InterPARES 2 Project

International Research on Permanent Authentic Records in Electronic Systems

Policy Cross-domain

Archives Legislation Study Report

Jim Suderman, Fiorella Foscarini
and Erin Coulter

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Study researchers are: Erin Coulter, Jennifer Douglas, Fiorella Foscarini, Greg Kozak, Catherine Miller, Jim Suderman (study leader), Sherry Xie and, Ma Xueqiang.

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1. Overview

The study's purpose is to examine what barriers and enablers to preservation of electronic records may be found in legislation from a number of jurisdictions. The report focuses on how the term record is defined and how the records lifecycle is used in the records-related legislation examined to identify preservation barriers and enablers. It also tries to assess the effect of legislation at different levels (supra- and sub-national) on the preservation of electronic records. Each section of the report concludes with several policy framework considerations, representing an attempt to capsulate the findings.

Appendix 3 of this Report provides a listing by jurisdiction of all legislation examined. It was recognized at the outset that this study overlaps with others being undertaken by the Policy Cross-domain of the InterPARES 2 Project.

2. Purpose, Scope and Methodology

The study's purpose is to examine what barriers and enablers to the preservation of electronic records may be found in legislation from a number of jurisdictions. The resources of the study required that the number of jurisdictions examined be limited, that legislation within selected jurisdictions be similarly limited, and that policies or standards, i.e., non-statutory requirements, be excluded. Findings presented in this report, while accurate, cannot be shown to be common to all jurisdictions.

The jurisdictions selected for study are Australia, Canada (including the provincial jurisdictions of Nova Scotia, Quebec, Manitoba and British Columbia), China, the European Union, France, Hong Kong, Italy, Singapore and the United States.[1] These were chosen as being representative of nations currently leading in e-government initiatives. It was also felt that they provided a sufficient mix of common and civil law environments.

Within each jurisdiction, legislation was selected that addressed one or more of the following: the enabling of national archival institutions, access and privacy, definitions of evidence for criminal and civil

[1] Bangladesh and Malaysia were initially included among the jurisdictions selected for study at its inception at a meeting of the Policy Cross-domain meeting in Vancouver in September 2004, but these were subsequently dropped. The legal relationship between the Hong Kong Special Administrative Region and China in terms of archives legislation is outlined in Appendix 2.

proceedings, and legislation passed specifically with regard to e-government, e.g., referring to digital signatures or recognizing the validity of electronic transactions. There was no attempt to identify legislation that may have included some record-related requirement, e.g., "must keep a register of licenses." The focus was on statutes established for records or information-related purposes.

Research assistants examined selected legislation for information concerning:

- how record is defined, including references reflecting the records lifecycle;
- whether a governance structure was put in place for administering the records preservation function;
- whether responsibility for record preservation was assigned, and if so what body was named (if any);
- what the scope of acquisition was for identified preserver organizations;
- whether there were any references to standards affecting record preservation; and
- whether legislation identified any conditions requiring a preservation organization to return records to the creating (or other) organization.

This report also considered additional materials including published sources, consultative documents and surveys.[2]

This report compiles and summarizes the results of the studies by jurisdiction. In general, the studies pointed to three key areas:

1. how records are defined;
2. how the records lifecycle is reflect in statutes; and
3. the effect on records-related legislation in multi-level jurisdictions.

3. Definition of record

InterPARES 2 defines a record as "A document made or received in the course of a practical activity as an instrument or a by-product of such activity, and set aside for action or reference."[3] This can be described as an activity-oriented definition. The record comes into existence "in the course of a

[2] Appendix 3 lists the non-statutory resources consulted in the preparation of this Report.
[3] InterPARES 2 Terminology Database, http://www.interpares.org/ip2/ip2_index.cfm. Records are distinct from documents. The Project defines "document" as "A unit of information constituted by a message affixed to a medium (recorded) in a syntactic manner." InterPARES 2 does not define the terms 'instrument' or 'by-product.' One of the definitions provided by *The Concise*

practical activity" and is "set aside" to support further activities. The distinction between instrument, e.g., a legal instrument, and by-product suggests that the definition encompasses both formal and informal record structures and relationships to activities. Regardless of the formality of the process of creation, to be considered a record they must be set aside, i.e., there must be a record-keeping activity connected to the practical activity.

Definitions from records-related legislation in Australia, France, Hong Kong, Italy and Singapore all include explicit references to records in connection with something, although not always a practical activity. For example, Italian law defines an electronic record as "the electronic representation of legally relevant acts, facts or data."[4] The idea of records being related to activities or other things is absent in archives-enabling legislation[5] in Canada and the United States, where records are defined as having informational content and structure. Canadian and American evidence legislation recognizes the relationship of records to actions or actors. Australia's *Archives Act* defines a record as:

> a document (including any written or printed material) or object (including a sound recording, coded storage device, magnetic tape or disc, microform, photograph, film, map, plan or model or a painting of other pictorial or graphic work) that is, or has been kept by reason of any information of matter that it contains or can be obtained from it or by reason of its connection with any event, person, circumstance or thing.[6]

At the time this report was composed, the InterPARES 2 Terminology Cross-domain was considering *fourteen* other definitions of record. Some of these definitions were media- or structure-oriented.[7] The following summarizes definitions of record found in archives and other records-related legislation, in terms of what, if any, consistency in definition is found there. A basic premise of

Oxford Dictionary (7th ed.) for the former is "formal, esp. legal, document." The same source defines the latter term as "incidental or secondary product of manufacture."

[4] Italy. DPR 445/2000, art. 1 (b). Translated by Fiorella Foscarini. Underline added for emphasis in this report. This definition, which excludes records having no legal value or referring to activities with no juridical implications, goes back to the traditional definition of record as it was formulated by the diplomatists of the 17th century.

[5] For the purposes of this report archives-enabling legislation is defined as legislation that enables (brings into existence and assigns responsibilities) an archival institution or repository. Records-related legislation is that which deals with records or information generally such as evidence legislation, which is not in connection with a specific legislated activity like banking.

[6] Australia. *Archives Act* s. 1.3 (1983).

[7] An example of a media-oriented definition under consideration is "Any electronic, photographic or mechanical recording of music, singing, dialogue, sound effects or visual events, including CDs, DVDs, audio tapes, films, videos and the like. – [Visual Arts]" (InterPARES 2 Terminology Database reference AA. 1121.949, 11 May 2005). An example of a structure-oriented

InterPARES 2, and represented in the Project' *Chain of Preservation* model,[8] is that it pertains to the preservation and reproduction of records. If there is no clear definition of what a record is, or if records can be different things in different contexts, then definitions of record in existing legislation can be considered a barrier to preservation.

The term "record" is not universally used even within archives legislation. Italian, French, American and Chinese legislation do not use or define the term "record." The term "archives" is used in Italy, France and China, defined as the plural of "document."[9] American archives law uses the term "historical materials," defining these as documents "having historical or commemorative value."[10] It appears, however, that this difference is purely a linguistic one and that there is no fundamental difference in meaning or intent of the terms used in the different jurisdictions.

In addition to considering the variety of terms used and definitions provided, Chris Hurley identified two tests of "recordness" in his study of Australian archives legislation:

- The *made or received* test: public records are records 'made or received' by a body subject to the statute in the course of conducting official business (or by a servant of the body in the course of carrying out an official duty; and
- The *ownership* test: public records are records 'owned' by the Crown (in the case of departmental agencies) or a statutory body.[11]

Neither of these tests is helpful at the creation phase of the lifecycle. The first test assumes that the record-making body knows what records it has created or received. It also clearly links records to the conduct of activities, which the second test does not. There is no explicit reference in either test that being "set aside" is a characteristic or quality of a record.

definition is "In automatic data processing, a unit of data forming the basic element of a file and consisting in turn of a number of inter-related data fields. – [Archival Science]" (Ibid., AA. 1121.950, 11 May 2005).

[8] Available at http://www.interpares.org/ip2/ip2_models.cfm.

[9] Archives is defined as a "Collection of documents, because of their age, their form and their material support, made or received by a physical or moral person, whether private or public, in the course of their normal activities" (France. *Ordinance 2004-178, L.211-1 (National Patrimony),* translated by Greg Kozak). Document refers to the combination of a material support and of the information that it contains, which can be used as a proof or for consultation and is considered the singular form of "archives" (From the Archives Nationales Web site, translated by Jennifer Douglas).

[10] United States. *National Archives and Records Administration* (44 USC, c. 21, s.2101).

[11] Chris Hurley. "From Dustbins to Disk-drives: A Survey of Archives Legislation in Australia," in *The Records Continuum: Ian Maclean and Austrlian Archives first Fifty Years*, Sue McKemmish and Michael Piggott, eds. (Melbourne: Ancora Press in association with Australian Archives, 1994), p. 216. Italics are from source publication.

To these two tests can be added a third: a test of state or social value that is applied to private records in private custody. The *Archives Law of China* states that:

> Collectively-owned or individually-owned archives whose preservation is of value to the State and society or which should be kept confidential shall be properly taken care of by the owners... the national archives administration department shall have the right to take such measures as may ensure the integrity and safety of the archives.[12]

In Italy, private citizens "in possession of archives that have been notified as of historical interest are responsible for the proper custody of their holdings."[13] Additional variations to this third requirement are enumerated in the archives legislation studies of Eric Ketelaar and Dagmar Parer for UNESCO (1985), and the Association of Commonwealth Archivists and Records Managers (2002), respectively.[14] It is possible that other tests to define records may be needed to accommodate records created or maintained in experiential, interactive and dynamic systems.

Legislation examined did not provide consistent definitions of *electronic* records. This may be due to the UNESCO recommendation that a generic definition of record be used within archival legislation.[15] The federal statutes examined for Canada have almost identical definitions for record in the *Library and Archives Canada*, the *Personal Information Protection and Electronic Documents*, and the *Access to Information* acts. The *Personal Information Protection and Electronic Documents Act* defined the term "electronic document" as:

> data that is recorded or stored on any medium in or by a computer system or other similar device and that can be read or perceived by a person or a computer system or other similar device. <u>It includes a display, printout or other output of that data</u>.[16]

China's *Standard for the Setting-aside and Management of Electronic Records* echoes the emphasis on record 'production' in its definition of electronic records as those "generated in a digital environment …

[12] China. *Archives Law of the People's Republic of China* (1987, revised 1996), art. 16.
[13] Italy. *Code Regarding Cultural and Environmental Heritage* Legislative Decree No. 42/2004 (22 January 2004), art. 30. Translated by Fiorella Foscarini.
[14] Section entitled "Legislation/regulations regarding non-public archives" in Eric Ketelaar, *Archival and records management legislation and regulations: a RAMP study with guidelines*, (Paris: UNESCO, 1985), pp. 18-23; and "Non-governmental records" section in Dagmar Parer. *Archival legislation for Commonwealth countries*, Association of Commonwealth Archivists and Records Managers (ACARM), 2002), pp. 21-23.
[15] Ketelaar, *Archival legislation*, op cit., p.103. Dagmar Parer comments cryptically that the definition of record needs to be re-addressed, moving from "the present emphasis…on property, i.e., records that are the property of a jurisdiction, to one that gives proper emphasis to electronic records" (Parer, *Archival legislation*, op cit., p. 25.
[16] Canada. *Personal Information Protection and Electronic Documents Act*, s.31(1). Underline added for emphasis in this report.

relying on digital equipment such as computers to be read and processed and on communication networks to be transmitted."[17] By contrast, the *Manitoba Archives and Record Keeping Act* defines "record" as "a record of information in any form, including electronic form, but does not include a mechanism or system for generating, sending, receiving, storing or otherwise processing information."[18]

The following example is intended to illustrate the challenges in defining records in practice. The emails in question, both in print and digital formats, certainly pass the ownership test outlined above. Their relationship to a practical activity may be presumed to be 'governing the nation.' The courts concluded that what was 'set aside' differed from the opinion of the U.S. National Archives.

> *Example: The PROFS case (United States)*
>
> The PROFS case was a high-profile American lawsuit regarding the public disclosure of electronic government records. The case concerned emails created during President Bush, Senior's administration; namely, electronic records about Oliver North and the Iran/Contra affair. PROFS was the name of the electronic communications system. The government argued that the paper printouts were the records, while the electronic ones were convenience copies and therefore could be destroyed. The plaintiff argued that the existence of a printout did not invalidate the record status of the electronic version, and that the electronic version had a unique form and content and contained information that was not captured in the printout. This high-profile case began in the late 1980s and continued on, with appeals, for a decade.

Besides different definitions of record existing in different jurisdictions, the study shows that what defines a record can vary considerably even within a single jurisdiction, i.e., among statutes where the purpose is other than to enable an archival institution.[19] Record-related statutes frequently provide broad, inclusive definitions of record, or if not actual definitions, require the ability to administer the legislation within information holdings that might not be considered as "records" by more exclusive definitions. That is to say, in other legislation, particularly that which relates to freedom of access and privacy, the definition of the term "record" (or some similar term) is frequently broader in scope than in archives legislation. For example, the Australian *Freedom of Information Act* (1982) defines "document" as:

[17] China. *Standard for the Setting-aside and Management of Electronic Records* (GB/T 18894-2002). Translated by Sherry Xie.
[18] Manitoba. *Manitoba Archives and Record Keeping Act*, s.1. Underline added for emphasis in this report.

Any of, or <u>any part of</u>, the following things:

i. any paper or other material on which there is writing;

ii. a map, plan, drawing or photograph;

iii. any paper or other material on which there are marks, figures, symbols or perforations having a meaning for persons qualified to interpret them;

iv. any article or material from which sounds, images or writings are capable of being reproduced with or without the aid of any other article or device;

v. any article on which information has been stored or recorded, either mechanically or electronically;

vi. any other record of information.[20]

It is noteworthy that record definitions differed in records-related legislation, sometimes significantly, even when the laws all exist within the same jurisdiction. Contrast the definition of 'historical materials' from the U.S. National Archives and Records law (see above) with the definition of records in the U.S. *Disposal of Records Act*:

> all books, papers, maps, photographs, machine readable materials, or other documentary materials, regardless of physical form or characteristics, made or received by an agency of the United States Government under Federal law
> *or*
> in connection with the transaction of public business and preserved
> *or*
> appropriate for preservation by that agency or its legitimate successor as evidence of the organization, functions, policies, decisions, procedures, operations, or other activities of the Government
> *or*
> because of the informational value of data in them.[21]

The U.S. *Privacy Act* (1974) varies from this definition, defining records as items or groupings of information about an individual.[22] The U.S. Federal *Rules of Evidence* recognize etchings on a ring (among other things) as a record admissible as evidence.[23]

[19] "To set out the difference between archival legislation and legislation in other information fields, it is essential that the definition of records makes it clear that records are created, received, and maintained by an institution or individual in the transaction of its business." Ketelaar, *Archival legislation*, op cit., para 189, p. 103.
[20] Australia. *Freedom of Information Act 1982*, s. 4(1)a. Underline added for emphasis in this report.
[21] United States. *Disposal of Records* (44 USC Chapter 33), s.3301. Section is divided as shown and italicized for emphasis within this report.
[22] From a 2004 edition of an overview of the *Privacy Act* on the U.S. Ministry of Justice Web site, Definitions, item D, available at http://www.usdoj.gov/04foia/1974definitions.htm#record (checked 22 April 2005).
[23] United States. Federal Rules of Evidence , Rule 803(13): "Family Records."

Laws in some jurisdictions noted differences between originals and copies of electronic records. The U.S. Federal *Rules of Evidence* distinguish between originals and duplicates with greater value as evidence given to originals. For example, Rule 1004 allows other evidence of the contents of a record where the original has been lost or destroyed, unless "the proponent lost or destroyed [the record] in bad faith."[24] For electronic records it is noteworthy that 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.'"[25] The quality of being original is acknowledged in Italian legislation as well in terms of adding weight or greater of trustworthiness to records. However, unlike the U.S. rule, Italian legislation emphasizes the difference between electronic data (original) and any kind of output of those data (copy), by establishing that "any data or document electronically created by any public administration represents a primary and original source of information that may be used to make copies on any kind of medium for all legal purposes."[26]

The *Electronic Signatures Law of the People's Republic of China* regards an e-record as an original if it meets the two following qualifications: it must be

1. capable of presenting the carried content effectively and of being retrieved and consulted at any moment;
2. capable of unfailingly ensuring the integrity and unalteration of the content from the moment of its final formation. However, the endorsement added to a data electronic record and the changes occurring on formats in the process of data exchanging, storing and displaying do not affect its integrity.[27]

The emphasis in this "evidence-oriented" legislation is on the reproduction of the records that have been set aside.

Most access to information legislation allows individuals the right to access information about themselves and correct it if it is erroneous. This reflects an environment where alteration of record

[24] United States. *Rules of Evidence*, Rule 1004, "Admissibility of Other Evidence of Contents."
[25] United States. *Rules of Evidence*, Rule 1001. The same rule generalizes that "any counterpart" to the writing or recording "intended to have the same effect by a person executing or issuing it" is an original.
[26] Italy, DPR 445/2000, art. 9, par. 1.
[27] China. *Electronic Signatures Law of the People's Republic of China*, art. 5. Translated by Sherry Xie. See Ma Xueqiang and Sherry Xie (2005). "InterPARES 2 Project – Policy Cross-domain: Supplements to the Study of Archival Legislation in China (Report I)," 3-4. Available at http://www.interpares.org/display_file.cfm?doc=ip2(policy)archival_legislation_CHINA_SUPPLEMENT.pdf.

content is not just acceptable but an acknowledged right. It appears that there is a contradiction in the law between e-government legislation pertaining to electronic signatures for the purpose of establishing unalterable content and access legislation authorizing, indeed requiring, changes to record content. The U.S. *Privacy Act* explicitly allows individuals to request the amendment of records.[28] There is no instruction as to whether this involves expungement of the amended data. It also appears that an individual's right to amend ceases upon the transfer of the record to the National Archives. The situation is similar in Italy where deletion of data is authorized in the *Code Regarding Personal Data Protection – Privacy*.[29]

The e-government legislation examined lays heavy emphasis on digital signatures and their relationship to records. The complexity of electronic records, i.e., that a record may be comprised of more than one digital component that must be correctly assembled each time the record is produced is not taken into account in the legislation examined. The legislation showed an additional distinction in relation to digital signatures, with some jurisdictions distinguishing between light and strong digital signatures.

> The distinction between "electronic signature" and "advanced electronic signature" comes from the EU Directive 1999/93/EC of the European Parliament and of the Council of 13 December 1999 on a Community Framework for Electronic Signatures…, which has been put into effect by the Italian Government through the Legislation Decree No. 10/2002 (23 January 2002). Art. 2 of the above mentioned EU Directive defines "electronic signature" (a.k.a. "light signature") as "data in electronic form which are attached to or logically associated with other electronic data and which serve as a method of authentication" and "advanced electronic signature" (a.k.a. "strong signature") as "an electronic signature which meets the following requirements:
> a) it is uniquely linked to the signatory;
> b) it is capable of identifying the signatory;
> c) it is created using means that the signatory can maintain under his sole control; and
> d) it is linked to the data to which it relates in such a manner that any subsequent change of data is detectable."[30]

[28] United States. *The Privacy Act of 1974*, 5 U.S.C. §552a(d)(2)(B).
[29] Italy. Legislative Decree No. 196/2003 of 30 June 2003: Codice in materia di protezione dei dati personali, art. 7, par. 3. See Fiorella Foscarini (2005). "InterPARES 2 Project – Policy Cross-domain: Archival Legislation in Italy (Consolidated Version)," p. 10, Dlgs 196/2003, art. 7, par. 3 Available at http://www.interpares.org/display_file.cfm?doc=ip2(policy)archival_legislation_ITALY_consolidated.pdf.
[30] Ibid., p. 11, footnote 4.

In Canada, electronic signatures are distinguished from "secure" electronic signatures in a similar way.[31] It is clear from the four criteria listed above that electronic signatures have two key roles: 1) linking the record with the signatory – an accountability and an authenticity role as this is crucial information for establishing record identity; and 2) monitoring content. In InterPARES terms this provides a combined authenticity and reliability role. Linking the record with the signatory accomplishes some of the authentication purposes of a signature, a seal, and a clause of corroboration, which are bound to the time and circumstances of record creation.[32] Monitoring or fixing content concerns the maintenance and transmission of the created record through time and space. Unlike a traditional seal or hand-written signature, which can be easily examined subsequent to the activity to which it pertains, "strong" electronic signatures are a component that has a lifecycle limited by the security of the technology used. Thus the lifecycle of an electronic signature may differ from the lifecycle of the record to which it is attached. None of the legislation examined considers this asymmetry.[33]

The legislation examined focused generally on governmental or administrative records.[34] Among all the laws examined, only one Chinese regulation contains explicit inclusion of scientific records, defining scientific archives as:

> Scientific-technological records, in forms such as drawings, graphics, texts, calculations, photographs, films, video tapes, formed in activities of natural science research, production technologies and infrastructure developments that should be filed and preserved.[35]

This definition is activity-based and in this way is consistent with most definitions already reviewed. It may be safe to presume that considerations outlined above with reference to administrative or

[31] Canada. Personal Information Protection and Electronic Documents Act, s. 48(1), (2).
[32] See Luciana Duranti. "Diplomatics: New Uses for an Old Science (Part V)," *Archivaria* 32 (Summer 1991), pp. 9, 14 for definitions of seal and clause of corroboration.
[33] For example, Italian law stresses the higher degree of security that is ensured by the "digital signature," i.e., "a special kind of advanced (or qualified) electronic signature that is based on a system of asymmetric keys, of which one public and one private, and that allows both signatory and addressee, through the private and the public key respectively, to make evident as well as to verify provenance and integrity of any electronic record or group of electronic records [DPR 137/2003, art. 1, lets. e) and n)." Underline added for emphasis in this report. However, it is evident that the law ignores the consequences for records preservation that the addition of a digital signature component engenders.
[34] The InterPARES 2 Project has three focuses: e-government, science and art. See Luciana Duranti (2001). "International Research on Permanent Authentic Records in Electronic Systems (InterPARES): Experiential, Interactive and Dynamic Records," SSHRC MCRI InterPARES 2 Project Proposal, 412-2001, p. 1.1-5. Available at http://www.interpares.org/display_file.cfm?doc=ip2_detailed_proposal.pdf.

governmental records are relevant for scientific records as well, including the use of technology for authentication of the records.

A reference to records of artistic endeavours was found in The National Archives (UK) report on its consultation concerning proposed legislation to revise the existing records and archives law. The report includes responses from two different film archives asking that non-traditional archives such as, "photos, cinefilm, video, sound recordings of all formats and origins should be fully included in any legislation."[36] China's State Cultural Ministry, in conjunction with the State Archival Administration, issued regulations on "Artistic archives management measures" in 1983, revised in 2002.[37]

Some legislation may be interpreted to include records from scientific and artistic fields of endeavour on the basis of the wide variety of formats identified as being record formats, e.g., cinefilm and video. However, specific types of electronic or digital formats, e.g., mpeg, are not articulated. The U.K. *Data Protection Act 1998* regulates "the processing of information relating to individuals, including the obtaining, *holding*, use or disclosure of such information."[38] This suggests the possibility of a subject-oriented definition of records. The *Act* certainly pertains to government stores of personal information but may extend to scientific research information stores as well.

Conclusion

The current InterPARES 2 definition of record differs in important ways with definitions in existing archives and records-related legislation by its exclusive definition of records in an activity-oriented, evidential context. InterPARES emphasizes the maintenance of the connection of records to the activity(ies) from which they originated in order to preserve authenticity. This approach is consistent with evidence legislation, but its connection to archives and other records-related legislation is weaker. Preservation for evidential purposes determines what characteristics of the record, such as its elements

[35] China. *The Regulations on Scientific-Technological Archival Work* (1983). Translated by Sherry Xie.
[36] The National Archives (United Kingdom). *Report on responses to The National Archives' consultation paper CP03/01: Proposed National Records and Archives Legislation, Proposals to change the current legislation provision for records management and archives* (March 2004), para. 31, p. 9.
[37] This regulation has not been examined in this study.

and behaviour or functionality, are essential to preserve. In areas where records are not primarily created and maintained for evidential purposes, such as a musical score or a web exhibit, preservation requirements other than those articulated by InterPARES 2, may be more relevant.

> ***Policy Framework Consideration #1:*** *Jurisdictional records policies must clearly set out rules, relevant to the field of endeavour (administrative, scientific, artistic), for identifying records.*

Statutes, especially evidence-related ones, recognize original records as having greater weight than copies and accommodate the characteristic of "originality" for electronic records.[39] The legislation examined defines original electronic records in two different ways:

- as an accurate output or representation of data (U.S.) or
- where the data or document was created by any public administration (Italy).

The attachment of electronic signatures can also confer some of the qualities of an original to an electronic record.[40] While the quality of originality does not constitute a barrier to preservation of electronic records, the widespread inclusion of this concept in electronic records-related legislation needs to be reflected in InterPARES 2 findings pertaining to appraisal and preservation.

> ***Policy Framework Consideration #2:*** *Jurisdictional records policies must set out characteristics that define electronic records as originals, as appropriate*

In the records-related legislation examined, a contradiction concerning record content became apparent. E-government legislation required the use of digital signature technology as a way to authenticate not only delivery of information but its on-going integrity as well. Access to information legislation, particularly as it relates to the rights of citizens not only to examine information about themselves but also to correct it, clearly authorizes changes to the content of records that have been set

[38] United Kingdom. *Data Protection Act 1998* (Available at http://www.hmso.gov.uk/acts/acts1998/80029--a.htm, checked 24 January 2005.)
[39] The InterPARES 2 Terminology Database defines "original record" as "The first copy or archetype; that form in which another instrument is transcribed, copied or initiated," checked 13 August 2007.
[40] See Canada. *Personal Information Protection and Electronic Documents Act*, s. 42, and China. *Electronic Signatures Law of the People's Republic of China*, art. 5. Translated by Sherry Xie. See also Xueqiang and Xie, "Supplements to the Study of Archival Legislation in China,"op cit., pp. 3-4.

aside. The original digital signature will no longer be able to fulfill its original authentication purpose due to the nature of digital signature technology.

> ***Policy Framework Consideration #3:*** *Jurisdictional records policies must recognize and address apparent contradictions about the fixity of record content within legislation.*

Finally, legislation does not make reference to the complexity of electronic records introduced by multiple digital components. This is particularly evident with widespread inclusion in legislation of electronic signature technologies. Digital, i.e., "strong," signature laws introduce not just one more component to an electronic record; they also introduce two new lifecycles: the security lifecycle of the certificate, i.e., how long it can be considered secure and trustworthy; and a technological lifecycle, i.e., how long it remains possible to read the digital signature and the record content that has been thereby encrypted. While the distinction between digital components and the records they combine to create is central to InterPARES research, it addresses only the record lifecycle except to acknowledge that it may not be feasible to preserve the components or properly access them to reproduce the record.

> ***Policy Framework Consideration #4:*** *Jurisdictional records policies must clarify how to manage different lifecycles of digital components of electronic records, including acceptable substitutes for long-term preservation.*

4. Records lifecycle

InterPARES 2 defines the records lifecycle as the "theory that records go through distinct phases, including creation, use and maintenance, and disposition (destruction or permanent preservation)."[41] The records lifecycle is a records management concept developed to illustrate the relationship between records and the business processes that bring them into being. This is noteworthy for the InterPARES 2 research perspective, as the absence of legislation pertaining to records of scientific or artistic endeavor does not allow confident conclusion that the "business process" idea necessarily translates to those environments. This is important because if it is the relationship with business procedures that provides records with

[41] InterPARES 2 Terminology Database, checked 26 April 2005.

qualities requiring preservation, then a business process or something analogous will need to be established for those records of artistic and scientific endeavors.

Aspects of the records lifecycle exist implicitly in almost all legislation examined, but only a few explicit references were found. The *Quebec Archives Act* specifically addresses the records lifecycle, with part one directed at active and semi-active records, and part two at inactive records.[42] However, the procedures authorized by this *Act* deal primarily with the development of retention schedules and their implementation, relevant to record maintenance and disposition rather than creation. Many lifecycle references found in legislation enabling archival institutions simply authorize the records creator to transfer to the archives records considered "to have historic or archival value" and so implicitly refer to the end of the records lifecycle.[43]

Other points on the lifecycle, such as record creation, are evident in other records-related legislation. The U.S. *Rules of Evidence* clearly tie records to business processes by considering a record to be admissible if

1. it was made at or near the time of the event,
2. in the course of a regularly conducted business activity,
3. recorded by a person with knowledge of the event being recorded.[44]

This reference clearly establishes a relationship between the records lifecycle and business processes of a creating organization.

Most of the legislation examined focused on the creation or disposition phases of the lifecycle, although some statutes implicitly or explicitly include the whole lifecycle using phrases such as "facilitate the management of information by government institutions."[45] Similarly, some legislation referred to the archivist's responsibility to establish recordkeeping policies and standards "for the creation,

[42] Canada, Province of Quebec. *Quebec Archives Act*, R.S.Q., c.A-21.1.
[43] Canada. *Library and Archives of Canada Act*, s.13(1).
[44] United States. Federal Rules of Evidence , Rule 803(6): "Records of regularly conducted activity" states that:

> 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, or by certification…unless the source of information or the method or circumstances of preparation indicate lack of trustworthiness.

[45] Canada. *Library and Archives of Canada Act*, s. 7(d).

identification, maintenance, retention, disposition, custody and protection of records."[46] Both of these inclusive statements refer specifically to government records. References to specific parts of the lifecycle are summarized in the following section, which concludes with an illustrative example taken from the Alsace-Moselle case study.

Creation

References pertaining to record creation in the legislation examined focus on specific components or aspects of a record, in particular on the use of secure electronic signatures.[47] References to records creation in Canada's *PIPEDA* specifically permit the use of digital signatures:

- in place of certificates signed by government ministers or seals that attest to the reliability of record to which the certificate applies; and
- as a means of verifying that a document is unchanged.[48]

The part of the *Quebec Archives Act* which addresses active and semi-active records, focusses not on record creation or use, but rather on establishing ownership and setting retention periods.

Italian legislation emphasises registration of records as a means of, if not defining what records are being created, then at least identifying them once they have come into existence. Records are registered in *protocol registers*, which are used to manage records throughout their lifecycle. It is noteworthy that these registers themselves take on the qualities of a record, including permanent preservation.[49] In the case of electronic registry systems, the Italian law prescribes that:

> All metadata describing all records entered in the protocol register system are contained in a file which has to be XML 1.0 compliant and has to be compatible with the DTD file that is available on the AIPA web site.[50]

[46] Canada. Manitoba. *Manitoba Archives and Recordkeeping Act* (2001), s.8(a).
[47] Canada. *Personal Information Protection and Electronic Documents Act*, ss.36, 39, 42. An electronic document can be considered "to be in its original form" under three conditions, one of which is the addition of a secure electronic signature to the document when it "was first generated in its final form." (s.42). Secure electronic signatures are defined in s.31(1) of the Act as "an electronic signature that results from the application of a technology or process prescribed by regulations made under subsection 48(1)."
[48] Canada. *PIPEDA*, sections 36, 39, 42 and 48(2).
[49] This and other characteristics of the Italian *protocol register* correspond to the definition of registration as one of the outcomes of the UBC Project: "Registration serves not only administrative accountability but also historical accountability over time because the protocol register preserves evidence of the existence of records and the act to which they relate even after the records themselves no longer exist." Luciana Duranti, Terry Eastwood and Heather MacNeil, *Preservation of the Integrity of Electronic Records* (Boston: Kluwer Academic Publishers, 2003), p. 48.
[50] Italy. Prime Minister's Decree (DPCM) of 31 October 2000 *Technical Rules for the Electronic Protocol Register According to DPR No. 428/1998*, art. 18, par. 1. AIPA (Authority for Information Technology in the Public Administration), today CNIPA (National Centre for Information Technology in the Public Administration), is the government authority established with the

Land registers, as well as the registers for births, marriages and deaths, are special types of registers on which Italian law confers constitutive value, in that the responsible registry officer authenticates each record. As a consequence, where information in the register differs from copies, such as certificates, issued by registry officers then the register content prevails. It would appear that original records would prevail over the register in case of discrepancy.[51]

The legislation examined provides specific characteristics or qualities that electronic records created through specific processes should have when they are created. The legislation does not identify a comprehensive or generic set of characteristics or qualities that all electronic records need to be authentic and reliable throughout their record lifecycle.

Use

Generally, use of records can be summarized in terms of the acceptance of their integrity and authenticity, e.g., admissibility as evidence. Canada's *Evidence Act* allows the integrity of electronic records to be presumed if one of the three following conditions are met:

1. the proven proper operation of the system supporting the record;
2. the record was recorded or stored by a person with an adverse interest to the person wanting to introduce it; or
3. the record was recorded or stored in the usual and ordinary course of business.[52]

Maintenance

Chinese law requires that departments or full-time personnel must be designated "to manage the setting-aside of their electronic official records, integrating the activities of collecting, arranging, filing, preserving and providing access to electronic official records into the procedures of managing organs' documents and the job duties of relevant officers and employees."[53] China's official records in electronic form are required to be "set aside with archival offices immediately after their completion."[54]

purpose of providing technical rules for implementing any changes relevant to the modernization of public administrations (i.e., e-government measures).

[51] Italy. Civil Code, article 2676. Foscarini, "Archival Legislation in Italy," op cit., p. 19.

[52] Canada. *Evidence Act*, s.31.3.

[53] China. "Interim Measures for the Setting-aside of Electronic Official Records" (Order No. 6 of the State Archival Administration, 2003). Quoted in Sherry Xie (2005). "InterPARES 2 Project – Policy Cross-domain: Archival Legislation in

The U.S. *Freedom of Information Act* requires agencies to make records available, a requirement that implies on-going maintenance. It also allows the deletion of "identifying details when [an agency] makes available or publishes an opinion, statement of policy, interpretation, staff manual, instruction, or copies of records" if necessary to "prevent a clearly unwarranted invasion of personal privacy."[55]

In Canada, organizations are advised to, "develop guidelines and implement procedures with respect to the retention of personal information. These guidelines should include minimum and maximum retention periods."[56] Authority is granted to the Archivist of Manitoba to establish standards and procedural guidelines, "where a record is to be retained or preserved in a form or medium other than the original one."[57]

Recent Italian legislation places archival responsibilities, i.e., for the maintenance of authentic records, onto organizations creating and using electronic records. The Presidential decree on "Legislative and Regulatory Provisions Regarding Administrative Document" assigns preservation obligations to a specific service dedicated to the management of electronic records and archives in public administrations.[58] The law addresses technological and methodological issues, and establishes a specific role with attendant responsibilities for electronic records management. Responsibilities include distinguishing between operational (active), intermediate (all records referring to closed procedures: semi-active), and historical archival repositories (inactive) for electronic records.[59]

The procedures prescribed in Italy for "substitute copying" – which can be seen as an acknowledgement of the fact that preserving original records is not possible in the digital environment (as was concluded by InterPARES 1) – require the application of a digital time stamp and digital signature of

China – Report I: Provisions Having Impact on Preservation," pp. 3-4. Available at http://www.interpares.org/display_file.cfm?doc=ip2(policy)archival_legislation_CHINA_no1.pdf.

[54] China. "The Interim Measures for the Setting-aside of Electronic Official Records" (Order No. 6 of The State Archival Administration, 2003), clause 6.

[55] United States. 5 U.S.C., § 552 (amended 2002), s. (a)2.

[56] Canada. *Personal Information Protection and Electronic Documents Act*, Schedule 1, s.4.5 "Principle 5 - Limiting Use, Disclosure, and Retention," sub-section 2.

[57] Canada. Manitoba. *Manitoba Archives and Recordkeeping Act* (2001), s.8(b).

[58] Italy. *Single Text of Legislative and Regulatory Provisions Regarding Administrative Documentation* (DPR 445/2000), art. 61, par. 1.

[59] Italy. Prime Minister's Decree (DPCM) of 31 October 2000: *Technical Rules for the Electronic Protocol Register According to DPR No. 428/1998*, art. 4.

the individual responsible for preservation. In this way, "the authenticity of a preserved record is not established on the object itself (as it was with traditional media), but through the authority of the preserver…who would attest to the identity and integrity of the whole of the reproduced records every time a migration occurs."[60]

Legislation also referred to maintenance of electronic records in terms of security or trustworthiness. These references are focused on the active and semi-active parts of the record lifecycle.

Disposition[61]

The U.S. *National Archives and Records Administration Act* provides for the transfer to the Archives of records more than thirty years old, and "determined by the Archivist…to have sufficient historical or other value to warrant their continued preservation."[62] China's *Interim Measures* for electronic records requires that:

> The electronic official records with permanent or long-term value must be made into paper records which shall be set aside with the storing media of the original electronic official records, and shall establish the connecting relationship between.[63]

References from other legislation contain clauses regarding retention of records. Given the very inclusive definitions of "record," described in the preceding section of this report, retention of record clauses are not especially meaningful. In the jurisdictions studied, they simply represent the transfer of maintenance responsibilities from the creating office to a preserving office. Besides time-based records dispositions, legislation also addresses retention in terms of technology and access. For example, Singaporean legal requirements to retain records electronically are satisfied if the following conditions are met:

- the information contained therein remains accessible so as to be usable for subsequent reference;

[60] Foscarini, "Archives Legislation in Italy," op cit., p. 15.
[61] The InterPARES definition of the records lifecycle ends with the disposition stage. Disposition, in the context of the records lifecycle, refers to the final destruction or transfer of the records to a trusted custodian (e.g., a neutral third-party archives or the creator's own permanent preservation system) as determined by the appraisal decision.
[62] United States. 44 U.S.C., c. 21, s. 2107(2).
[63] China. *The Interim Measures for the Setting-aside of Electronic Official Records* (2003), s.7.

- the electronic record is retained in the format in which it was originally generated, sent or received, or in a format which can be demonstrated to represent accurately the information originally generated, sent or received…[64]

Besides references to the lifecycle within legislation, words used in the names of the laws can also convey a conception of the records lifecycle. The word "archives" in *The Library and Archives of Canada Act* suggests, at least in the North American records tradition, that the *Act* deals with records at the end of their lifecycle, even though its provisions authorize the institution to provide advice concerning the creation and maintenance of active records. Related laws that use different words may also obscure the relevance of the entirety of the lifecycle.[65] For example China's *Archival Law* (revised 1996) provides the basis for the *Interim Measures for the Setting-aside of Electronic Official Records* (2003). The use of the term "archival" in the law and "records" in the interim measures may suggest that the former deals with records at the end of their lifecycle while the latter during active life. The definition of archives as "historical records" in article two of the Law may further reinforce a perception that it does not address operational records.[66]

The following example is taken from the report of an InterPARES 2 case study. It is included here for the purpose of illustrating an e-government initiative that uses sophisticated technology and results in the creation of vital records. It shows that business processes and technologies are being deployed to meet immediate business requirements, but where maintenance aspects of the records lifecycle are being considered only after the records have been created.

Example: Alsace-Moselle Land Registry Records

The report of the case study dealing with the computerized land registry of Alsace-Moselle provides a useful practical illustration of the segmented approach that frequently results from the adoption of information technology by a business process, and its effect on the records lifecycle. Land registration is a well regulated business and the paper-based system in use for more than a century in Alsace-Moselle is described as

> a highly reliable mechanism for citizens, interested parties, and real estate professionals to access accurate and authentic information. It was not however a system designed to

[64] Singapore. *Electronic Transactions Act,* s.9(1).
[65] Victoria Lemieux raised this issue in a presentation, entitled "Towards an integrated approach to public records legislation," at the 1989 ARMA Conference in Edmonton, Alberta, Canada.
[66] The point here is not to suggest that the *Archival Law* and *Interim Measures* are not related, but rather to highlight how different terms used may affect perceptions about the scope in lifecycle terms of a law or regulation.

> meet the increased complexity of urban real estate contracts, and the increase[d] rates at which property is exchanged.[67]

It can be concluded that the relationship between the business activity and the records arising from it was well-established and maintained. Considerable effort was put into introducing information technology to the activity so as to "offer the same level of reliability." It becomes evident however that such effort was focused primarily at the record creation and use stages of the records lifecycle.

Digital signature technology was introduced both to facilitate finalization of transfers and to ensure the reliability and authenticity of the registered records. Signatures are applied to the legal document (*ordonnance*) which contains the information that is to be transcribed to the registry. The electronic registry is a database and the system automatically transfers the information to the registry database as each ordonnance is finalized. New data (*inscriptions*) are continually added and data that is no longer current continues to reside within the database. The reliability and authenticity of the database is by automated routines checking that the data in each ordonnance is consistent with the inscription, and vice-versa. Because of the ease of accessing information the database, i.e., the *inscriptions*, are relied upon during the ordinary course of business although the database would not "*be used as evidence in the case of litigation*."[68] Record creation and use is well developed in the electronic environment.

The signatures have an additional role, which is as a monitor on the integrity of the bitstream of the ordonnances – by remaining associated with the original bitstream. This is a record maintenance feature and it is likely that for this reason the technology used to establish the security of the digital signatures promises that signatures cannot be forged for at least thirty years.[69] A second maintenance feature is that the data for an ordonnance record is defined by XML tags and the record structure is specified through a DTD. The absence of a defined retention period for both the ordonnances and the registry records (inscriptions) is a significant gap in terms of record maintenance. Another is the loss of authentication provided by the digital signature should the bitstream of the ordonnance to which it is connected ever need to be modified for preservation purposes, such as migrating text from ASCII to UNICODE for example. This affects both record maintenance and preservation. A different challenge applies to preservation of the database, which relies on a complex data structure that would require resources beyond what an archival institution could provide. The report describes two strategies under consideration for long-term preservation of the records:

1. conversion from the complexity of the operational data structure to a simpler one that could be supported by an archival institution; and
2. distributed custody, meaning that the land registry office itself would undertake the preservation of the records.

It is clear that even where there was a highly reliable existing system (paper-based) the transition to digital technology combined with an increasingly complex business process and a concomitant need to streamline that same process can significantly dislocate the records lifecycle. It is also clear that in spite of such dislocation, the business of the day can proceed even though long-term needs remain unaddressed.

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[67] Jean-François Blanchette, François Banat-Berger and Geneviève Shepherd (2004). "InterPARES 2 Project - Case Study 18 Final Report: Computerization of Alsace-Moselle's Land Registry," p. 20. Available at http://www.interpares.org/display_file.cfm?doc=cs18_final_report.pdf.
[68] Ibid.," p. 26. Italics as in original.
[69] Ibid.," p. 21. There is no explanation in the report as to how this can be predicted given the rapid growth of security technologies and so the reliability of this forecast cannot be assessed.

What is clear from the legislation is that only aspects of the lifecycle are addressed. This means that even where legislation addresses record creation, for example, it does not do so in a way that considers record maintenance or disposition. For example, inclusion of digital signatures may be related to the record creation stage but maintenance of records with digital signatures is not addressed. The Manage Chain of Preservation model developed by InterPARES 2 requires management of the entire lifecycle of records. The piecemeal treatment of the lifecycle in legislation does not contradict the MCP's conceptual approach, but neither does it provide a solid foundation for its integrated approach.

Italian legislation recognizes the three phases of records lifecycle (active – semi-active – inactive), but the requirements for administering records at these stages appears "to correspond to three different physical archival spaces (offices – intermediate repository – historical archives)."[70] This model also appears in France.[71] Coincidentally, the InterPARES Manage Chain of Preservation (MCP) model describes three systems: one each for creation, maintenance, and preservation, and within a framework that integrates the three systems.[72] Each system is defined as a "set of rules" and so the systems are (and need to be) well adapted to include rules articulated in legislation. Differentiating between systems for record creation and recordkeeping also helps establish the quality of being "set aside," which forms part of the InterPARES definition of record.

Evidence from the case studies shows that record-creating systems can be put in place that fulfill the requirements of the business process, e.g., the transfer of title to real property, even though the set of rules or system for maintaining the record is not yet established. In effect, the legislation examined segments business processes in the same way that it does the records lifecycle. Creation addresses the immediate requirement for the business activity, e.g., a registration is made or a license is issued. The requirements for setting aside the record of the registration, i.e., its recordkeeping, are not necessarily connected with meeting that immediate requirement.

[70] See Foscarini, "Archival Legislation in Italy," op cit., p. 7, citing Italy. DPR 445/2000, art. 62, 67, 69.
[71] France. Decree No. 79-1037 (3 December 1979), art. 12, 13, 16.
[72] See the InterPARES 2 Chain of Preservation (COP) Model (http://www.interpares.org/ip2/ip2_models.cfm), which identifies the design of record-making, recordkeeping, and permanent preservation systems (activities A1.2.1, A1.2.2 and A1.2.3, respectively).

Access and privacy legislation

So far this section has focused on the records lifecycle and its relationship to the business process. Requirements in access and privacy legislation (and possibly other legislation governing intellectual property) affect the records lifecycle in two ways. What might be defined as a record in the business area may not be consistent with what is defined as a record in terms of implementing access and privacy legislation. This has been explored, for the most part, in the previous section of this report. All that needs to be added here is that if access and privacy provisions affect record content and structure, then a sort of parallel lifecycle is introduced that runs alongside the business record; parallel because while it may not be necessary for recording a transaction, it is required by the business to meet its obligations as defined by access and privacy laws.

Privacy legislation may also introduce record creation, use and maintenance requirements to the more conventional business area requirements for those aspects of the lifecycle. In terms of the lifecycle, Canada's *Privacy Act* requires that:

> Personal information that has been used by a government institution for an administrative purpose shall be retained by the institution for such period of time after it is so used as may be prescribed by regulation in order to ensure that the individual to whom it relates has a reasonable opportunity to obtain access to the information.[73]

If "reasonable opportunity" is defined as no greater than the normal business retention requirement, then there is no problem. If it is otherwise defined, the normal means of establishing the records lifecycle must be modified to accommodate this consideration.

The U.S. *Privacy Act* requires that, where a record containing private information is disclosed, a record be created and kept of that disclosure. The content of this disclosure record is defined, and must be retained "for at least five years or the life of the record, *whichever is longer*, after the disclosure for which the accounting is made."[74] This requirement not only establishes a maintenance or retention consideration that cannot have been anticipated at the record creation stage, the provision also overrides

[73] Canada. *Privacy Act*, RS 1985, c. P-21, section 6(1).
[74] United States. *The Privacy Act of 1974*, 5 U.S.C. §552a(c)(1-2). Italics added to this report.

established retention periods. This suggests that it may not be possible to determine a record's lifecycle at a single point in time.

Conclusion

The lifecycle concept is evident in legislation examined from all jurisdictions. Most laws relate to the creation and disposition points on the lifecycle, but even these points are not addressed comprehensively, nor are they placed within a comprehensive framework. References to record creation are usually specific, relating to the application and value of digital signatures or, in the case of Italy, registration of the records, rather than comprehensive. There is little focus on use of records – such information likely resides in the enabling legislation of the record-creating bodies. The piecemeal coverage of the lifecycle provided by legislation may signal a receptivity to a comprehensive framework like that presented through the MCP model. The MCP knits the phases of the records lifecycle together in a way that fulfils legislated requirements but is not required by that same legislation.

Ketelaar's 1985 UNESCO report concludes that statutory responsibility for the whole lifecycle "will not be feasible in many countries." While the report goes on to indicate that early lifecycle activities such as forms management, standards on media, paperwork management, and file and security classifications should be governed by regulations or circulars, the emphasis is on the later stages, i.e., records centres, appraisal and destruction, and transfer to archives.[75] Parer's 2002 study of legislation for ACARM emphasizes rather that if "management responsibilities [of an archives] include records management as well as archives management, legislation should clearly state that as well as outlining the specific responsibilities the archives will assume in either or both of those roles."[76] He concludes by saying that archival legislation instructions "should recognise the impact that modern technologies have on documents and records management and so allow for an archives to set management requirements at and prior to record creation."[77] This approach has clearly been adopted in the new *Public Records Act* in

[75] Ketelaar, *Archival legislation*, op cit., pp. 109-110.
[76] Parer, *Archival legislation*, op cit. p. 29.
[77] Ibid., p. 33.

New Zealand, which authorizes the chief archivist to issue standards for creation, maintenance and disposal of records.[78] In Italy the mandate for the organization for implementing technological changes is tied to the Ministry for Innovation and Technologies, while the administration of public archives is the responsibility of the Ministry for Arts and Culture.

> ***Policy Framework Consideration #5:*** *A records policy framework needs to include all legislated requirements in a comprehensive and integrated way.*

What becomes evident as well in studying the legislation through a records lifecycle lens is that such legislation does not take into account the lifecycle of the technology that it endorses. In this respect, no notice is taken of the impact that the [usually much shorter] technological lifecycle(s) of digital components may have on the records lifecycle. Where technology affects only a portion of the records lifecycle, such as the use of digital signatures to provide a point-in-time authentication (e.g., for the transmission of a record), there is no effect on preservation. Where technology affects the maintenance and disposition of electronic records, the much shorter technological lifecycle can become a significant barrier to preservation. Fixity of record content shares similar characteristics with stability / preservability of digital components. Access and privacy legislation authorizes modification or deletion of content of records that have been set aside and are being maintained.

> ***Policy Framework Consideration #6:*** *The records lifecycle needs to address issues concerning fixity of content during the maintenance phase as well as the technological lifecycle of the digital components of which electronic records are comprised.*

The study also shows that the lifecycle model may be simplistic, with use and maintenance assuming that records have been set aside after creation in a recordkeeping system. Case studies show that systems where records are created do not necessarily set them aside for maintenance. For example, land registrations in Alsace-Moselle have well-developed routines for creating sophisticated records, but how they will be preserved is, at least at the time of the study, only at a conceptual stage.

[78] New Zealand. *Public Records Act 2005*, s. 27(1)(a).

Policy Framework Consideration #7: *Legislation does not address the records lifecycle in a comprehensive or integrated way. In particular there is no requirement that records move through the lifecycle.*

5. Effects of laws at differing levels within national jurisdictions

Laws governing the creation, maintenance and preservation of records are created at many levels within one jurisdiction. This section considers the effects that different levels of legislation have on the preservation of electronic records, drawing on the European (supra-national and national) and the Canadian (national and sub-national jurisdictions) jurisdictions. Predominantly, this section will focus on the relationships between the jurisdictions in terms of the consistency of how records are defined, and in terms of how the records lifecycle is integrated into records-related statutes.

It is important to note that issues identified in this section may not apply equally everywhere in the world. While there are national and sub-national governments in China, for example, legislation that affects records and the guidelines for the implementation of that legislation is centralized in the State Archival Administration. The way this is accomplished is outlined as follows:

> The State Archival Administration is under the direction of both the Office of the Central Committee of the CPC/the State Council and supervises archival administrations at provincial level; the provincial archival administration is under the direction of both the provincial Party Committee/the provincial government and supervises municipal archival administration; the municipal archival administration is under the direction of both the municipal Party Committee/municipal government and supervises county archival administrations; and so on. For professional work, the direction line is from the State Archival Administration down to the county archival administration.[79]

Laws at sub-national levels are constitutionally required to be consistent with national laws. In this more centralized environment, it may be concluded that inconsistencies in how key concepts, such as the definition of record and the records lifecycle might be more easily addressed in laws and regulation, and from there translated into policies and procedures.

[79] Xie, "Archival Legislation in China – Report I," op cit., p. 2.

Europe: Supra-national and national jurisdictions

Each of the twenty-five member states of today's European Union (EU)[80] has full autonomy to establish laws and regulations on how to manage records and archives in its own territory. The value of records is recognized in the European Community and reflected in the following resolution:

> the European archival heritage provides an indispensable resource for writing the history of Europe or of an individual nation; considering that well-kept and accessible archives contribute greatly to the democratic functioning of our societies; considering that an adequate archives policy and efficient archives management create the conditions for the accessibility needed,[81]

For this and other reasons, the EU established a Group of Experts in 1991 for the purpose of enhancing cooperation and coordination of archives policy and practice within the Community. Because of the rapid technological development and the global character of the Internet, the numerous initiatives within the EU concerning citizen access to information, and the increased importance of the flow of information across borders, the Group of Experts is focusing on five priorities. They are:

1. Preservation and damage prevention for archives in Europe [which involves measures for preventing and recovering from natural and other catastrophes, restoration programs, standards for archival buildings, etc.];
2. Reinforcement of European interdisciplinary cooperation on electronic documents and archives;
3. Creation and maintenance of an Internet Gateway to documents and archives in Europe;
4. EU and national legislation relevant to management and access to documents and archives;
5. Theft of archival documents.[82]

Item number two stresses the need for "strengthening Europe-wide collaboration on the authenticity, long-term preservation and availability of electronic documents and archives,"[83] in particular by updating and extending the current Model Requirements (MoReq) for electronic documents and archive management systems and by reinforcing the DLM-Network and -Forum.[84]

[80] The original 12 Member States have become 25 following the enlargement of the European Union on May 1, 2004.
[81] *Resolution of the Council and the Ministers of Culture meeting with the Council of 14 November 1991 on arrangements concerning archives*. Official Journal C 314, 05/12/1991.
[82] Commission of the European Commission, *Report on Archives in the enlarged European Union. Opportunities for future action: priorities*. Brussels, 18/02/2005, COM(2005) 52 final.
[83] The promotion of concrete activities in this respect had already been addressed in the *Council Resolution of 6 May 2003 on archives in the Member States*. Official Journal C/113, 13/05/2003.
[84] For more information about the 1996 EU initiative that was originally called Données Lisibles par Machine and today Document Lifecycle Management: http://www.dlm-network.org/index.php?option=com_frontpage&Itemid=1.

It is clear from the above quotations that the EU legislation, following usage in the Latin countries, consistently and exclusively uses the terms "document" and "archives" without making any distinction between record and document. In defining those documents that are "drawn up or received by it [i.e., any of the EU Institutions] and in its possession, in all areas of activity of the European Union,"[85] the EU legislator draws from activity-oriented and media-oriented definitions:

> Document shall mean any content whatever its medium (written on paper or stored in electronic form or as a sound, visual or audiovisual recording) concerning a matter relating to the policies, activities and decisions falling within the Institution's sphere of responsibility.[86]

Similarly,

> Archives of the institutions of the European Communities means all those documents of whatever type and in whatever medium which have originated in or been received by one of the Institutions or by their representatives or servants in the performance of their duties, which relate to the activities of the European Communities.[87]

As to record lifecycle, the EU Institutions must all comply with the so-called "30-year rule" meaning that starting from the date of document creation, a maximum period of thirty years exists for applying any exceptions to public right of access.[88] In order to facilitate public access, a 2003 regulation requires every EU Institution to establish its "historical archives," consisting of "that part of the archives of the Institution which has been selected […] for permanent preservation."[89] This regulation is very precise in indicating when documents contained in the current archives shall be transferred to the historical archives, i.e., "no later than 15 years after the date of creation."[90] Records appraisal, which is to occur "no later than the 25th year following the date of the document creation," is defined as "a sorting

[85] *Regulation (EC) No. 1049/2001 of the European Parliament and of the Council of 30 May 2001 regarding public access to European Parliament, Council and Commission documents.* Official Journal L145, 31/05/2001, art. 2 (3).
[86] *Regulation (EC) No. 1049/2001*, art. 3 (a).
[87] *Council Regulation No. 1700/2003 of 22 September 2003 amending Regulation No. 354/83 concerning the opening to the public of the historical archives of the European Economic Community and the European Atomic Energy Community*. Official Journal L243/1, 27/09/2003, art. 1 (2,a).
[88] Regulation 1049/2001 also provides that: "In the case of documents covered by the exceptions relating to privacy or commercial interests and in the case of sensitive documents, the exceptions may, if necessary, continue to apply after this period." Ibid., art. 4 (7).
[89] *Council Regulation No. 1700/2003*, art. 1 (2, b).
[90] *Council Regulation No. 1700/2003*, art. 7. The record lifecycle appears to be divided into two (instead of the usual three) stages: current and historical.

process with the purpose of separating documents that are to be preserved from those that have no administrative or historical value,"[91] according to the criteria laid down by each Institution.

The above-mentioned definitions and rules are not binding for the EU members, each of them having to follow the directives of their respective National Archives in setting up records policy. However, such an interpretation of the records lifecycle mirrors the actual situation in every European country where any legislative attempt specifically dedicated to archival matters suffers a terrible delay in reacting to the new technological challenges. Even the most recent EU regulations still seem to refer to traditional paper records and include a clear distinction between records management responsibilities (as part of the administrative duties of the originating office) and preservation responsibilities (starting after the transfer of records to the historical archives).

A much more conscious and innovative approach is shown by EU legislators when their focus moves from the "static" archival domain to the dynamic world of electronic communication and commerce, networks security, electronic data interchange, etc. In particular, the EU bodies consider standardization "an integral part of their policies to carry out 'better regulation,' to increase competitiveness of enterprises and to remove barriers to trade at international level."[92] The directives on *Data Protection*, *Electronic Signature*, *e-Invoicing* and the regulatory framework for electronic communications networks and services (which consists of five additional directives) are a set of new legislation (categorized as Information Society legislation). They are issued under the aegis of the European Standards Organizations with the purpose of establishing a "legal framework to ensure the free movement of information society services between Member States."[93] The latter are of course invited to adopt new laws or amend existing ones, according to the EU Directives, in order to remove any fragmentation and to achieve effective interoperability both internally and at EU level.

[91] *Council Regulation No. 1700/2003*, arts. 5 and 7. Furthermore, during the appraisal exercise, documents which have been classified may be declassified, if that is the case. "The re-examination of those documents that have not been declassified at the first examination shall be done periodically and at least every 5 years."
[92] *Communication from the Commission to the European Parliament and the Council on the role of European standardization in the framework of European policies and legislation.* [SEC(2004) 1251] (Text with EEA relevance) / *COM/2004/0674 final* /, p. 1.
[93] *Communication from the Commission*, ibid., p. 8.

> Interoperability is the means by which this inter-linking of systems, information and ways of working occur: within or between administrations, nationally or across Europe. At the technical level, open standards can help to achieve such integration. In addition, administrations are building up experience with open source considering intrinsic aspects such as costs and security, and benefits from externalities including ease of integration. Exchange of experience in the use of open standards and open source amongst administrations should be promoted amongst others through the relevant EU programs.[94]

In general, national archival communities have been passive or ineffective, with one exception, in alerting national legislators on the implications of applying the "principle of freedom of movement of goods" (i.e., one of the main pillars of the EU) to the exchange of data, information and eventually records. The exception concerns the *e-Signature Directive*, for which the consequences for records preservation have attracted archivists' attention in most European countries. The following provisions of general relevance may be pointed out when considering which barriers and enablers to preservation of electronic records may be hidden in the EU enabling legislation.

All Member States have by now implemented the general principles of the *e-Signature Directive*,[95] despite recognized limitations in the technology supporting e-signatures. However, a *Communication on the eEurope 2005 Action Plan* stresses that

> a number of issues remain on the legal and market aspects of the application of the Directive. Firstly, there is currently no market demand for qualified certificates and related services. Secondly, greater interoperability of e-signatures is called for by the Directive as necessary to achieve the wide spread-use of electronic signatures and related services.[96]

This may be due to the difficulties in implementing the *Directive's* requirements for issuing qualified certificates and for secure signature-creation devices, which are so demanding from the record-keeping viewpoint (with particular reference to security issues) that currently no public or private agency on the market feels up to committing itself. For example, one of the many requirements certification service-providers must achieve is to

[94] *Communication from the Commission to the Council, the European Parliament, the European Economic and Social Committee and the Committee of the Regions – The Role of e-Government for Europe's Future*. [SEC(2003) 1038] / *COM/2003/0567 final* /, p. 12. Underline added for emphasis in this report.
[95] *Directive 1999/93/EC of the European Parliament and of the Council of 13 December 1999 on a Community framework for electronic signatures*. Official Journal L 13, 19/01/2000. See p. 10 above for summary of electronic signatures.

use trustworthy systems to store certificates in a verifiable form so that:

- only authorized persons can make entries and changes;
- information can be checked for authenticity;
- certificates are publicly available for retrieval in only those cases for which the certificate-holder's consent has been obtained; and
- any technical changes compromising these security requirements are apparent to the operator.[97]

Another challenging requirement specifies that secure "signature-creation devices must not alter the data to be signed or prevent such data from being presented to the signatory prior to the signature process."[98]

The *Directive on Electronic Commerce* and related EU legislation concerning public procurement procedures and contracts rely on the use of advanced electronic signatures in order to achieve higher levels of security and confidentiality. However, the *Directive* explicitly excludes certain categories of contracts, illustrating a lack of confidence in the current state of the technology and the adoption of a cautious approach.[99] As to the role and liability of intermediary service providers, the *e-Commerce Directive* provides that

> Member States shall ensure that the service provider shall render easily, directly and permanently accessible to the recipients of the service and competent authorities at least the following information:
> a) the name of the service provider;
> b) the geographic address at which the service provider is established; […].[100]

[96] *Communication from the Commission to the Council, the European Parliament, the European Economic and Social Committee and the Committee of the Regions – eEurope 2005 Action Plan: An Update.* [SEC(2004) 607-608] /* COM/2004/0380 final */, p. 9.

[97] "Requirements for certification-service-providers issuing qualified certificates," Annex II to the *Directive 1999/93/EC*. Underline added for emphasis in this report.

[98] "Requirements for secure signature-creation devices," Annex III to the *Directive 1999/93/EC.*
It is worth mentioning that some European Standards Organizations have recently developed standards for electronic signature products (CWA-CEN workshop agreement and ETSI TS-ETSI technical specification) on the basis of the Annexes to Directive 1999/93/EC. See *Commission Decision of 14 July 2003 on the publication of reference numbers of generally recognized standards for electronic signature products in accordance with Directive 1999/93/EC of the European Parliament and the Council.* Official Journal L 175, 15/07/2003.

[99] According to *Directive 2000/31/EC of the European Parliament and of the Council of 8 June 2000 on certain legal aspects of information society services, in particular electronic commerce, in the Internal Market*, Official Journal L 178, 17/07/2000, art. 9, the following categories of contracts cannot be concluded electronically:
a) contracts that create or transfer rights in real estate, except for rental rights;
b) contracts requiring by law the involvement of courts, public authorities or professions exercising public authority;
c) contracts of suretyship granted and on collateral securities furnished by persons acting for purposes outside their trade, business or profession;
d) contracts governed by family law or by the law of succession.

[100] *Directive 2000/31/EC*, art. 5. Underline added for emphasis in this report.

According to the *Directive*, the service provider information is all that must permanently be stored, that is, the service provider is not liable for the information transmitted beyond the period of transmittal:

> The acts of transmission in a communication network of information provided by a recipient of the service, and of provision of access to a communication network include the automatic, intermediate and transient storage of the information transmitted in so far as it takes place for the sole purpose of carrying out the transmission, and provided that the information is not stored for any period longer that is reasonably necessary for the transmission.[101]

The *Directive on privacy and electronic communications* not only limits the responsibilities of a service provider in terms of how long certain information must be kept, it goes beyond that to require deletion or anonymization of data following transmission:

> Traffic data relating to subscribers and users processed and stored by the provider of a public communications network or publicly available electronic communications service must be erased or made anonymous when it is no longer needed for the purpose of the transmission of a communication.[102]

The *Directive on Data Protection* and accompanying regulation provide stringent rules with reference to the processing of personal data. Such rules, if broadly interpreted, might hamper the proper storage of the records containing those data in many ways, e.g., by influencing records retention periods and appraisal decisions, or by irremediably altering the records content and/or structure. In particular, personal data must be, *inter alia*,

> d) accurate and, where necessary, <u>kept up to date</u>; every reasonable step must be taken to ensure that data which are inaccurate or incomplete […] are <u>erased</u> or <u>rectified</u>;
> e) kept in a form which permits identification of data subjects for no longer than is necessary for the purposes for which the data were collected or for which they are further processed. […] Personal data which are to be stored for longer periods for historical, statistical or scientific use should be kept either in <u>anonymous form</u> only or, if that is not possible, only with the identity of the data subjects <u>encrypted</u>. In any event, the data shall not be used for any purpose other than for historical, statistical or scientific purposes.[103]

The following example provides a detailed description of preservation requirements relevant to a special record type: the invoice. For obvious reasons this record form is very important in the context of

[101] *Directive 2000/31/EC*, art. 12 (2).
[102] *Directive 2002/58/EC of the European Parliament and of the Council of 12 July 2002 concerning the processing of personal data and the protection of privacy in the electronic communications sector*. Official Journal L 201, 31/07/2002, art. 6.
[103] *Regulation (EC) No. 45/2001 of the European Parliament and of the Council of 18 December 2000 on the protection of individuals with regard to the processing of personal data by the Community institutions and bodies and on the free movement of such data*. Official Journal L 008, 12/01/2001, art. 4. Underline added for emphasis in this report.

the European single market:. The use of electronic invoicing and the electronic storage of invoices are encouraged in all Member States by the EU legislation,

> provided that the authenticity of the origin and integrity of the contents are guaranteed:
> - by means of an advanced electronic signature […];
> - or by means of electronic data interchange (EDI) […].[104]

In terms of record maintenance and preservation requirements, the *e-Invoicing Directive* specifies that:

> The authenticity of the origin and integrity of the content of the invoices, as well as their readability, must be guaranteed throughout the storage period. […] Invoices must be stored in the original form in which they were sent, whether paper or electronic. […] When invoices are stored by electronic means, the data guaranteeing the authenticity of the origin and integrity of the content must also be stored.[105]

The *e-Invoicing Directive's* technological specifications do not appear to consider the complicating aspect provided by digital components in the make-up of electronic records:

> Transmission and storage of invoices 'by electronic means' shall mean transmission or making available to the recipient and storage using electronic equipment for processing and storage of data (including digital compression) [!], and employing wires, radio transmission, optical technologies or other electromagnetic means.[106]

The references to wires and radio transmissions suggest that the *Directive* may be of limited utility in establishing compliance regimes for maintenance and preservation of complex electronic records.

Canada: National and sub-national jurisdictions

The Canadian jurisdiction is one where records preservation is not centralized at the national level. Canada's constitution assigns some powers to the federal government and others to the provincial and territorial governments. Creation and preservation of the records of government is not addressed in any detail. The *Constitution Act 1867*, as modified in 1982, makes only two references to records. The

[104] *Council Directive 2001/115/EC of 20 December 2001 amending Directive 77/388/ECC with a view to simplifying, modernizing and harmonizing the conditions laid down for invoicing of value added tax*. Official Journal L 015, 17/01/2002, a.k.a. *e-Invoicing Directive*. Underline added for emphasis in this report.
Electronic Data Interchange (EDI) is the "electronic transfer, from computer to computer, of commercial and administrative data using an agreed standard to structure EDI messages." On the contrary to e-mail messages, EDI messages are "structured set of segments, capable of being automatically and unambiguously processed." According to *Commission Recommendation No. 94/820/EC of 19 October 1994 relating to the legal aspects of electronic data interchange*, Official Journal L 338, 28/12/1994, art. 4, "[…] in the event of a dispute, the records of EDI messages, which the parties have maintained in accordance with the terms and conditions of this Agreement, shall be admissible before the Courts and shall constitute evidence of the facts contained therein unless evidence to the contrary is adduced." Underline added for emphasis in this report.
[105] *Directive 2001/115/EC*, art. 2 (d). Underline added for emphasis in this report.

first requires that a duplicate "of every such Speech, Message, or Proclamation" of both the House of Commons and the Senate "shall be delivered to the proper Officer to be kept among the Records of Canada."[107] The second gives the Governor General the authority to order

> that such and so many of the Records, Books, and Documents of the Province of Canada as he thinks fit shall be appropriated and delivered either to Ontario or to Quebec, and the same shall thenceforth be the Property of that Province; and any Copy thereof or Extract there from, duly certified by the Officer having charge of the Original thereof, shall be admitted as Evidence.[108]

A note at the Canadian government website suggests that this section may no longer be considered current as it has not been used since 1868, but it does explicitly recognize the relationship between the division of powers between national and sub-national jurisdictions, and the responsibility for maintaining the records relating to the exercise of those powers. Both references treat records as commodities or artifacts.

Comparing federal archives-enabling legislation with similar legislation at the provincial level highlights the decentralized nature of archival work in Canada. Not surprisingly, the range of definitions identified in section III of this report is also reflected in statutes of the different jurisdictional levels. The federal *Library and Archives of Canada Act* contains no reference to records preservation at the provincial or territorial level. Likewise, three of the four provincial archives-enabling statutes examined contain no provisions in terms of coordinating or establishing common approaches to preservation, either with archives in other provinces and territories or with the federal archives. The exception is Manitoba, where federal statutory authority to destroy government records is acknowledged.[109]

In order for a common conceptual approach to be adopted for the preservation of electronic records, common standards or regulations would need to be adopted within each jurisdiction. Different governance structures among preserving agencies would affect how or whether this would come about. Federally and in Manitoba and Quebec, the Archivist reports upwards to the minister responsible for the

[106] *Directive 2001/115/EC*, art. 2 (e). Underline and exclamation mark added for emphasis in this report.
[107] Canada. *The Constitution Act 1867*, s.57. Available at http://laws.justice.gc.ca/en/const/c1867_e.html#provincial, checked 26 July 2005.
[108] Canada. *The Constitution Act 1867*, s.143.
[109] (Canada) Manitoba. *The Archives and Recordkeeping Act*. s.28(2).

enabling act.[110] In Nova Scotia, the Archives is under the "general direction and control of the Minister," but a Board of Trustees exists to advise the provincial archivist and provide recommendations to the Minister.[111] In British Columbia, the *Museum Act* does not even identify an officer as the provincial archivist and instead assigns archival responsibilities to the corporation of the Royal British Columbia Museum, which is headed by a board of directors.[112] Different governance models can influence perceptions about what electronic records are, and approaches to their maintenance and preservation.

It is also possible that differing scope among the statutes may result in a similar disparity of viewpoint. For example, the Manitoba act governs only records of the executive branch of government, although it allows the provincial archivist to enter into agreements with the legislative and judicial branches, municipalities, and other broader public sector agencies.[113] It is very possible that the terms of any agreements will vary from one organization to another in terms of what kinds of records might be governed, what rules (e.g., access) might apply to the records, etc. Presumably, if the requirements of any agreement were such that the archives could only administer them with difficulty, then the archives would not enter into the agreement in the first place.

There are also differences of scope in terms of where in the records lifecycle the statutes authorize the setting of standards. The *Library and Archives of Canada Act* makes reference to development of regulations prescribing, "terms and conditions governing the transfer of records."[114] Nova Scotia's *Public Archives Act* lists the establishment of standards for "effective records management" as one of the "objects and functions of the Public Archives."[115] This is not an explicit inclusion of the entire records lifecycle, but may be understood as an implicit one. Interpretation is equally necessary for understanding Nova Scotia's *Government Records Act,* which refers to the entire records lifecycle but only in the

[110] Canada. *The Library and Archives of Canada Act*, s. 4; (Canada) Quebec. *The Archives Act*, s. 4; (Canada) Manitoba. *The Archives and Recordkeeping Act*, s.6.
[111] (Canada) Nova Scotia. *Public Archives Act*, ss. 4(2), 9.
[112] (Canada) British Columbia. Museum Act, s. 2(1).
[113] (Canada) Manitoba. *The Archives and Recordkeeping Act*, s.10-14.
[114] Canada. *The Library and Archives of Canada* Act, s. 13(2).
[115] (Canada) Nova Scotia. *An Act Respecting the Public Archives of Nova Scotia*, s. 5(b).

context of retention scheduling.[116] Manitoba's *Act* not only authorizes but requires the archivist to establish recordkeeping policies, standards and guidelines for the entire records lifecycle.[117] Quebec's *Archives Act* requires the minister to "adopt a management policy for the active and semi-active [and inactive] documents of the public bodies" but it must be noted that what is defined as a public body in the Quebec *Act* is much broader than in other Canadian archives-enabling legislation.[118] Quebec's law is unique in that it appears to establish a central authority within the province for recordkeeping. The authorization for making regulations in British Columbia's *Museum Act* is a generic one, i.e., the creation of regulations is outlined in another statute. The related *Document Disposal Act*, as its name suggests, is concerned with the disposition of records, and the scope of regulatory powers it authorizes in terms of the records lifecycle are limited accordingly.[119]

Conclusion

Ketelaar's UNESCO study recommends the development of a "national archives system" for the planning and implementation of a national archival policy.[120] Ketelaar emphasizes that some sort of central guiding agency, with or without executive powers, should be in place, but recognizes that laws as fundamental as a nation's constitution may affect how this might be accomplished. The assumption behind Ketelaar's recommendation seems to be that such an agency would be needed to bring cohesion and consistency to archives and records management legislation. Such an organization exists within China in the form of the State Archives Authority.

The EU's Group of Experts provides an example of how such an agency might work where the recordkeeping is not constitutionally addressed and where member jurisdictions, i.e., EU member states, retain their own legislative and regulatory autonomy. This is consistent with a finding of the 2003 study on legislation and regulations concerning the preservation of digital resources:

[116] (Canada) Nova Scotia. *Government Records Act*, s. 9(1)(b)(i).
[117] (Canada) Manitoba. *The Archives and Recordkeeping Act*, s. 8(a).
[118] Quebec. *Archives Act*, ss. 4, 14. The statute's definition of "public bodies" includes not only the legislative branch of government and the courts, but also municipalities, school boards, health and social service organizations and public transit authorities. By contrast, as noted above Manitoba's act simply authorizes the provincial archivist to enter into agreements with such organizations.
[119] (Canada) British Columbia. *Document Disposal Act*, s. 6(2).

> Within countries, there is a fragmented legislation and regulation activity and, at the European level, not enough effort is made towards reconciling the contradictions in the regulatory activity of European Union governing bodies.[121]

There is neither national archival policy nor any sort of regulated system in Canada, and so it may be seen as an example of a decentralized record-keeping environment. The influence of the Canadian Council of Archives, a central organization without executive power, is shown by the widespread adoption by archival institutions of the *Rules for Archival Description*. It is reasonable to conclude from this example that such an organization could similarly influence the adoption of common standards, always assuming these could be agreed upon, for the preservation of electronic records. However, its influence is limited, perhaps absent, in organizations focusing on the non-archival phases of the records lifecycle.

> ***Policy Framework Consideration #8:*** *Regulatory framework should consider how a centralized authority (mandatory or otherwise) can be establishment and recognized to guide the development of common approaches to records preservation.*

It has been shown that the creation of laws and regulations does not necessarily keep pace with technological developments or even service delivery mechanisms, e.g., qualified issuers of certificates for digital signatures. Outdated requirements or legal requirements that are difficult to fulfill form barriers to effective preservation programs. Requirements must also be relevant throughout the records lifecycle or the requirements must be specifically limited in terms of designating at what point(s) within the lifecycle they apply.

> ***Policy Framework Consideration #9:*** *Regulatory framework should incorporate some means for the review of statutes and regulations to help ensure that requirements keep pace with developments in technology and the marketplace.*

[120] Ketelaar, *Archival legislation*, op cit., p. 33.
[121] Mariella Guercio (2003). "Preface," in M. Guercio, L. Lograno, A. Battistelli and F. Marini (trans.), "Legislation, Rules and Policies for the Preservation of Digital Resources: A Survey," draft report prepared for the Florence European conference on digital preservation (Florence: October 2003), p. 7. Available at http://eprints.erpanet.org/65/.

Appendix 1

Consolidated listing of Policy Framework Considerations

Policy Framework Consideration #1: *Jurisdictional records policies must clearly set out rules for identifying records relevant to the field of endeavour (administrative, scientific, artistic).*

Policy Framework Consideration #2: *Jurisdictional records policies must set out characteristics that define electronic records as originals, as appropriate.*

Policy Framework Consideration #3: *Jurisdictional records policies recognize and address apparent contradictions about the fixity of record content within legislation.*

Policy Framework Consideration #4: *Jurisdictional records policies must clarify how to manage different lifecycles of digital components of electronic records, including acceptable substitutes for long-term preservation.*

Policy Framework Consideration #5: *A records policy framework needs to include all legislated requirements in a comprehensive and integrated way.*

Policy Framework Consideration #6: *The records lifecycle needs to address issues concerning fixity of content during the maintenance phase as well as the technological lifecycle of the digital components of which electronic records are comprised.*

Policy Framework Consideration #7: *Legislation does not address the records lifecycle in a comprehensive or integrated way. In particular there is no requirement that records move through the lifecycle.*

Policy Framework Consideration #8: *Regulatory framework should consider how a centralized authority (mandatory or otherwise) can be establishment and recognized to guide the development of common approaches to records preservation.*

Policy Framework Consideration #9: *Regulatory framework should incorporate some means for the review of statutes and regulations to help ensure that requirements keep pace with developments in technology and the marketplace.*

Appendix 2

Description of the relationship between China and the Hong Kong Special Administrative Region as it pertains to archival legislation

by Ma Xueqiang

Hong Kong, as a Special Administrative Region of the People's Republic of China, is authorized to **exercise a high degree of autonomy and enjoy executive, legislative and independent judicial power,** including that of final adjudication, by The Basic Law of the Hong Kong Special Administrative Region of the People's Republic of China, (Adopted on 4 April 1990 by the Seventh National People's Congress of the People's Republic of China at its Third Session, Article 2). The relationship between the Central Authorities and the Hong Kong Special Administrative Region are fixed explicitly by this law.

> By law, the Hong Kong Special Administrative Region has been vested with legislative power. But, Laws enacted by the legislature of the Hong Kong Special Administrative Region must be reported to the Standing Committee of the National People's Congress for the record. (The reporting for record shall not affect the entry into force of such laws).

If the Standing Committee of the National People's Congress, after consulting the Committee for the Basic Law of the Hong Kong Special Administrative Region under it, considers that any law enacted by the legislature of the Region is not in conformity with the provisions of this Law regarding **affairs within the responsibility of the Central Authorities or regarding the relationship between the Central Authorities and the Region**, the Standing Committee may return the law in question but shall not amend it. Any law returned by the Standing Committee of the National People's Congress shall immediately be invalidated. This invalidation shall not have retroactive effect, unless otherwise provided for in the laws of the Region. (Article 17)

With regard to the application of the laws, this law states: The laws in force in the Hong Kong Special Administrative Region shall be this Law, the laws previously in force in Hong Kong as provided for in Article 8 (*The laws previously in force in Hong Kong, that is, the common law, rules of equity, ordinances, subordinate legislation and customary law shall be maintained, except for any that contravene this Law, and subject to any amendment by the legislature of the Hong Kong Special Administrative Region.*) of this Law, and the laws enacted by the legislature of the Region. National laws shall not be applied in the Hong Kong Special Administrative Region except for those listed in Annex III to this Law, as follows:

1. Resolution on the Capital, Calendar, National Anthem and National Flag of the People's Republic of China
2. Resolution on the National Day of the People's Republic of China
3. Order on the National Emblem of the People's Republic of China Proclaimed by the Central People's Government [Attached: Design of the national emblem, notes of explanation and instructions for use]
4. Declaration of the Government of the People's Republic of China on the Territorial Sea
5. Nationality Law of the People's Republic of China
6. Regulations of the People's Republic of China Concerning Diplomatic Privileges and Immunities

And the laws listed therein *shall be applied locally by way of promulgation or legislation by the Region*. The Standing Committee of the National People's Congress may add to or delete from the list of laws in Annex III after consulting its Committee for the Basic Law of the Hong Kong

Special Administrative Region and the government of the Region. Laws listed in Annex III to this Law shall be confined to those **relating to defence and foreign affairs** as well as other matters outside the limits of the autonomy of the Region as specified by this Law. (Article 18)

Although the law enacted by the legislature of Hong Kong SAR may be returned by the National People's Congress, such action would only **impact the affairs within the responsibility of the Central Authorities or regarding the relationship between the Central Authorities and the Region**. There may be more national laws applied in Hong Kong SAR, but only **relating to defence and foreign affairs.** As to archival legislation, it is always beyond these articles. So, I think the study on archival legislation in Hong Kong may go on, and need not worry about being superseded by the Central Authorities.

Appendix 3

A. Listing, by jurisdiction, of all legislation reviewed

Australia
Archives Act (1983)
Copyright Act (1968)
Electronic Transactions Act (1999)
Evidence Act (1995)
Freedom of Information Act (1982)
Privacy Act (1988)

Canada
Canada Evidence Act (2004)
Library and Archives Canada Act (2004)
Personal Information Protection and Electronic Documents Act (2000)
Access to Information Act (2000)
Privacy Act (2004)

Provincial Acts
British Columbia – Document Disposal Act (1996); Museum Act (2003)
Manitoba – Manitoba Archives and Record Keeping Act (2001)
Nova Scotia – Government Records Act (1995-96); Public Archives Act (1998)
Quebec – Quebec Archives Act (1983)

China
The Archival Law of the People's Republic of China (1987, revised 1996)
The Measures for Implementing the Archival Law of the People's Republic of China (1990, revised 1999)
The Regulations on Organ's Work (1983)
The Regulations on Scientific-Technological Archival Work (1980)
The General Provisions for Archival Institutional Work (1983)
The Establishment Principle and Layout Plan for Archival Institutions in China (1992)
The Measures for Handling Official Records in the State Administrative Organ (2000)
The Interim Measures for the Setting-aside of Electronic Official Records (Order No. 6 of The State Archival Administration, 2003)

European Union
Resolution of the Council and the Ministers of Culture meeting with the Council of 14 November 1991 on arrangements concerning archives, *Official Journal of the European Communities* C 314, 05/12/1991
Council conclusions of 17 June 1994 concerning greater cooperation in the field of archives, *Official Journal of the European Communities* C 235, 23/08/1994
Commission Recommendation No. 94/820/EC of 19 October 1994 relating to the legal aspects of electronic data interchange. *Official Journal of the European Communities* L 338, 28/12/1994
Directive 95/46/EC of the European Parliament and of the Council of 24 October 1995 on the protection of individuals with regard to the processing of personal data and on the free movement of such data. *Official Journal of the European Communities* L 281, 23/11/1995
Directive 1999/93/EC of the European Parliament and of the Council of 13 December 1999 on a Community framework for electronic signatures. *Official Journal of the European Communities* L 13, 19/01/2000

Regulation (EC) No. 45/2001 of the European Parliament and of the Council of 18 December 2000 on the protection of individuals with regard to the processing of personal data by the Community Institutions and bodies and on the free movement of such data. *Official Journal of the European Communities* L 008, 12/01/2001

Regulation (EC) No. 1049/2001 of the European Parliament and of the Council of 30 May 2001 regarding public access to European Parliament, Council and Commission documents. *Official Journal of the European Communities* L 145, 31/05/2001

Council Directive 2001/115/EC of 20 December 2001 amending Directive 77/388/ECC with a view to simplifying, modernizing and harmonizing the conditions laid down for invoicing of value added tax. *Official Journal of the European Communities* L 015, 17/01/2002

Council resolution of 21 January 2002 on culture and the knowledge society, *Official Journal of the European Communities* C 32, 05/02/2002

Directive 2002/58/EC of the European Parliament and of the Council of 12 July 2002 concerning the processing of personal data and the protection of privacy in the electronic communications sector. *Official Journal of the European Communities* L 201, 31/07/2002

Council Resolution of 6 May 2003 on archives in the Member States. *Official Journal of the European Communities* C 113, 13/05/2003

Commission Decision of 14 July 2003 on the publication of reference numbers of generally recognized standards for electronic signature products in accordance with Directive 1999/93/EC of the European Parliament and the Council. *Official Journal of the European Communities* L 175, 15/07/2003

Council Regulation No. 1700/2003 of 22 September 2003 amending Regulation No. 354/83 concerning the opening to the public of the historical archives of the European Economic Community and the European Atomic Energy Community. *Official Journal of the European Communities* L 243, 27/09/2003

Communication from the Commission to the Council, the European Parliament, the European Economic and Social Committee and the Committee of the Regions – The Role of e-Government for Europe's Future. [SEC(2003) 1038] / *COM/2003/0567 final* /

Communication from the Commission to the Council, the European Parliament, the European Economic and Social Committee and the Committee of the Regions – eEurope 2005 Action Plan: An Update. [SEC(2004) 607-608] /* COM/2004/0380 final */

Communication from the Commission to the European Parliament and the Council on the role of European standardization in the framework of European policies and legislation. [SEC(2004) 1251] (Text with EEA relevance) / *COM/2004/0674 final* /

Commission of the European Commission, *Report on Archives in the enlarged European Union. Opportunities for future action: priorities*. Brussels, 18/02/2005, COM(2005) 52 final

France

Ordinance 2004-178 (National Patrimony)
Law 78-753 (Access to Information)
Law 2000-230 (Evidence Law and Electronic Signatures)
Decree 2001-272 (Electronic Signatures)
Order of 25 March 2002 (National Archives' Services)
Order of 25 March 2002 (Direction of the National Archives)

Hong Kong

Copyright Ordinance
Electronic Transactions Ordinance
Evidence Ordinance
Land Titles Ordinance
Personal Data (Privacy)

Prevention of Copyright Piracy Ordinance
[Policy document – Public Records (Access) Rules]

Italy

Law No. 241 7 Aug 1990 – New Rules on Administrative Procedures and Access Rights to Administrative Documents
Legislative Decree No. 39/1993 – Rules on Public Authorities' Automated Information Systems, According to Article 2 of Law No. 421/1992
Legislative Decree No. 135/1999 – Integrative Provisions of Law 675/1996 on Public Bodies' Sensitive Data Management – Privacy Law
Legislative Decree No 10/2002 – Putting into Effect EU Directive No. 1999/93/CE on a Community Framework for Electronic Signature
Legislative Decree No. 196/2003 – Code Regarding Personal Data Protection – Privacy
Legislative Decree No. 42/2004 – Cultural and Environmental Heritage Code
President of the Republic Decree No. 1409/1963 – Rules on Organizational Structure and Personnel of the State Archives
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