

Technology Neutrality and the Canadian Uniform Acts

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[1] [The views expressed here are not necessarily those of the Ministry.]

Introduction

[2] This brief overview of Canada's uniform legislation on electronic communications - the Uniform Electronic Commerce Act and the Uniform Electronic Evidence Act - sets out their ambition to make the law media neutral in a way that is also neutral as to the technology to be used. It gives examples of statutory provisions. It then canvasses the advantages and disadvantages of technology neutrality and reviews some of the safeguards contemplated to mitigate the disadvantages. It makes occasional references to corresponding provisions in the Quebec legislation.

Media neutrality

[3] The purpose of the Uniform Electronic Commerce Act (UECA) ([1999] Proceedings of the Uniform Law Conference of Canada 380, [http://www.ulcc.ca/en/us/index.cfm?sec=1 & sub=1u1](http://www.ulcc.ca/en/us/index.cfm?sec=1&sub=1u1)) is to remove some significant legal barriers to the effective use of electronic communications in Canada. It aims to help make the law "media neutral", i.e. able to work the same way regardless of the medium of communication used for legal information. (Most of its provisions are directly inspired by the United Nations Model Law on Electronic Commerce (1996), <http://www.uncitral.org/english/texts/electcom/ml-ec.htm>.)

[4] The UECA does this by proclaiming a general ban on discrimination on the basis of medium:

Information shall not be denied legal effect or enforceability solely by reason that it is in electronic form. (section 5)

[5] The "solely" is important. The law may impose requirements on information that cannot be satisfied electronically. These requirements will still be effective, and may bar effective legal use of the information in electronic form.

Nothing in this Part limits the operation of any requirement under [enacting jurisdiction] law for information to be posted or displayed in specified manner or for any information or document to be transmitted by a specified method. (section 15.)

[6] The UECA also provides for interpretation of rules requiring particular paper-based manifestations so that the rules may be satisfied electronically.

A requirement under [enacting jurisdiction] law that information be in writing is satisfied by information in electronic form if the information is accessible so as to be usable for subsequent reference. (section 7)

A requirement under [enacting jurisdiction] law for the signature of a person is satisfied by an electronic signature. (section 10)

A requirement under [enacting jurisdiction] law that requires a person to present or retain a document in original form is satisfied by the presentation or retention of an electronic document if,

(a) there exists a reliable assurance as to the integrity of the information contained in the electronic document from the time the document to be presented or retained was first made in its final form, whether as a paper document or as an electronic document;

(b) where the document in original form is to be provided to a person, the electronic document that is provided to the person is accessible by the person and capable of being retained by the person so as to be usable for subsequent reference. (section 11(1))

(a) the criterion for assessing integrity is whether the information has remained complete and unaltered, apart from the introduction of any changes that arise in the normal course of communication, storage and display;

(b) the standard of reliability required shall be assessed in the light of the purpose for which the document was made and in the light of all the circumstances. (section 11(2))

[7] The Uniform Electronic Evidence Act ([1998] Proceedings of the Uniform Law Conference 164, <http://www.ulcc.ca/en/us/index.cfm?sec=1 & sub=1u2>) also aims at media neutrality. It provides a means of satisfying electronically the "best evidence rule", which requires documentary evidence to be presented to a court as an original. The notion of "original" is problematic for electronic documents.

[In any legal proceeding,] Subject to Subsection (2), where the best evidence rule is applicable in respect of an electronic record, it is satisfied on proof of the integrity of the electronic records system in or by which the data was recorded or stored. (section 4(1))

[8] Implementation of these uniform statutes across Canada is shown in chart form at the Uniform Law Conference web site, <http://www.ulcc.ca/en/cls/index.cfm?sec=4> =4b

Technology neutrality

[9] The examples just cited show that the Uniform Acts are technology neutral: they do not prescribe the use of any particular technology to achieve the legal results they set out. In this, as in their goal of media neutrality, they share the character of Quebec's *Act to establish a legal framework for information technology*. (The character they do not share is minimalism; Quebec has shown that a technology neutral statute need not be minimalist.)

Advantages of technology neutrality

1. Technology neutrality is flexible. It allows users of electronic communications to decide what is appropriate to them, in expense, in deployment, in security and in reliability. One size does not fit all. High value transactions between strangers call for different methods than routine exchanges between people who know each other well. Dealings with public authorities may raise different policy considerations than entirely private communications. (The UECA expressly allows "government" to make additional rules for incoming electronic documents.)
2. Technology neutrality is timeless. It allows the technologies of communication to evolve without having to change the legal rules with every new version of hardware or with every new method of encryption. The evolution of technology is so fast that spelling out a particular technology in legislation would risk being out of date even by the time the law received Royal Assent.
3. Technology neutrality is fair. It allows designers of technology to solve the challenges of reliability, security, and accessibility (among others) however their imagination inspires them to do so. It does not keep technological development within narrow borders in order to have legal effect. It does not "legislate market winners" but permits competition and innovation to improve how technology may achieve the legal results.

Disadvantages of technology neutrality

1. The risk of error. Since the statute does not tell users of information technology how to achieve the results necessary to have legal effect, users may choose means that prove insufficient. They are at least in a position of uncertainty. This can be reduced somewhat by express agreements between parties about using particular technology, but such agreements may or may not be recognized by the courts.
2. The risk of tampering. The statute does not set out any security procedures for legally effective electronic documents. As a result, people may create documents that are exposed to tampering. Changes to electronic documents may be very difficult to detect, if the appropriate controls are not used. This creates an increased risk of fraud or at least interference with legal relations.
3. The risk of degradation. The statute does not tell users what kinds of system to use and how the system should be maintained. Electronic communication and storage involve the transfer of data among different kinds of system - hardware, software and storage media may all change over relatively short periods - and data may be lost, unintentionally and barely perceptibly, with each transfer. The longer one needs to keep the information in electronic form, the greater the risk of such loss.

Safeguards for technology neutrality

1. Consent. The UECA does not require anyone to use or accept documents or information in electronic form. (section 6. cf. Quebec's statute, s.29) The right to say No includes the right to say Yes, if In other words, the statute makes clear the parties' control over the risks of technology neutrality. If someone is not comfortable with a particular form of electronic communication, then that communication can be refused. This does put some burden on parties to electronic communication to be aware of the risks and means of reducing them.
2. Standards. A number of governmental and private-sector bodies have developed standards, i.e. rules or guidelines for effective use of technology. Parties are permitted, and even encouraged, to find appropriate standards for their uses of technology to comply with them and to require compliance of those with whom they deal electronically. The Uniform Electronic Evidence Act allows the court or tribunal to refer to standards as required:

For the purpose of determining under any rule of law whether an electronic record is admissible, evidence may be presented [in any legal proceeding] in respect of any standard, procedure, usage or practice on how electronic records are to be recorded or stored, having regard to the type of business or endeavour that used, recorded or stored the electronic record and the nature and purpose of the electronic record. (section 6)

Compare the Quebec statute's detailed provisions on fixing standards (sections 64 to 68.)

3. Exclusions. Some uses of electronic communications may be considered too risky for use under a technology neutral statute. The UECA expressly does not apply to wills, personal powers of attorney, transfers of land, and negotiable instruments. The first two classes of document are often created by individuals without professional, much less technical, advice, and it was thought that the risk of tampering was too great. Transfers of land may also be subject to similar risks, but they also involve third party rights, and usually some public registration system. Many Canadian provinces do allow for electronic communications about land transfers, but they spell out in more detail the security and sometimes the technology requirements that apply. Negotiable instruments must be unique documents - since the document itself carries value that is transferred from one holder to the next. Technology cannot yet create a unique but transferable electronic document. (Some people say that if it does not exist, it need not be excluded from the statute! Most implementations of the UECA have adopted the exclusion, however.)

Conclusion

[10] Much of the world's legislation removing barriers to legally effective use of electronic communications is technology neutral, inspired by the UN Model Law mentioned above. Canada - including Quebec - is decidedly in the mainstream of such legislation. The concept of technology neutrality is attractive in principle, but it has its downsides. Time will tell if the choices of the uniform legislation strike the right balance, or if Quebec's neutral but more detailed approach works better, or if technology does have a place in our statute books after all.

Further reading

- A sceptical look at technology neutrality by an advocate of public key cryptography for secure electronic commerce: M. Baum, " Technology Neutrality and Secure Electronic Commerce: Rule-making in the Age of 'Equivalence'", (1999: Exposure Draft 1.1), online:

http://www.verisign.com/repository/techneutrality1_1.doc.

- A description of the debate between advocates of technology neutrality and advocates of being more prescriptive, in the interests of security: A.H. Boss, "Searching for Security in the Law of Electronic Commerce, 23 Nova L. Rev. 585 (1999), *reprinted in* The Best in E-Commerce Law (Bowne 2001).
- A more detailed overview of the concepts in and provisions of Canadian legislation on the topic: John D. Gregory, "Canadian Electronic Commerce Legislation", (2002), 17 Banking and Finance Law Review 277.

