.2d 16 (1948).

[58] Palmer v. Hoffman, 318 U.S. 109, 113-14 (1943).

some time has elapsed between the transaction and its recordation by computer. Businesses should not be penalized for automating and modernizing their operations.

The authentication of computer data may also present a problem. Clearly a business record must be identified and authenticated by a proper witness for the proponent of its introduction.[59] If data stored in the computer is printed out without any processing by the arithmetical unit, no serious authentication problem normally will arise. In such a situation, the authentication requirements are the same as are required in cases involving conventional business records. The only additional factor is the qualification of the computer system as being reliable in reproducing the record.

More serious authentication problems arise when the computer's arithmetical function alters the stored input data. The witness may then be required to reconcile the accuracy of the original stored data with the processed figures shown on the computer business record.[60] Normally authentication is a simple task, but cases may arise when it is virtually impossible. The computer can process data at speeds much faster than a man can perform the same operation. Computers also deal more accurately with complicated formulas. It could take hours of testimony to authenticate computer data in some cases. If the accuracy of the system and procedures used to make the record have been established to the trial judge's satisfaction, he should be given the discretion to dispense with authentication of the processed data.

Despite the general reliability of computer business records, in certain controversies there is a need for independent evidence not produced by computer of the underlying transaction. The following is an example. Customer *A* receives from a large department store *B* a bill for one-thousand dollars for goods allegedly purchased on a certain date. *B* offers its computer record as evidence of the purchase along with an unsigned computer input card impressed with *A*'s name and account number. It is apparent that *A* is in a very poor position to defend himself and that *B* very easily could have fabricated the unsigned input card. *A* should be protected from such possible fabrication by the court's requiring non-computer-produced evidence of the original transaction by *B* with *A*.

[59] Sims v. Charlotte Liberty Mut. Ins. Co., 257 N.C. 32, 35, 125 S.E.2d 326, 329 (1962).

[60] Transport Indem. Co. v. Seib, 178 Neb. 253, 258, 132 N.W.2d 871, 875 (1965).

Once the purchase is established, subsequent payments may properly be proved solely by computer records. *A*'s cancelled checks or cash receipts should offer him sufficient protection in contesting the amount of payments. But there is a real need for protecting the consumer by requiring independent evidence of the sale because a reasonable businessman would make an independent record of the transaction that would bear the customer's signature.

The decisions in *King* and *Transport* show that computer records can and will be admitted into evidence as routinely as conventional business records have been in the past. But as fewer "conventional" records remain in use to support the computer's product, courts will have to be more diligent in examining whether the computer business record is satisfactorily qualified and authenticated for admission. The impersonal and automatic computer, which is the servant of the businessman, must also be the servant of justice and not the master of men and their laws.

NORMAN E. SMITH

Federal Estate Taxation—Application of the Reciprocal Trusts Doctrine Under the New Objective Standard

A typical reciprocal or crossed trusts situation occurs when *A* sets up an irrevocable trust to pay *B* the income for life, remainder to *C*, and *B* does likewise for the benefit of *A* for life with the remainder to *C* (or *D*). In the usual situation *A* and *B* are members of the same family. At one time it was thought that such an arrangement would avoid taxation under the retained-interest rule of section 811(c)(1) of the Internal Revenue Code of 1939—now section 2036 of the 1954 Internal Revenue Code. These sections provide that certain transferred property in which the decedent has retained a life interest is to be included in his gross estate. The general purpose underlying both sections is to insure taxation of transfers that are essentially testamentary—that is, transfers in which the transferor retained a significant interest or control over property transferred during his lifetime.

But the reciprocal trusts doctrine, which was advanced in *Lehman v. Commissioner*,[1] dissolved the belief that creation of reciprocal trusts held the answers to successful evasion of estate taxes.[2] Though the reciprocal

[1] 109 F.2d 99 (2d Cir.), *cert. denied*, 310 U.S. 637 (1940).

[2] For a complete history of the development of the reciprocal trusts doctrine