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Civil Section Documents - Electronic Evidence

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This paper was prepared to stimulate discussion on the topic of electronically produced evidence for the Uniform Law Conference of Canada. I am very grateful to John Gregory and Ken Chasse for their comments on earlier drafts.

CONTENTS

I. Introduction: Why Another Paper?

[1] In 1995, at a joint session of the Uniform and Criminal Law Sections, the Uniform Law Conference of Canada considered proposals for a Uniform Electronic Evidence Act, and after raising a number of questions about the various proposed Acts, resolved to conduct further consultations and to revise the consultation document. See footnote 1 In previous papers, the basic policy issues, the existing law, and the law of other jurisdictions have been reviewed; options for reform have been drafted; and the arguments for and against the options (as well as the argument for doing nothing) have been presented.² This paper neither revises the existing consultation documents, nor proposes a new set of statutory provisions. Rather, I hope to stimulate further discussion of the policy issues surrounding computer-generated evidence by restating the basic problems and by presenting two hypothetical fact situations. My purpose is not to advocate any particular approach to electronic evidence, but to highlight the ways in which computer-generated evidence differs from traditional documentary evidence, and to support the view that some statutory changes directed at electronic evidence would be desirable.³

II. Three Questions about Electronic Evidence

[2] Information presented to a computer must be encoded as a sequence of bits, that is, of ones and zeroes. These bits can be stored on a magnetic medium such as tape or disk, where they take the form of magnetized and demagnetized portions of the medium, or on an optical medium such as a CD-ROM, where they take the form of pitted or smooth portions of the CD's surface. ⁴ By its nature, data of this sort cannot be directly interpreted by humans, and in particular not by the triers of fact in a courtroom; they must be transformed by the computer system into something a human can perceive, whether on a screen or on a piece of paper.

[3]. Thus, although the term "record" has been defined broadly enough in some statutes to include a tape, disk, or CD-ROM,⁵ our concern must be with the transformation of the information into a documentary format. Normally, the information will be processed by a program and printed out, thus producing what I will call a "computer-generated document", and it will be the admissibility of this document that will be in issue.⁶

[4] There are three questions traditionally asked when a document is tendered as evidence:

- (i) Authentication: What is this document? Where did it come from? Who or what created it?
- (ii) Best evidence: Is this document the original? If not, is it a copy that is admissible under an exception to the original document rule?⁷
- (iii) Hearsay: Is the document offered for the truth of the assertions it contains? If so, is it admissible for its truth under an exception to the rule against hearsay?

Under existing law, these questions would be asked of computer-generated documents as well; but the answers would be based on an idea of how documents are created that is not appropriate to a computer-generated document. Thus, relying on existing doctrine to determine the admissibility of computer-generated documents raises two dangers: on the one hand, a strict reading of existing doctrine may exclude reliable and probative evidence simply because it does not meet a requirement designed before computers were routinely used to store and process information; on the other hand, a lenient reading of existing doctrine may give insufficient attention to the problems of authentication that are relevant to computer-generated documents. To see these dangers, I consider the existing doctrine and how it would handle two hypothetical cases, and then revisit the three questions.

III. The Limitations of Existing Doctrine

[5] The volume of reported cases dealing with computer-generated documents is surprisingly small, given that these documents must be widely used in litigation. Two frequently cited cases dealing with electronic evidence involve the interpretation of s. 29 of the *Canada Evidence Act*, though of course the approaches proposed in these cases need not be confined to that particular statutory provision.

[6] In *R. v. McMullen*,⁸ the accused was charged with obtaining property and cash by false pretences. The Crown sought to introduce a computer print-out of the accused's account during the relevant period. The case proceeded on the assumption that the print-out was based on information in the memory of a central computer. The accused's branch had "no written record, document, or book which could be regarded as an original account record",⁹ apart from the print-out itself. The summary conviction court judge held that the computer's memory was not a "record" within the meaning of s. 29 of the *Canada Evidence Act*; the print-out was therefore not admissible under s. 29. as a "copy". In the summary conviction appeal court, Linden J. read the words "record" and "copy" in a broad, functional manner, emphasizing the diversity of record-keeping systems over time, to hold that the print-out was "a new type of copy made from a new type of record."¹⁰ In affirming Linden J.'s interpretation of s. 29, the Court of Appeal agreed that "record" should be read broadly,

but suggested that the proponent of a computer-generated document would have to lay a fairly detailed foundation as a precondition to admission:

... the demonstration of reliability of computer evidence is a more complex process than proving the reliability of written records. ... as a matter of principle a Court should carefully scrutinize the foundation put before it to support a finding of reliability, as a condition of admissibility ... The nature and quality of the evidence put before the Court has to reflect the facts of the complete record keeping process - - in the case of computer records, the procedures and processes relating to the input of entries, storage of information, and its retrieval and presentation ... If such evidence be beyond the ken of the manager, accountant, or the officer responsible for the records ... then a failure to comply with s. 29(2) must result and the print-out evidence would be inadmissible.¹¹

The Court thus emphasized the question of authentication: implicitly recognizing that the question of "original" and "copy" has little relevance to computer records, the Court nonetheless imposed a high burden to demonstrate how the print-out was created.

[7] But *McMullen* could certainly be read as suggesting that the computer's memory was the "record" and that the printout was a copy of that "record". On that interpretation, erasing of the computer's memory would constitute destruction of the "record". This interpretation was urged on the court by the accused in *R. v. Bell and Bruce*.¹² The accused were charged with fraud, and the Crown wanted to introduce their bank statements. The evidence was that the transactions in a customer's account were recorded in a central computer and that, every month, the bank created two print-outs listing the transactions. The computer's memory of the original transactions was then erased, leaving only the closing balance in memory. The two print-outs were sent to the customer's branch. One copy went to the customer, and the other was stored by the bank. Thus, if the memory was the "record", and the print-out was the "copy", the conditions of admissibility in s. 29(2) of the *Canada Evidence Act* would not be met. ¹³ On this basis, the trial judge held that the print-out of the monthly statement was inadmissible, and the accused were acquitted.

[8] On appeal, the Court rejected the accused's interpretation of *McMullen*, holding that the earlier case said only that "information stored in a computer is *capable* of being a 'record kept in a financial institution', and that the computer print-out is *capable* of being a copy of that record".¹⁴ It was therefore possible for the print-out itself to be the "record", inasmuch as it was a transformation or "collation" of the information originally placed in the central computer's memory: "it makes no difference that the original information changes form, or becomes absorbed in some larger record."¹⁵

[9] To this point, the court was merely distinguishing *McMullen* in a plausible way, but the court went on to express a very different attitude towards the admission of a computer-generated document. Among the "general propositions" relating to computer-generated documents, the Court included the following:

- "the record "must have been produced for the bank's purposes as a reference source, or as part of its internal audit system and, at the relevant time must be kept

for that purpose." The Court made no reference to the need to demonstrate the operation of the computer system.¹⁶ The Court's discussion suggests that the key to admissibility is the record-keeper's reliance on the record; if the record is good enough for the bank, it is good enough for the fact-finding process."

[10] The differences between *McMullen* and *Bell and Bruce* illustrate the need for some statutory guidelines for the admission of computer-generated documents.¹⁷ In these two cases, the purpose for which the Crown introduced the evidence was the same; the statute governing the admission of the evidence was the same; the manner in which the evidence was produced was very similar; and the same result was reached (albeit only on appeal). Yet the court relied on very different theories about the prerequisites of admissibility. In *McMullen*, the court contemplated a fairly detailed inquiry into the manner in which the information underlying the print-out was recorded and processed, while in *Bell and Bruce*, the court seemed content to take the bank's reliance on its own system as a substitute for this inquiry.¹⁸

IV. Two Hypothetical Cases

(i) A Criminal Case

[11] The accused are charged with offences arising out of the sale of stolen cars. The prosecution alleges that the accused would steal a car, obtain a wrecked car of the identical make, and sell the stolen car as the repaired version of the wrecked vehicle. Each car had two numbers associated with it: a cylinder block number and an engine number. The engine number could be removed, but the cylinder block number could not. The prosecution alleges that the accused transferred the engine number from the wrecked vehicle to the stolen vehicle, and proposed to prove this allegation by identifying the vehicles in question by their cylinder block numbers. The prosecution therefore seeks to introduce manufacturers' records showing the original numbers for each stolen vehicle.

[12] These records were created as follows. Each vehicle component, including the engine and the cylinder block, was bar-coded. When a car was assembled, the assembly workers scanned the bar codes with a laser pencil as the parts were assembled. The information indicating which parts went together would then be stored in a computer, and would be printed out if needed. After a certain period of time, the printouts would be optically scanned for long-term storage, and the computer's memory of the bar codes would be erased.¹⁹ Could the Crown introduce a copy or printout of the optically scanned records into evidence?²⁰

[13] There is little doubt that such records would be found admissible, one way or another, but the existing case law reviewed above and in the earlier consultation documents suggests that the theory of admissibility remains unclear. Suppose that a print-out of an optically scanned version of the records was offered. The Crown would rely on s. 30 of the *Canada Evidence Act* to get this print-out into evidence. Section 30(1) reads: "Where oral evidence in respect of a matter would be admissible in a legal proceeding, a record made in the usual and ordinary course of business is admissible in evidence under this

section in the legal proceeding on production of the record." Where the record is not reasonably available, a copy is admissible, with supporting documentation, under s. 30(3). Now, "record" is defined very broadly in this section.²¹ But the definition of "copy" in s. 30(12), though it does not exclude anything, seems to contemplate photographic reproduction of a paper record:

- "copy", in relation to any record, includes a print, whether enlarged or not, from a photographic film of the record, and "photographic film" includes a photographic plate, microphotographic film or photostatic negative ...

How does the print-out of the optical scan of the print-out of the magnetic memory of the bar-coded numbers fit into this scheme?

[14] The theory of *McMullen* is that the original computer memory in which the information about the bar codes was stored is the "record", and the definition of "record" in s. 30 is certainly broadly enough to permit this interpretation. But this "record" has been destroyed, so we must turn to the "copy". The print-out at issue is far removed from the "record" and, in any event, can scarcely be described as any sort of "photographic" record of that "record". Observing that the definition of "copy" is not exclusive, a court might well hold that the print-out is nevertheless a "copy", because it serves precisely the same function in relation to the original computer record as a microfilm does in relation to paper records. On the other hand, microfilm is made admissible specifically by statute,²² and not by reading the word "copy" to include "microfilm"; an *expressio unius* construction might therefore suggest exclusion of the print-out. Furthermore, *McMullen* does suggest that the Crown would be required to present a fairly extensive foundation for the print-out, in the form of extended evidence on how the car manufacturer's computer and optical imaging system worked.

[15] The theory of *Bell and Bruce*, on the other hand, suggests that the optical scan is just as much a "record" as the original computer memory. Like the bank statements at issue in *Bell and Bruce*, the optical image is just another way of presenting the same information in a form humans can read. Further, the fact that the manufacturer relied on the optical scan for its own purposes would make it sufficiently reliable. A reproduction of the optical scan would then be a "copy" under s. 30(3).

[16] These interpretations are certainly possible applications of the terms used in s. 30 to information stored in computers, but there is a certain artificiality to them. It strains language to call something a "copy" when it is a reprocessed version of digital information; and to say that any processing of the information is as much a "record" as the original computer memory seems uncomfortably close to reading s. 30(3) out of the *Evidence Act* when applied to computers.²³ Coupled with the uncertainty created by the differing theories in *McMullen* and *Bell and Bruce*, this strain on language suggests that a specific statutory regime, directed at information stored in and processed by computers, would be desirable.

(ii) A Civil Case

[17] A firm in a service industry, such as law or engineering, bills clients both for services and for disbursements. The firm has a fully integrated, paperless system for recording disbursements: photocopiers, telephones, fax machines, on-line information services, and so forth are all connected to the firm's computer system. Whenever an employee of the firm makes a photocopy, a long-distance call, and so forth, the charges are assigned by the computer to the account of the appropriate client. Now, suppose a client refuses to pay its full account, claiming that its file could not possibly have incurred the amount of photocopying, faxing, and on-line searching that the firm has assigned to it. If the firm sues to collect its account, is the firm's computer-produced documentation of the disbursements admissible?

[18] The firm would rely on a provision such as s. 35(2) of the Ontario *Evidence Act* to get the documentation into evidence. This section raises some of the same problems of authentication as the criminal case. Where the electronic signals from the phones and the photocopiers and so forth are interpreted and collated by a central computer, one might say that the computer's memory is the "record", and any print-out from the memory is a "copy". The statute certainly defines "record" broadly enough to include a computer's memory;²⁴ but it makes no provision for the admission of a "copy". A court might interpret "record" broadly enough to include both the memory and the print-out since, as in *Bell and Bruce*, the print-out is just another way of presenting the same information. But again, this interpretation seems to strain our ordinary understanding of the term "record", suggesting that some statutory reform is desirable.

[19] In addition, this hypothetical raises a serious hearsay problem. In the criminal case, the record-keeper had no motivation to misrepresent the information; but here, the essence of the client's claim is that the firm's records are inaccurate, whether through negligence or fraud. The particular problem raised by the electronic form of the evidence is that some members of the firm may have altered the records after they were created, and this alteration is likely to be completely undetectable in the computer-generated document presented to court.²⁵ The reliance theory underlying *Bell and Bruce*, where the records were generated and kept by a third party, does not seem adequate in this situation:

- given the client's position, the firm's internal reliance on its record-keeping system simply begs the question. The court might well require the firm to provide considerable evidence as to how the records were created, maintained, transformed, and protected from tampering. It may be that this evidence should go to the weight and not to the admissibility of the firm's records,²⁶ but not to require it at all would be excessively generous. The hearsay problem inherent in having a party offer its own records to prove its case is not avoided simply because the records are computerized.²⁷

(iii) Summary

[20] To reiterate, the danger is twofold. On the one hand, the evidence in these cases

should not be excluded simply because it can only be read in the form of a computer-generated document. In the criminal hypothetical, it is just the sort of reliable, probative evidence that we would want to put before the trier of fact. If a court took a narrow reading of the word "copy" in s. 30, the evidence could nonetheless be excluded. On the other hand, there are many ways that the information recorded in a computer can be deliberately or negligently falsified as goes from its point of origin to the document presented in court. In the civil hypothetical, where the party offering the evidence is the party that generated and maintained it, the document should not be immune from scrutiny just because it came from a computer. Existing statutory and common law doctrine can handle these questions, but only at the cost of some distortion of language and some uncertainty about how this evidence will be treated in the future.²⁸

V. The Three Questions Revisited

(i) Authentication

[21] As with traditional documentary evidence, many of the concerns about electronic evidence turn on authentication. To be admissible, a traditional document must be authenticated by a witness; so must a computer record. Documents can be forged or altered; so can computer records, and it may well be that alteration or forgery of computer records will be even harder to detect than comparable operations on traditional documents. It is partly for this reason that Chasse has recommended that the Uniform Law Conference adopt a fairly detailed checklist of factors that the court would have to consider before admitting a computer-generated document.²⁹ The focus of authentication of a computer-generated document is not only on the provenance of the piece of paper itself, but on the security, reliability, and accuracy of the system that placed the marks on the piece of paper.

(ii) Original Document Rule

[22] Underlying the common law rules and statutes governing documentary evidence is the idea of an original document which should be brought to court or, if that is impractical, should be copied manually, mechanically, or photographically. But the concept of an "original document" has no sensible application to computer-generated documents. In none of the computer records cases I have looked at was the "best evidence" issue raised. But the ghost of the idea of an original document can be seen lurking in *McMullen*, where the court interpreted the computer's memory as a "record", and in *Bell and Bruce*, where the court said that there could be more than one "record", for the purposes of s. 29 of the *Canada Evidence Act*. These semantic contortions were produced more by the words of the statute than by an underlying vision of a paper original, but they illustrate the need to dispense with the "best evidence" rule in its usual formulation when applied to computer-generated documents.

[23] A statutory regime appropriate to computer-generated records would merge the "original document" rule with the problem of authentication. The rationale for the original document rule was that, where the document was offered either for the legal effect or for the truth of its words, it was important to avoid the errors that inevitably creep into the processes of copying and transcription.³⁰ This rationale is also applicable to computer-

generated documents, because errors can creep into the copying, processing and transcription of computer files. But the focus should be on the overall security and reliability of the computer system that produced the document. In functional terms, this focus would lead to consideration of the same factors that would go into authenticating the computer-produced document.³¹

(iii) Hearsay

[24] The question of hearsay is probably the least contentious of the three. The traditional rule was that hearsay was inadmissible unless it fell into a statutory or recognized common law exception. The Supreme Court's recent principled approach indicates that there is a trend to admitting hearsay where it is shown to be necessary and reliable.³² It is as yet unclear whether the principled approach has swallowed up the traditional common law exceptions, or whether the principled approach is a residual category to be explored after the traditional exceptions have been exhausted. Thus, it is unclear whether the common law rules relating to business records will survive or will be subsumed into the principled approach. While these rules are based on the idea that records kept in the ordinary course of business are likely to be reliable, they are not expressly addressed to the same criteria of necessity and reliability that underlie the principled approach; the principled approach might then require more in the way of demonstration of the reliability of the computer system than the existing common law exception. But, as long as this exception survives, computer-generated business records generated by a system that is shown to be sufficiently reliable in its recording, processing, storage, and printing functions should be admissible for the truth of its contents. This policy already underlies statutory business records exceptions, and seems likely to prevail at common law in the event that it is not embodied in an electronic evidence statute.³³

VI. Conclusion

[25] The need for a statute to govern the admissibility of computer-generated documents springs less from any glaring inadequacy in the existing law than from the fear that the law may develop in unpredictable and undesirable directions. The cases discussed in the text above reached sensible results regarding the admissibility of bank statements; but these results were reached only on appeal, are based on strikingly different criteria regarding the requirements for admissibility, and deal with perhaps the most reliable form of computer-generated evidence (bank records). Thus, while *Bell and Bruce* may be an authoritative interpretation of one particular statutory provision, there is a wide range of other computer-generated records for which the criteria of admissibility remain unclear; and this uncertainty affects not just the conduct of litigation but also the advice that a solicitor can give a client who is interested in setting up an information-management system.³⁴

[26] The key to thinking about computer-generated evidence is to get away from the paper-document model that underlies the existing rules. For a computer-generated document, the issue is not whether the piece of paper (or other form of information) is an "original" or is a "copy" of an original; the issue is whether the information on the piece of paper accurately

reflects the intentions of the persons who use the computer system that generated it.³⁵ Therefore, the focus of admissibility for a computer-generated document should be on the security and reliability of the computer system that handles the records. The rules should not make admission of computer records excessively difficult, but should not completely immunize them from scrutiny. At the same time, a statutory framework for this sort of evidence should not be so specific that it is unlikely to be able to cope with future changes in computer technology.

[27] Specific options for statutory reform that attempt to meet these criteria have been proposed and discussed elsewhere.³⁶ Rather than provide another one, I conclude by listing the key issues that any statutory reform must deal with. These questions are drawn from the existing consultation documents and from the minutes of the 1995 meeting of the Uniform Law Conference.

- (i) Should statutory reform be directed at the entire field of documentary evidence, or should the reform be restricted to computer-generated evidence?³⁷
- (ii) Should the statute require the proponent of computer-generated evidence to demonstrate the compliance of its system in detail, or should the statute provide only a general indication of the factors to be considered?³⁸ Should the onus be rather on the party opposing the introduction of computer-generated evidence? Should the statute distinguish between records kept by a party and records kept by a non-party?
- (iii) Should there be any special provisions to deal with the hearsay use of computer-generated evidence, or should the hearsay issue be left to the evolving common law doctrine?
- (iv) Should optical imaging be dealt with separately from other forms of computer-generated evidence? If so, should it be blended with existing provisions regarding microfilm? In any event, should the statute or regulations governing optical imaging incorporate the standards that are developing in the industry?³⁹

I hope that this paper has helped to clarify the reasons for considering these questions seriously.

Footnotes

Footnote: 1Uniform Law Conference of Canada, 1995 Proceedings, p. 67.

*Footnote: 2E.A. Tollefson, "Admissibility of Computer-Produced Evidence in Proceedings Within Federal Jurisdiction", Uniform Law Conference of Canada, 1995; Ken Chasse, "Computer-Produced Records in Court Proceedings", Uniform Law Conference of Canada, June 1994. For a short-form statute, see John Gregory, "Proposals for a Uniform Electronic Evidence Act", Uniform Law Conference of Canada, 1995; for a long-form statute, see Tollefson, *supra*, at 21-40. These papers are available at the Web site of the Uniform Law Conference: <http://www.law.ualberta.ca/alri/ulc>.*

*Footnote: 3Another important topic is electronic data interchange (EDI). In EDI, of which e-mail is perhaps the most familiar example, two (or more) parties can exchange information over computer or phone lines. I have chosen not to discuss this topic, partly for reasons of space, but also because I am inclined to agree with the view expressed by Chasse, supra note 2, at 5, that EDI is likely to be more problematic in contract law rather than evidence law. For example, if goods are bought and sold by EDI, it may be that the purchase order states that title will pass on delivery, while the seller's invoice states that title will pass when the order is placed. But this is just the familiar "battle of the forms" in an electronic guise. (On the "battle of the forms", see Stephen M. Waddams, *The Law of Contracts*, 3d ed. [Toronto: Canada Law Book, 1993], ¶¶65-72.) For a more detailed discussion of EDI, see John D. Gregory, "Electronic Documents in Ontario's Photoradar System" (1995) 6 J.M.V.L. 277 at 279-280.*

Footnote: 4Other media, such as bar codes and punched cards, can also be used to represent data. See Chasse, supra note 2, at 4, for further examples of the electronic representation of data.

Footnote: 5E.g., Canada Evidence Act, s. 30(12) ("record" defined as including "the whole or any part of any book, document, paper, card, tape or other thing on or in which information is written, recorded, stored or reproduced ..."); Ontario Evidence Act, s. 35 ("record" defined as "any information that is recorded or stored by means of any device"). The recent New Brunswick amendments relating to electronic evidence define "document" as "any record of information, however recorded or stored, whether in printed form, on film, by electronic means or otherwise". Evidence Act, R.S.N.B. 1973, c. E-11, as am. by S.N.B. 1996, c. 52, s. 1 (not in force).

Footnote: 6It is possible that, in some courtroom of the future, computer terminals would be available to all participants in the trial, so that computer records could be viewed without being produced on paper. This possibility does not substantially affect the basic issues to be discussed in this paper.

*Footnote: 7The "original document" rule should be thought of as a special case of the "best evidence" rule, though it is doubtful whether the "best evidence" rule has strict application elsewhere. See S.A. Schiff, *Evidence in the Litigation Process*, 4th Student ed., vol. 2 (Toronto: Carswell, 1993) at 811 and at 842.*

Footnote: 8 25 O.R. (2d) 301, 47 C.C.C. (2d) 499 (C.A.), *aff'g* 42 C.C.C. (2d) 67, 6 C.R. (3d) 218 (Ont.H.C.J.) [hereinafter McMullen cited to O.R.].

Footnote: 9 *Ibid.* at 304, quoting from case stated by trial judge.

Footnote: 10 *Ibid.* at 305, quoting from Linden J.

Footnote: 11 *Ibid.* at 309.

Footnote: 12 (1982), 35 O.R. (2d) 164, 65 C.C.C. (3d) 377 (C.A.) [hereinafter Bell and Bruce cited to O.R.]. Bell and Bruce was affirmed in very brief reasons that expressed agreement with the Court of Appeal: [1985] 2 S.C.R. 287.

Footnote: 13 For a "copy" to be admissible under s. 29(2), the financial institution must have the "record" in its "custody and control". This requirement obviously entails that the record has not been destroyed.

Footnote: 14 *Ibid.* at 166, original emphasis.

Footnote: 15 *Ibid.* at 167.

Footnote: 16 In the same vein, the Court seemed impressed by the fact that the print-out was "the only source of reference available to the bank as to the state of the bank account, saving the possibility of compiling a new statement by seeking out the original deposit slips, cheques, etc."; similarly, the Court was unconcerned by the fact that there was no direct proof of how some other bank statements offered in the case were generated. *Ibid.* at 167.

Footnote: 17 Chasse, *supra* note 2, at 10, says that Bell and Bruce "refined" McMullen. Others believe that Bell and Bruce implicitly overrules McMullen. Tollefson, *supra* note 2, at 5, points out that if Bell and Bruce does supersede McMullen, it leaves the following question unanswered: "what is the record where there is a printout which is relied upon on a daily basis, but the information still remains on the memory of the computer?" The two cases may not be logically incompatible, but each has a different view of the meaning of the words in the statute.

*Footnote: 18*In a number of other cases, the courts have tried to fit computer-generated documents into the language of the Canada Evidence Act, but without detailed discussion and without any attention to the question of the reliability of the system that produced the record. The British Columbia Court of Appeal has held that a computer print-out is a "record" within the meaning of s. 30 of the Canada Evidence Act: *R. v. Vanderberghe* (1976), 6 C.R. (3d) 222 (B.C.C.A.) (computer print-out of a bank's records); *R. v. Bicknell* (1988), 41 C.C.C. (3d) 545 (B.C.C.A.)

(print-out of computer records of phone calls). In contrast, the view in Nova Scotia is that the computer's memory is the "record" and that a print-out is the "copy": *R. v. Sunila and Solagman* (1986), 26 C.C.C. (3d) 331 (N.S.S.C.T.D.) (print-out of information stored in a computer during investigation by Canadian Forces a "copy" under Canada Evidence Act s. 30); *R. v. Hanlon* (1985), 69 N.S.R. (2d) 266, 163 A.P.R. 266 (Co.Ct.) (print-out of information stored in Department of Fisheries computers a "copy" under Canada Evidence Act ss. 26, 28(1)).

*Footnote: 19*See *Chasse*, *supra* note 2, at p. 5 and Appendix D, and *Tollefson*, *supra* note 2, at 14-15, for a discussion of imaging. It may be implausible for a firm to go to the trouble of printing out and the optically imaging these records. I include imaging not for realism but to enrich the hypothetical.

*Footnote: 20*This hypothetical is based on a simplified, but computerized, version of the facts in *Myers v. D.P.P.*, [1965] A.C. 1001, [1964] 2 All E.R. 881 (H.L.). The point at issue in the case was whether microfilmed records, though hearsay, were admissible. Because of the absence of any statutory or established common law exception to the hearsay rule for records of this sort, the House of Lords held that

they were not admissible. In Canada, they would likely be admissible under s. 30 of the Canada Evidence Act. My focus here is not on the hearsay aspect, but on the record-keeping aspect.

*Footnote: 21*See note 5 *supra*, and *Tollefson*, *supra* note 2, at 5.

*Footnote: 22*E.g. Canada Evidence Act, s. 30(12); Ontario Evidence Act, s. 34(1)(b).

*Footnote: 23**Tollefson*, *supra* note 2, at 6, points out that, under s. 30, if a print-out is a "record", its proponent need only prove that it was made in the usual and ordinary course of

business; but if it is a "copy", foundation evidence is required. "The irony is that the document which is presented in evidence in each case is identical".

Footnote: 24Section 35(1) states: "'record' includes any information that is recorded or stored by means of any device."

Footnote: 25Chasse, supra note 2, at 16. I am not concerned with the billing of phantom disbursements to the client, since this phenomenon could occur regardless of the firm's record-keeping system.

Footnote: 26This would seem to be the result if s. 35 was applied as it stands: s. 35(4) provides that "The circumstances of the making of such a writing or record, including lack of personal knowledge by the maker, may be shown to affect its weight, but such circumstances do not affect its admissibility."

Footnote: 27Statutes dealing with documentary evidence typically do not distinguish between business records offered by a party to an action and business records obtained from third parties, but see Ontario Evidence Act, s. 33. In Tecoglas, Inc. v. Domglas, Inc. (1985), 51 O.R. (2d) 196 (H.C.J.) a party was permitted to offer its own computer records to prove its damages at trial where the records had been subject to scrutiny during discovery. The court seemed unconcerned about the possibility that the records had been deliberately or negligently altered. The recent New Brunswick amendments, supra note 5, do not make this distinction either, but do require that a printout of an imaged record be a true copy (new s. 47.1(3)(c)) and that a printout of an electronically stored document be unaltered from its original storage (new s. 47.2(2)(b)).

Footnote: 28Cf. Tollefson, supra note 2, at 3 and at 6.

Footnote: 29Chasse, supra note 2, at 25-26. The recent New Brunswick amendments do not adopt this check-list approach, preferring instead a more general requirement that the document be shown to be unaltered: supra note 27.

Footnote: 30Schiff, supra note 7, at 842.

Footnote: 31Chasse, *supra* note 2, at 13; see also UNCITRAL Draft Model Law, *ibid.* at 52-53, which does not distinguish between "best evidence" and authenticity where computer-generated evidence is offered when an "original" would otherwise be required.

Footnote: 32R. v. Smith (1992), 75 C.C.C. (3d) 257. This trend is so pronounced that "[a]n argument can even be made that there is no longer a ban on hearsay evidence." Chasse, *supra* note 2, at 2; see also Tollefson, *supra* note 2, at 9.

Footnote: 33The recent amendment to the New Brunswick Evidence Act does not expressly refer to the hearsay issue; printouts of electronic images and printouts of computer records are "admissible in evidence in all cases and for all purposes for which the original document would have been admissible." Evidence Act, R.S.N.B. 1973, c. E-11, as am. by S.N.B. 1996, c. 52, s. 1 (not in force).

Footnote: 34For example, the extent to which a business can save space by microfilming paper records and then destroying the originals is fairly clear (see, e.g., Ontario Evidence Act, s. 34), but the extent to which the same records could be imaged is completely unclear. The recent amendment to the New Brunswick Evidence Act is clearly designed to facilitate the admission of print-outs of optically imaged documents, requiring that the electronic storage be "in the course of an established practice in order to keep a permanent record of it", that the original be destroyed, and that the printout be "a true copy of the original document": Evidence Act, R.S.N.B. 1937, c. E-11, as am. by S.N.B. 1996, c. 52, s. 1 (not in force).

Footnote: 35This point is emphasized by Gregory, *supra* note 3, at 278-279.

Footnote: 36See note 2 *supra*.

Footnote: 37Tollefson, *supra* note 2, Appendix A, offers a comprehensive reform of the law of documentary evidence. Gregory, *supra* note 2, at pp. B1-B9, presents a more modest proposal that would deal only with computer-generated evidence. New Brunswick's recent amendments deal with electronic record-keeping only, and do not attempt a complete revision of documentary evidence law.

Footnote: 38Chasse, supra note 2, at 24-26; Tollefson, supra note 2, at 36-37; Gregory, supra note 2, at p. B4.

Footnote: 39Chasse, supra note 2, at 68 briefly discusses existing standards for imaging, which could be applied in determining admissibility and weight.