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Digitizing the World's Laws

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Digitizing the World's Laws

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Introduction

Where does one find the foreign investment laws of Botswana? What about the copyright law of the Netherlands, the corporation laws of Japan, or the English translation of the Egyptian Civil Code? Already back in 1991, just before the internet, Wallace Baker remarked that “foreign law has become the daily bread of lawyers everywhere who formally had totally domestic practices.” (Germain 1991, xii)¹ Since then, the need to access the content of foreign law has increased exponentially. The importance of global access to foreign laws on the internet and how to improve it was recently highlighted at an international Meeting of Experts on Global Co-operation on the Provision of Online Legal Information on National Laws organized by the Hague Conference on Private International Law in October 2008.² This chapter purports to evaluate the current state of progress in online access to the content of foreign law, provide a world snapshot, and discuss such digital law issues as authentication and preservation for long term access.

I. The Context

The Need for Access

Access to legal information is needed in the domestic context for citizens to know what the law is that applies to them, and what their rights are, for the conduct of business, for the rule of law, and for life in society in general. Lawyers, judges, notaries, and other legal professionals also need to access the law. The principle “no one is deemed to be ignorant of the law » goes back to the old Latin adage, *nemo legem ignorare censetur*,³ known in common law countries as « ignorance of law is no excuse », *ignorantia legis non excusat*, both expressions traced back to Roman times, with similar meaning.⁴ In civil law countries, where the legal system is primarily based on written law, the need to publicize new laws has an old origin (Cartier 2008, 57; Saint-Prix 1809; Gaudemet 1993; Laferrière, 1949). New laws can only become effective if they are published and made known to citizens. Before the internet, typically the law entered into force a number of days after its publication in the country’s official gazette, so that there would be enough time to send it to various places. In France, it was one full day after publication in the French *Journal officiel*. (Szladits 1985). In Brazil, it was forty-five days after official publication in *Diario oficial da uniao*. (Passos, 2008). This changed with computerization, which provided both savings (no more paper and mailing costs) and the practicality of immediate notification via the internet. In France,

¹ Wallace Baker founded Baker & McKenzie in Paris.

² I was invited to this meeting as an academic expert on foreign law (19-21 October 2008) by his Secretary General, Mr. Hans van Loon. <http://www.hcch.net/> (Visited March 8, 2010).

³ The Roman *Digest* devoted the entire Title 6 of Book 22, distinguishing « ignorance of the law, » from « ignorance of fact, which was by nature excusable. (Cartier 2008, 58) As François Terré, an eminent French law professor remarked, “the maxim is considered in Antiquity and even now as translating a principle of reason without which life in society would be impossible. It is not written anywhere in the corpus of legal rules, but it dominates the entire body of law.” (author’s English translation) (*Id.*) See also Wagner 2008).

⁴ In tracing the origin of these two expressions, it seems that the former is used in civil law countries and the latter in common law countries, even though they both refer the origin of the concept to Roman law and the explanations are similar. The standard English work only mentions the latter, but cites to the same source in the Digest and the identical explanation, the difference between ignorance of fact and ignorance of law. (Broom 1900, 205)..

⁵ The decision was about a challenge to a law allowing the government to use the procedure of art. 38 of the Constitution to legislate via ordinance, rather than parliamentary legislation, because of the urgency of enacting nine codes into law. The Constitutional Council approved the law, mentioning that the goal of the law met the “goal with constitutional value of accessibility and intelligibility of the law; that the equality before the law mentioned in art. 6 of the Declaration of the Rights of Man and the Citizen and the “guarantee of rights” required by its article 16 may not be effective if citizens do not have enough knowledge of the norms that are applicable to them. “ Décision 99-421 DC du 16 décembre 1999, Loi portant habilitation du Gouvernement à procéder, par ordonnance, à l’adoption de la partie législative de certains codes, JORF, 22 décembre 1999. (Cartier 2008)

⁶ UK Interpretation Act 1978, ch. 30, sec3 “Every Act is a public Act to be judicially noticed as such, unless the contrary is expressly provided by the Act. “ Further, sec. 4 “An Act or provision of an Act comes into force...(b) where no provision is made for its coming into force, at the beginning of the day on which the Act receives the Royal Assent.”.

⁷ Legal systems have many variants, even within the same families. The world map offered by the University of Ottawa gives a good pictorial representation of the countries covered. <http://www.juriglobe.ca/eng/index.php> (Visited March 8, 2010).

⁸ Many authors have attempted to formulate classifications of different families of legal systems. This is a classic question for comparative law scholars. The civil law and common law classifications proposed here are mainly for the convenience of accessing what constitutes the law in a particular country and therefore to find a common denominator.

⁹ <http://canada.justice.gc.ca/eng/notices-avis.html> (Visited March 8, 2010).

¹⁰ <http://www.bangladesh.gov.bd/> (Visited March 8, 2010).

¹¹ <https://www.riigiteataja.ee/ert/intr/en.htm> (Visited March 8, 2010).

¹² It began operations in May 2008. Global Journal May 2009 at 2-3 http://www.loc.gov/law/news/glin/pdf/GGJ_May09.pdf (Visited March 8, 2010).

¹³ http://www.moj.gov.kw/index_en.asp arabic, with an English version for part of it. (Visited March 8, 2010).

¹⁴ For more information, see <http://www.hcch.net/> (Visited March 8, 2010).

¹⁵ For specific definitions of legal gazette, official journal, official gazette (Access 2009, ...)

¹⁶ *Id.* , Table 3, Annex 1.

¹⁷ A current list of some 60 official gazettes, which is not exhaustive, is kept by the Swiss Institute of Comparative Law at.. <http://www.isdc.ch/en/bibliotheque.asp/4-0-10552-5-4-1/5-0-1630-11-4-2/>

¹⁸ <http://www.worldlii.org/> (Visited March 8, 2010).

¹⁹ The Legal Information Institute was the pioneer in these efforts and inspired the creation of other institutes. It started at Cornell Law School in 1992, under the leadership of Professor Peter Martin and Research Associate Thomas Bruce. www.law.cornell.edu. (Visited March 8, 2010).

²⁰ Lovdata <http://www.lovdata.no/info/lawdata/html> (Visited March 8, 2010).

²¹ <http://www.kenyalaw.org/update/index.php> (Visited March 8, 2010).

²² www.bermudalaws.bm; www.gov.bm (Visited March 8, 2010).

²³ <http://www.laws.gov.bw/> (Visited March 8, 2010).

²⁴ two integrated systems Argentina Ministry of Justice's Legal Information System (SAIJ) <http://www.saij.jus.gov.ar/> also has Infoleg (Visited March 8, 2010).

²⁵ <http://ris.bka.gv.at/> (Visited March 8, 2010).

²⁶ <http://law.by/> (Visited March 8, 2010).

²⁷ <http://www.belgiumlex.be/> (Visited March 8, 2010).

²⁸ www.pgr.go.cr/scij (Visited March 8, 2010).

²⁹ <http://www.finlex.fi/> (Visited March 8, 2010).

³⁰ <http://www.poderjudicial.gob.hn/juris/principal.aspx> Honduras (Visited March 8, 2010).

³¹ <http://www.jerseylaw.je/Home/WhatsNew/default.aspx> (Visited March 8, 2010).

³² <http://www.kenyalaw.org/update/index.php> (Visited March 8, 2010).

³³ <http://www.legalinfo.mn/> (Visited March 8, 2010)

³⁴ http://spij.minjus.gob.pe/spij_quienessomos.asp (Visited March 8, 2010).

³⁵ <http://www.lawnet.lk/> (visited March 8, 2010, In place, but does not work)

³⁶ <http://www.legalinfo.mn/> (Visited March 8, 2010)

³⁷ <http://eur-lex.europa.eu/> (Visited March 8, 2010) www.europa.eu. The European Union official portal comprehensively covers news and information about its activities, institutions, policies and programs, including full texts of official documents.

³⁸ <http://laws-lois.justice.gc.ca/eng/MainPage> (Visited March 8, 2010).

³⁹ Electronic Riigi Teataja--ERT <https://www.riigiteataja.ee/ert/intr/en.htm> (Visited March 8, 2010).

⁴⁰ <http://www.affaires-generales.gov.ma/bibliotheque.asp?LIB3> (Visited March 8, 2010).

⁴¹ <http://www.eip.gov.eg/> (Visited March 8, 2010). A commercial database Tashreat provides texts.

⁴² <http://www.mofa.gov.lr/index.php> (Visited March 8, 2010).

Because of historical ties between Cornell professor Milton Konvitz and Liberia, Cornell Law Library has digitized and provides access to a number of laws online. The situation for current laws is under review. Until recently, the laws were copyrighted, which presented an obstacle to their free access.

<http://library.lawschool.cornell.edu/WhatWeHave/SpecialCollections/LiberianLaw/index.cfm>. (Visited March 8, 2010).

⁴³ <http://www.haiti.org/> (Visited March 8, 2010).

⁴⁴ See later fn

⁴⁵ www.caricomlaw.org/ (Visited March 8, 2010).

⁴⁶ <http://www.governo.gov.ao/LegislacaoTodos.aspx> (Visited March 8, 2010).

⁴⁷ <http://www.presidence.cg/accueil/> (however latest info is 2007 voeux du president!), also a portal site,

<http://www.congo-siteportail.info> (Visited March 8, 2010).

⁴⁸ : <http://www.judiciary.gov.bt/index.htm> (Visited March 8, 2010).

⁴⁹ <http://www.legiburkina.bf/> (Visited March 8, 2010).

⁵⁰ Décret n° 84-940 du 24 octobre 1984 relatif au service public des bases et banques de données juridiques (Journal officiel du 25 octobre 1984, p. 3336) <<http://www.dsi.cnrs.fr/RMLR/textesintegaux/volume4/4143-d84-940.htm>> (Visited March 8, 2010)

⁵¹

http://www.legifrance.gouv.fr/affichTexte.do;jsessionid=B913959487EF7849E4D8162DF50911F6.tpdjo05v_2?cidTexte=LEGITEXT000005633251&dateTexte=20091229 (Visited March 8, 2010).

⁵² <http://www.service-public.fr/langue/english/> (Visited March 8, 2010).

⁵³ <http://www.reseau-presidents.eu/rpcsjeu/?lang=en> (Visited March 8, 2010).

⁵⁴ <http://www.network-presidents.eu/IMG/pdf/NewsletterNov09B.pdf> (Visited March 8, 2010).

⁵⁵ Association des Hautes Juridictions de Cassation des pays ayant en partage l'usage du Français (French) <http://www.ahjucaf.org/spip.php?article6> shows world map (Visited March 8, 2010).

⁵⁶ <http://www.accpuf.org/> (Visited March 8, 2010).

⁵⁷ <http://eur-lex.europa.eu/n-lex/pays.html?lang=en> (Visited March 8, 2010).

⁵⁸ www.un.org; www.wipo.org; www.ilo.org; www.icj-cij.org/. (Visited March 8, 2010). Cornell Law School collaborated in the start of some of these web sites. Cornell Law Library helped create the first web site of the International Court of Justice. Cornell Law Library subsequently created mirror sites for the ICJ and the ILO web sites, for redundancy.

⁵⁹ <http://www.loc.gov/glin> (Visited March 8, 2010).

⁶⁰ Building the Global Legal Information Network (GLIN) from glin foundation web site. Retraces the history of GLIN since the early days of 1950 with the card index. Undated. 1999?

⁶¹ Global Journal May 2009 at 2-3 http://www.loc.gov/law/news/glin/pdf/GGJ_May09.pdf (Visited March 8, 2010).

⁶² <http://www.bermudalaws.bm/disclaimer.html> (Visited March 8, 2010).

Bermuda Laws Online

⁶³ http://eur-lex.europa.eu/en/editorial/legal_notice.htm. (Visited March 8, 2010).

⁶⁴ <http://www.journal-officiel.gouv.fr/> (Visited March 8, 2010).

⁶⁵ In Brazil, until December 2002, the texts of legal rules available on the Internet had only an informative nature. With the advent of Decree No. 4,520, all official documents are published by the Official Gazette of the Federal Government and the Official Gazette of the Justice, are available at the official web site of the National Press, and are certified by the Brazilian Public Key Infrastructure (ICP-Brazil), thus giving them the same authenticity and validity as the printed ones.

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⁶⁷ See *Authentication Survey Executive Summary*.

http://www.aallnet.org/aallwash/authen_rprt/ExecutiveSummaryReport.pdf (Visited March 8, 2010).

The definition is drawn from the latest editions of *Black's Law Dictionary* and *Fundamentals of Legal Research* (by J. Myron Jacobstein, Roy M. Mersky, & Donald J. Dunn) and adopted as a guide to survey participants.

⁶⁸ The International Organization for Standardization (ISO) has published standard ISO 15489-1 Information and Documentation—Records Management. This standard in clause 7.2.2. defines authenticity: An authentic record is one that can be proven a) to be what it purports to be, b) to have been created or sent by the person purported to have created or sent it, and c) to have been created or sent at the time purported (Aki 2007, 9)

⁶⁹ A Public Key Infrastructure (PKI) is “an asymmetric cryptography security environment that supports the transmission, delivery, and receipt of digital communications over a non-secure communications channel. PKI uses a pair of cryptographically related keys known as public and private keys which verify the identity of the sender (signing) and/or ensure privacy (encryption).” Information provided by Mike Wash, Chief Technical Officer, U.S. Government Printing Office.

⁷⁰ I commissioned this study during my presidency of AALL in 2005-06. The Authentication Survey investigated six sources of law: state statutes and session laws, state high and intermediate appellate court opinions, and state administrative codes and registers. For each legal document, the question was: is the digital version considered official? Is it considered authentic? *Id.*

⁷¹ See generally Authentication in a Digital Age website at <http://www.aallnet.org/summit/> (Visited March 8, 2010).

⁷² <http://www.gpo.gov/fdsys/> (Visited March 8, 2010).

⁷³ From official website. <https://www.riigiteataja.ee/ert/intr/en.htm> (Visited March 8, 2010). See more under country's name.

⁷⁴ Legislation Act, 2006 (S.O. 2006, c. 21, Sched F). <http://www.e-laws.gov.on.ca> (Visited March 8, 2010).

⁷⁵ November 2008 Full Text Security Policy <http://www.glin.gov/helpTopic.action?topic=8080> (Visited March 8, 2010).

⁷⁶ See pascal petitcollot, Editor in Chief, Legifrance. L'édition électronique authentifiée de la législation en Europe *Authentication of digital legal information in Europe* <http://archive.ifla.org/IV/ifla74/papers/157-Petitcollot-fr.pdf> (Visited March 8, 2010).

⁷⁷ Oya Rieger chapter 3 of <http://www.clir.org/pubs/abstract/pub141abst.html> (Visited March 8, 2010).

unless otherwise provided, the law takes effect one day after publication in the electronic *Journal officiel*, which is the official and authentic text. Generally, nowadays, many countries increasingly share the philosophy that governments have a duty to make their laws freely available to the public. In France, this *droit au droit* has reached the level of a principle of constitutional value in the 1999 French Constitutional Council decision.⁵ By contrast, legislation in common law countries, such as the UK, is judicially recognized whether it has been published or not.⁶ Publication is therefore not a legal prerequisite for its coming into force as is the case in Continental law systems.

The increased globalization of our national economies and legal cultures makes the need to consult legislation other than one's own even greater. In the 35 countries of the European Union and the European Economic Area, because of the regional integration of the economies, access to European and foreign legislation has become a regular, practical need. (Berger 2009) Across the world, many issues are connected with more than one legal system, and parties and their advisers need to determine the law applicable to their relationships and transactions. International instruments at the regional level, such as the EU Regulations Rome I and II on the law applicable to contractual obligations and to torts, and at the global level, e.g., the recent Hague Convention on Choice of Court Agreements,

⁷⁸ Conversation with Ladislav Borhy, SUN Microsystems Czech Republic, at 2009 Caslin meeting in Tepla, Czech Republic, June 2009. http://alx.upol.cz/caslin2009/index_en.html (Visited March 8, 2010).

⁷⁹ *Open Archival Information System (OAIS)*. The OAIS reference model addresses a full range of preservation functions, including ingest, archival storage, data management, access, and dissemination.⁷⁸ Specifically applicable to organizations with long-term preservation responsibilities, it has provided a framework and a common language for digital preservation discussions and planning activities, especially for their technical and architectural aspects. *Trustworthy Repositories Audit & Certification (TRAC)*. An OCLC/RLG Programs and National Archives and Records Administration (NARA) task force developed the Audit Checklist for Certifying Digital Repositories as a tool to assess reliability, commitment, and readiness of institutions to assume long-term preservation responsibilities.⁷⁹

⁸⁰ For a more detailed explanation of Portico's archival approach, please see the first paper in our series, Papers from Portico.

⁸¹ http://www.digitalpreservation.gov/partners/states_mn/states_mn.html (Visited March 8, 2010).

⁸² More detailed project information can be found at the Project Web site <http://www.mnhs.org/preserve/records/legislativerecords/> (Visited March 8, 2010).

⁸³ I was part of the charter group which started the association in 2003 at Georgetown, under the initiative of Professor Bob Oakley, Director of the Law Library. <http://www.aallnet.org/committee/lipa/>; state initiatives at <http://www.aallnet.org/committee/lipa/states.asp> (Visited March 8, 2010).

⁸⁴ <http://www.dol.gov/opa/media/press/oasam/archive/oasam20091865.htm> (Visited March 8, 2010).

⁸⁵ www.duraspace.org, formerly D-Space and now merged with Fedora. Cloud technologies use remote computers to provide local services through the internet. DuraCloud will let an institution provide both data storage and access without having to maintain its own dedicated technical infrastructure, including content replication and monitoring services that span multiple cloud-storage providers. www.digitalpreservation.gov

⁸⁶ <http://lockss.stanford.edu/lockss/Home> (Visited March 8, 2010).

⁸⁷ <http://www.clockss.org/clockss/Home> (Visited March 8, 2010).

enhance the need for access to the content of foreign law. (The Hague 2009)

Before digitization, accessing legal information was particularly challenging. The online availability of laws improved access to foreign law in a considerable way starting in the 1960s for the early adopters pre-internet, and dramatically since the early 1990s. The main reason for the progress is, of course, technology and the internet, with its revolutionary effects on legal information. The second reason is the information policy of e-government, expressly stated by a number of countries, which pay particular attention to the dissemination of the legal sources, to ensure the effective implementation of the rule of law, and for legal security. A major consequence of this revolutionary change has been the evolution from fee-based databases to free online information systems.

Definitions and Scope of the World Laws

The context in which access to the world laws is needed and found varies. The researcher may be a legal professional well versed in the legal system of that country, or a citizen worried about their rights, or a businessman looking for commercial laws, which means different needs in different contexts. The focus here is on access to the official word of the law, specifically to statutes, codes, regulations, court decisions, and international agreements, sources which are called the “primary sources” in common law countries, that is, binding upon the courts, as contrasted with “secondary sources” which come in the form of commentaries on the law, treatises, law reviews, and the like. In civil law countries by contrast, the primary source of law is found in legislation, normally published in the country’s official gazette.⁷ Court decisions and scholarly writings (*la doctrine*) play an essential role in these legal systems, but are not usually at the top of the formal hierarchy of binding norms. A typical example of the law to be found is described in a guide to legal research in Costa Rica: “The laws passed by the Costa Rican legislature are the primary source of law. Once a law has been approved by the Legislature it must be published in the official gazette known as *La Gaceta*. The record of all laws published by the Gazette may be searched via the internet at the site of the National Printing Office. In addition to the laws passed by the legislature the Costa Rican government may issue regulations (*Reglamento*) to a specific law. Furthermore, the President and other government Ministries may issue Decrees (*Decreto*) regarding specific topics. Whether it is a law, a regulation or a decree all must be published in the official gazette before they become binding. A record of all laws, executive decrees and regulations in existence in Costa Rica is available from the National Legislation System database (*SINALEVI*) where the user can search the database based upon different types of search criteria.” (Petersen 2007) Of course, when one looks at the different families of legal systems, there are others beyond the ones belonging to the common law and civil law traditions, e.g., mixed systems, religious and customary law.⁸ And, one cannot separate access to these sources from access to legal information in general.

Access to Law and Understanding of the Law

Access to a particular law is often not good enough. One may need more comprehensive access, and one wants to make sure that the law is current, has not been repealed and is still

in force. For court decisions, one needs to ascertain that they are still good law. Often, one needs not only the current law, and all the laws currently in force, but one may need a photograph of the law as it was at any point in time, for instance, several years before, at the time of the litigation. This calls for access to previous versions of the laws, amended, and repealed versions, the ability to go back and forth between the various versions, and to have access to accurate, up-to-date and the final version of a particular text. Some websites do well in that regard, e.g., in Canada and Estonia, the government websites specifying that it provides “current legislation as at any date.”⁹ A caveat is that they may only go back so far, not to the beginning of publication.

Of course, in dealing with different legal systems, a certain knowledge of the role of the sources of law and the hierarchy of norms is important before appreciating the value of a particular law or case. One may sometimes want to know the state of the law in a particular area. In that instance, one may want to consult a treatise first, to get an introduction and references to specific codes and specific articles within that code.

How much can one understand the law by looking at a text? If no context is provided, it may be harder to understand the procedures and so on. The greatest danger is for non-professionals who get the letter of the law, but not the context. The internet makes legal information much more accessible to the public. But, it is not clear that the greater accessibility makes the law more understandable. Some countries have, however, taken steps to make the law understandable to citizens.

E-Government Policy Agendas

National governments in established democracies, as well as countries who are moving in that direction, increasingly use technology to help citizens and researchers understand the law they cannot ignore. Some emerging countries are spurred on by technological advances and move in that direction, sometimes as part of a rule of law project. Some countries make this e-government policy explicit on their web sites. The Bangladesh website, produced by the Ministry of Law, Justice and Parliamentary Affairs, endeavors to make available all existing laws and keep them updated and more users friendly to “ensure access to law and justice and make an effective e-governance.”¹⁰ The Estonia’s Office of electronic official gazette which publishes the new laws has an express statement of user assistance via email and helpline, and justifies free access because “[O]ne of the preconditions of understanding legislation is the legislation’s availability, which is why the eRT internet database can be used free of charge.” Further it states that “[t]he librarians and local government officials have completed a training course on using the eRT and are obligated by law to provide persons with instructions and help them in finding the necessary acts.”¹¹

Technology helps foster the rule of law. Gabon, one of the most recent member country in the Global Legal Information Network (GLIN) states its reasons for joining as “part of the implementation of the policy of transparency and good governance as well as natural resource management and sustainable development.”¹² Kuwait’s Ministry of Justice web sites mentions GLIN prominently on its front page, as well as its e-justice project.¹³ GLIN, operated by the Law Library of Congress in the USA, is a public database of laws and other

documents, contributed on a decentralized basis by government agencies in different countries of the world. (It is examined later at p.15).

The Hague Interest

The Hague meeting of experts in November 2008¹⁴ produced several useful ideas, and a draft declaration of principles, centered around a platform which would facilitate access to the content of foreign law, and work on standard-setting. The draft report proposed some work to be done through a new Hague Convention that would consist of three parts: (The Hague, 2009)

Part I: Facilitating access to online legal information on foreign law. This part would focus on assuring the free accessibility of a country's or regional economic integration organisation's main legal materials, particularly legislation, case law and international agreements (and potentially *doctrine* that would be important in civil law jurisdictions) for online publication and re-publication / re-use; it could possibly provide some guidance on realistic quality standards or best practices for such free access and online publishing, and perhaps the provision of a permanent body of experts to monitor the development of practical standards and / or best practices in these areas, also with a view to the compatibility or "interoperability" of global online publishing standards.

Part II: Cross-border administrative and / or judicial co-operation. This part would provide for the handling of requests for information in response to concrete questions on the application of foreign law in relation to a specific matter that arises in court proceedings (and possibly also in other contexts), and for which information available online is not sufficient.

Part III: A global network of institutions and experts for more complex questions. This part would address situations where there may be a need for accessing more in-depth information on complex legal questions in specific areas (e.g., insolvency or inheritance), or in the course of complex litigation that involves the interface of multiple areas of foreign and / or local law(s). Here, one might think of a series of networks of qualified organisations (bar associations, comparative law institutes, organisations of notaries and other specialists, whose services would not be free) facilitated via the Permanent Bureau.

Fee-Based or Free Access

Some countries have either copyrighted their legal materials or entered into exclusive publication and/or distribution agreements with quasi-governmental or private publishers. These agreements present obstacles to the free access to legal information, but the increasing trend is toward free access. These changes are best illustrated by briefly recalling the history of the online editions of the official gazettes in civil law countries in Europe and Latin America. The official gazette of a particular country is the main source

for publication of legislation, that is laws, regulations and decrees, legal notices, sometimes treaties, and even texts of court decisions in some countries (Belize, Costa Rica, Estonia are a few).¹⁵ Official gazettes were among the first legal websites created since the second half of the 1990s, and most of them were fee-based. This situation has changed. In Europe, as of 2009, most official databases (29 out of 35 — some countries have several official databases) can currently be accessed free of charge (Access 2009).¹⁶ In other countries of the world, it is mixed, even though the overall trend is toward free access.¹⁷ In some countries, free access is provided for current and retrospective issues. In other countries, the current edition (and a few months) are in free access, but one needs to pay for the archives. Some countries are still subscription-based, for instance in Chile (*Diario Oficial*) a private company which has state control, and has the legal duty to publish the state official bulletin. (Endress 2008). Free abstracts going back to 1950 are available through GLIN. Some countries have switched from fee-based, the government contracting with a private publisher, to free, open access, e.g., France.

With regard to the development of legal information systems, initiatives have varied. In several countries, notably Australia, Canada, and the United States, the pioneering efforts to exploit the new technologies to provide legal information came from universities, with a strong philosophy of free access to law. The first was the Legal Information Institute at Cornell Law School in the United States in 1992, which created the first websites for the decisions of the U.S. Supreme Court and the New York Court of Appeals (which, in spite of its name, is the highest court in New York). Other universities created websites for various federal circuit courts of appeals. The philosophy of the LII then spread and led to the creation of legal information institutes in different parts of the world, as shown by the World Legal Information Institute,¹⁸ in collaboration with members of the Free Access to Law Movement.¹⁹ In the United States, nowadays, because of the American principle that citizens should have free access to government information, most federal and state publications are in the public domain, without being subject to copyright. Today, all federal and state entities have developed their own websites to distribute their bills, statutes, court decisions and regulations over the internet. (Germain 1998). The cooperation between government entities and universities and other non profit organizations continues to this day, and are leading to improvements in access to the law, for instance, in taking the official text, improving upon it by providing a useful search engine, and linking to other sources. Cornell's Legal Information Institute collaborates with the U.S. Supreme Court for the delivery of U.S. Supreme Court decisions, and has improved the indexing and delivery of the official U.S. Code version provided by the U.S. government.

In other business models, Germany and Argentina provide examples of robust systems which were developed through a combination of government and commercial partnerships. Juris, the major legal information system for laws and cases in Germany was established in the 1970s by the Federal Ministry of Justice, and privatized in the 1980s. The majority share is still held by the German federal government, the other shares were bought a few years ago by Netherlands-based publisher SDU. (Exter 2008) Nowadays, *Gesetze im Internet* (Federal Laws on the Internet) is a free service to the public provided by the Federal Ministry of Justice in cooperation with Juris, and it features the current consolidated versions of nearly all federal laws. *Makrolog - Recht für Deutschland* is a part free, part

fee-based online service offering the Federal Law Gazette and other official compilations/law gazettes. Argentina offers a combination of free and fee based services.

Different cost recovery systems prevail in some countries. In Norway, legal information is produced and distributed through a private foundation. Some of it is free, but most of it is fee-based. The databases are offered for a modest sum and a cost recovery mechanism taking into account the needs of the public and the market offered by the legal profession.²⁰ In yet another business model, Kenya has entrusted the National Council for Law Reporting with the exclusive mandate to publish the official *Kenya Law Reports*. It also now publishes the laws of Kenya with a search engine, the official gazette, and other legal information.²¹ Access is free and permission is granted to copy and print, but no portion can be commercially reproduced unless a subscription fee is paid to offset the costs of production. In Bermuda access to laws and statutory instruments is free, but case law is provided by a commercial for a fee, Justis Publ.²² On the other hand, Botswana recently opened up its Laws of Botswana website to the public, which was previously restricted.²³

II. A World Snapshot

General Themes and Comments

In early 2010, I conducted an empirical survey of as many of the 192 countries listed by the United Nations as possible to assess progress, mostly by going directly to the government websites of each country. Two online guides were particularly useful in pointing the way. The NYU Globalex research guide series (free) and Reynold and Flores' *Foreign Law guide* (fee-based), both thorough and thoughtful, well researched, and providing a context for the primary and secondary sources (common law terminology), with a standardized table of contents for each country, useful for comparative purposes. They are not always quite up to date for the internet resources, mostly because it is impossible to keep up with the fast evolving landscape. This first world snapshot shows much progress, and the overall picture that emerges from this brief survey is very positive, constantly evolving toward more information provided.

This chapter reviews mostly governmental and free web sites, even though it is recognized that commercial, fee-based sources play an important and in some countries, even a predominant role in providing legal information to the legal profession, particularly for information on case law and legal literature but sometimes even now on legislation. In the past decade, more and more government web sites have appeared, leading to a great increase in the online accessibility of world laws. As already mentioned, this is due to the convergence of the internet revolution and E-government public policy agendas. When looking broadly at the world coverage, one notes that most if not all countries have some kind of presence on the Internet. The coverage of legal information shows unevenness among countries, which is not unexpected. Some countries have robust and sophisticated digital law websites, and some countries have hardly any.

Different countries are at different stages of internet development, depending on their political structure and rule of law status, their size, the level of government intervention, and

funding available for e-government policy. They use a variety of avenues, depending on which department or branch of government initiated and developed the technology. Sometime a special technology branch of government is created for internet activities. A private initiative creates a sometimes legal site.

Several countries have developed an integrated legal information system on one single central site that provides comprehensive access to laws and codes, regulations and decrees, court decisions, treaties, bills, and documents from other government entities, and are thus exemplary in using the internet to disseminate legal information to their citizens, and by extension to the world. Argentina,²⁴ Austria,²⁵ Belarus,²⁶ Belgium,²⁷ Costa Rica,²⁸ Finland,²⁹ Honduras,³⁰ Jersey³¹ Kenya,³² Mongolia³³, Peru³⁴ and Sri Lanka,³⁵ are but a few examples.

The Belarus Legislation Databank ETALON “ is a full-text search system containing legal acts issued by the President, Parliament, Government, National Bank, ministries, Constitutional Court, Supreme Court, Supreme Economic Court, and international treaties.”

The Mongolia website, created with the assistance of the World Bank under its “Legal and Judicial Reform Project,” and implemented by the Mongolian Ministry of Justice and Home Affairs explains: “Our objective is to create a single official source for Mongolian law and legal information by providing free and public access to all valid and enforceable laws and related documents. This service is crucial to ensure the protection of human rights and to improve respect for the rule of law.”³⁶ The European Union, as a regional system, is particularly well developed.³⁷

Some countries which started the computerization process with individual websites, now have moved to create an overall portal for legal information, offered through a central government website which may produce and host some of the information, and point to other websites on separately maintained websites. France, Germany, Argentina, and the United States offer such examples.

Australia and Canada have strong government websites, but access to their laws has been greatly facilitated by the umbrella of the Australian and Canada Legal Information Institutes (Austlii and Canlii), institutions created to provide free access to law, which serve as overall portals in a sometimes quasi-official capacity. The Global Legal Information Network (GLIN) also serves as a portal site to the laws of a number of countries.

Most countries now offer a website containing legislative information. Civil law countries have traditionally put more emphasis on legislation, a tradition which is reflected in the content of websites. Most countries from the civil law tradition now have a site for their official gazette (often from the country’s national printing office), and a legislation portal, often there are separate sites, which may originate from the country’s parliament, Ministry of justice, or even presidential website, e.g., in Columbia, which provides full texts of laws in .pdf.

Common law countries have historically put more emphasis on court decisions on their websites. They, however, also provide access to official gazettes, statutes and regulations, consolidated legislation, and treaties.

The organization and the level of sophistication of the websites vary, depending on the country's current development stage. Some countries provide online access to the official gazette, together with access to laws in force, and consolidated texts. Some publish the new laws in chronological order, sometimes in pdf format without any search capabilities. Others go further and provide a search engine. Some go even further and provide consolidated texts, and legislative texts at any point in time, e.g., Canada, for consolidated legislation³⁸ and Estonia. The Estonia's site³⁹ emphasizes its three qualities "official, current legislation as on any given date, and user-friendly and free of charge." The consolidated texts can be viewed as at any date, meaning that one can locate any former or current drafts of legislative acts, and also access the potential future drafts of the acts. Every draft of a consolidated text is linked to its preceding and subsequent drafts. This allows users to "move in time" from the previous draft of the consolidated text to the next and vice versa. As a result, the user does not have to ascertain the validity of a legislative act or locate its current draft by searching for the relevant amendments.

Often, the computerization starts with particular government entities, which create their own sites. Some countries have court portals, or individual courts, usually the first one online will be the constitutional court. In some other countries, there are separate portals for different entities. For some countries, one needs to search separately the various websites, e.g., the portal for their legislation, and separate portals or separate websites for their courts, e.g., Portugal.

Some countries are still midway in their development. Different ministries post laws and other information, e.g. in Morocco, the website of the Ministry of Economic and General Affairs.⁴⁰ Some countries are on their way to develop a good legal information system. Egypt's information portal is not specifically on legal information, but provides data and information to Egyptian citizens, and states "Information access is a right for each citizen."⁴¹

Most, if not all countries nowadays have a web presence, at a minimum some kind of a central government portal, or an embassy website. For instance, Liberia has a presidential website and a Ministry of Foreign Affairs website.⁴² Sometimes, laws can be found through other organizations. Haiti only has a government website,⁴³ but its laws can be found through GLIN, and constitutional court decisions through the Association of Supreme Courts (*Cassation*) of Countries Sharing the Use of French.⁴⁴ The laws of the Cooperative Republic of Guyana can be found through its regional organization CARICOM, which provides access to the laws of several other Caribbean countries.⁴⁵ If the country does not have a legal database, it may have at least an official government website, which provides legislation, e.g., in Angola.⁴⁶ The Republic of Congo Brazzaville website, is general in scope, with some information on the Constitutional Court.⁴⁷

Several emerging countries are using technology and getting money from foreign governments and organizations to modernize their legal systems, create a better technological infrastructure, and create websites. Technology has truly helped some countries as an instrument of law reform, democracy, and facilitated the rule of law. Some countries now explicitly state a need and a duty to make their laws and decisions more accessible to the public and uphold the rule of law. Bhutan, which has built a democracy and an independent judiciary within the past few decades and has used technology with the help of the Danish government provides an example. The government Royal Court of Justice web site states as its mission statement “to improve accessibility to Justice by making Courts user friendly; uphold and protect Due Process of Law, Fair Trial, Rule of Law and Review system; build public confidence and respect through continuing professionalism; improve legal language and retain Bhutanese terminology that reflect and command Bhutanese values; harness technology for efficiency and cost effectiveness; improve infrastructures and capacity building; make judicial process responsive, effective, faster, better, and easier; and impart legal Education”⁴⁸

Both the World legal information institutes and GLIN have been influential in partnering with several countries for the purpose of putting laws online. Burkina Faso now has a good technological infrastructure, with several government websites for various courts, thanks to technological help from LexUm, with funding from different international organizations, and is now embarking on a project with GLIN.⁴⁹

Australia has greatly benefited from the work of the Australian Legal Information Institute, a non profit organization created expressly for the purpose of facilitating free access to Australian primary legal materials. AustLII has been most successful in obtaining free public access to data from government and court sources and loads them on a central server, providing a user-friendly comprehensive access.

France as a Case Study

Retracing the history of France digital law movement is enlightening to understand how a pioneer country in the use of digital technologies and technological innovation evolved from a fee-based structure to free open access databases. France launched the Minitel back in 1982 pre-Internet, considered one of the world’s most successful pre web online services, allowing users to make online purchases, search the phone directory, and chat. One of its first applications was access to the official gazette. (Cottin Historique, 2002). The first official electronic databases for legal information (statutes, regulations, case law) were created in the 1960’s, possibly the first country in the world, by university laboratories, in collaboration with the Ministry of Justice, the offices of the Prime Minister, and the supreme courts. (id.) The government started an official “public service of dissemination of law,” for citizens, legal professionals and law vendors in 1984,⁵⁰ made available on the Internet in 2002.⁵¹ One of the major components was the digitization of the official gazette

(Cottin Service, 2006) For a number of years, the government contracted with a commercial vendor, ORT. The official gazette was available free for the past five days, but the archives were fee-based. In 1997, then French Prime Minister Lionel Jospin made a declaration that the public legal data should be available to the public free of charge, which led to the creation of Legifrance. (Germain, L'Accès 1998). From 1997 until 2002, there were two services, Legifrance was free, and Jurifrance was fee-based. This ceased in 2002. The philosophical underpinnings and foundation of that “public service for the dissemination of law” is threefold: Intelligibility of the law; accessibility of the legal rule; anonymization of court decisions. In its decision of 1999 the *Conseil constitutionnel* gave constitutional value to this right to information.

Today, the French government offers a strong panoply of access to laws, and official portal websites that aim to make the law not only accessible, but understandable to the public. The philosophy that it is not enough to have access to the law, you have to be able to understand what your rights are. France offers an impressive model of websites directed toward legal professionals and the public. Service-public.fr⁵² provides a single front office for administrative information. For each topic, it collects all the relevant information, and help citizens find answer to questions, such as the price of a passport; formalities on getting married and many other procedures; buying a house, etc. Information sheets with a clear explanation of rights and procedures to be carried out. According to the standards of the website, the information must be clear, efficient and precise enough to inform or direct the user ; complete in the relevant field, up-to-date and accessible to all regardless of the channel used. Parts of it are available in English. Vie-Publique.fr is another governmental portal site of all the public policies, and official information on political, social, economic life in France. It informs citizens, professionals of current events, studies, “dossiers” on news.

Official, Intergovernmental Multi-Jurisdictional Portals

Several systems offer cross-border searching of cases or legislation, a single access point with a common search interface, sometimes with a thesaurus, sometimes in several languages.

For Europe, the Common Portal of National Case Law, created by the Network of the Presidents of the European Supreme Courts, released in 2007, provides a meta-search engine to query simultaneously the various search engines and allow for comparisons of judicial solutions.⁵³ The Portal was conceived not just as an online database, but a tool for changing working habits and, by providing supreme court justices with an opportunity to inform themselves about the law of other countries, help to create, develop and strengthen a common judicial culture in Europe. It includes automatic translation facilities.⁵⁴

Worldwide, the Association of Supreme Courts (*Cassation*) of Countries Sharing the Use of French was created in 2001 and brings together forty eight (48) supreme and cassation

courts. It has created a useful database which provides full texts of decisions for these courts with a single search engine which allows searching through the various countries. It even provides access to courts which do not have their own website, e.g., Haiti.⁵⁵

Another association, the Association des Cours Constitutionnelles ayant en Partage l'Usage du Français (Association of Constitutional Courts sharing the Use of French) points to websites maintained by each country.⁵⁶

The European Union's N-Lex website, launched in 2006, provides a single access point with a common search interface to national legislation.⁵⁷ Produced by the EU and the participating national governments, it offers an interesting experiment, since one can query each official database of national law of 23 EU countries via a standard search screen, in 22 of the EU's official languages. A multilingual dictionary (EUROVOC) helps make text searches in foreign languages. It is noted that it requires considerable ongoing collaboration on both sides, to create a stable, standardized system.

Most, if not all international organizations publish their information online, including treaties and other international agreements, e.g. the United Nations, World Intellectual Property Organization (WIPO), International Labor Organization (ILO), and International Court of Justice (ICJ), to name a few.⁵⁸ These official portals contain an amazing, and ever growing, amount of authoritative information

Overall Portals. World LIIS and GLIN

The GLIN Model

The Global Legal Information Network (GLIN),⁵⁹ operated by the Law Library of Congress, is a public database of laws, regulations, judicial decisions, and other complementary legal sources contributed by governmental agencies that originate from countries in the Americas, Europe, Africa and Asia, and from international organizations. These GLIN members contribute the official full texts of published documents to the database in their original language. Each document is accompanied by a summary in English and subject terms selected from the multilingual index to GLIN. All summaries are available to the public, and public access to full texts is also available if the country allows it, otherwise abstracts are available.

GLIN is an interesting model because it works as a decentralized inter-governmental organization. GLIN is a cooperative, not-for-profit federation of government agencies—usually legislative agencies or ministries of justice—that contribute national legal information to the GLIN database. The data are in a central server at the Library of Congress in Washington, D.C. Access is equally shared by all participating national GLIN stations.⁶⁰ GLIN originated with a card index to Latin American legislation to meet the needs of Congress.

To take an example of how the system works, the GLIN Gabon station is located at the Directorate of Official Publications (DPO), the body responsible for the publication in the

Official Journal of the Gabonese Republic.⁶¹ The GLIN Gabon Station includes one director responsible for coordinating the activities and the daily management of the station; three legal analysts responsible for the literature review, indexing of legal texts for implementation of abstracts and their submission to the Network; and one scientist responsible for the administration of accounts, the digitization process.

GLIN strengths are that it works government to government. It gets foreign governments to provide authoritative info in a digital format that can be used in the GLIN system. It helps emerging countries put their laws online and access free legal information. It was developed with the support of the U.S. Congress, the World Bank interest and the Inter-American Development Bank (IABD). It is currently under review toward the goal of establishing an overall portal to laws of foreign countries.

WorldLIIs

The different world legal information institutes have played an essential role in fostering the online availability of laws worldwide, and they have rendered an great service to the citizens of the world, legal professionals and the rule of law. The WorldLIIs's portal is invaluable, and very clearly organized. The WorldLIIs are described in Chapter... of this book.

English Language Information and Translations.

The websites for each country often offer an English version, and sometimes a version in other languages. The information in these English "libraries" is usually limited and sometimes only in summary form. When seeking the full text of documents, one must be prepared to deal with sites in the vernacular, e.g. the French or Arabic languages for Morocco and Algeria. Translations into different languages vary widely, depending on the country. Some countries make a serious effort to provide translations of their laws and decisions, for instance Brazil's Infolegis compiles texts of Brazilian legal rules translated into English, French, and Spanish. Estonia through the Estonian Legal Language Centre, a State Agency database providing translation of Estonian legislation into English; translation of EC legislation into Estonian. These sites usually state that the translations are for information purposes only, that the official text is the one in the original language. As English is the new *lingua franca*, there is a strong demand for English language translations. A number of web sites have parts of it translated into English. Another variation is countries which provide an English language "window" into their website, introductions, explanations, but not the full texts of the documents.

The use of translation devices, has been made popular because of the ease of translation softwares. It is hazardous to say the least, but may be useful for a first approach if it is followed by human intermediation.

III. Digital Law Issues

Official and Authentic Digital Legal Sources

Some countries do not yet recognize the official status of their electronic publications. Bermuda, for instance, states on its web site that “[T]he laws on this website are provided for informational purposes only and do not yet have official sanction.”⁶² The European Union Eur-Lex Website states “Only European Union legislation published in paper editions of the Official Journal of the European Union is deemed authentic.”⁶³ Other countries, on the other hand, declare their digital law documents to be official and authentic. In France, the *Journal Officiel* electronic version has been declared authentic (authenticated) since 2004 legislation,⁶⁴ with a similar situation in Brazil.⁶⁵ Canada states that its consolidated legislative texts have official status, and evidentiary admissible in court.⁶⁶

Why does authenticity matter? It is because in every country of the world, in an environment where online sources have replaced official print legal information, citizens need to trust the digital version of the law, in the same way that they trust the print information. Since the digital medium is vulnerable to errors in management and control, corruption, and tampering, it is therefore of utmost importance to make the digital information both official and authentic. What is at stake is the transmission of official documents, “the word of the law,” to future generations. (Germain Digital, 1999)

The terms “official” and “authentic” are sometimes used interchangeably. They however mean different things. The definition of an online official legal resource is one that possesses the same status as a print official legal resource. In the United States, for instance, the definition of an official version of court opinions, statutes, session laws, or regulatory materials is one “that has been governmentally mandated or approved by statute or rule. It might be produced by the government, but does not have to be.”⁶⁷ This definition is firmly rooted in the print world. Courts and public officials turn to official legal resources for authoritative and reliable statements of the law and require citation to such sources in the documents that come before them. An online official legal resource offers no such automatic assurance.

Authenticity on the other hand refers to the quality and credibility of the document. It means that the text is provided by the competent authority, that it has not undergone any alteration in the chain of custody.⁶⁸ The definition of an online authentic legal resource is one the content of which has been verified by a government entity to be complete and unaltered when compared to the version approved or published by the content originator. Typically, an authentic text will bear a certificate or mark that conveys information as to its certification, so that the text is authenticated. The standard methods of authentication include encryption, especially digital signatures and public key infrastructure, or similar technologies.⁶⁹ Authentication of digital law varies depending on the country. Some countries provide authentication through a digital signature or PKI infrastructure, others through secure servers and certificates. (Hietanen Electronic, 2007).

In the United States, the American Association of Law Libraries (AALL) has been active and successful in its advocacy efforts to encourage federal and state government

entities to take the necessary steps to ensure authentic digital law. The 2006 AALL Fifty State Survey revealed that a significant number of the state online legal resources were deemed official, but none were authenticated by standard methods.⁷⁰ The subsequent 2007 AALL National Summit on Authentic Legal Information in the Digital Age led to a National Conference of Commissioners on Uniform State Laws Study Committee to investigate online authentication of legal materials in 2008, thanks to the interest of Michele Timmons, Minnesota Revisor of Statutes and NCCUSL Commissioner.⁷¹ At its July 2009 meeting, the Executive Committee of the National Conference of Commissioners on Uniform State Laws (NCCUSL) started drafting an act that will provide guidance to states on authenticating and preserving electronic legal materials.

At the federal level, the U.S. Government Printing Office (G.P.O.) Federal Digital System (FDsys) provides information from all three branches of government (executive, legislative, and judicial), permanently available in electronic format, authenticated, with version control, and accessible via the web for searching, viewing, downloading, and printing.⁷²

European countries use a variety of measures to ensure authenticity. Estonia uses secure servers.⁷³ Some countries do not take special measures. The Canadian province of Ontario does not specify any special authentication of their documents. "A copy of an official law that is printed by the Queen's Printer or accessed from the e-Laws website in a prescribed form or format is an official copy of the law, unless there is a disclaimer indicating that it is not official. Unless the contrary is proved, official copies of the law are accurate statements of the law".⁷⁴

GLIN's security policy assures users that the full text is a true representation of the source material, has not been modified, and is a certified document from GLIN.gov.⁷⁵ For new texts, the Certification of Authenticity is issued by an authenticated user and a signature.,

The need and importance of authentication of digital law are perceived differently by different categories of users. Some countries are still exploring the challenges of putting laws online. The first priority for them is the quality of texts and their accessibility.⁷⁶ Overall, it seems that it is a goal for countries to strive for.

Digital Preservation and Long Term Access

A major problem with digital information is its vulnerability. Under good conditions, official court reports, session laws, and codes printed on acid-free paper will last for centuries. The same information published in digital form may become obsolete within five years if it is not migrated to a new platform. The technical problems related to the fragility of the digital medium are numerous, as well as the legal and policy issues such as who is responsible for preserving the content. (Rieger 2008)⁷⁷ fn There is a special concern for the preservation and long term access to born digital content which has no paper equivalent. The future is still uncertain, and as of 2010, no permanent solutions exist yet. The best

technological systems can only guarantee a fixed number of years, no more than 50 years,⁷⁸ and information needs to be regularly migrated to a new software, or platform, so as not to disappear or be lost.

With legal materials, one issue of particular importance that has emerged now is the need to have access to the permanent digital records far into the future. Current efforts have the same goal, to make sure that in a paperless world there will be a permanent record of the law in its many forms, and that the document will be authentic. They demonstrate the importance to work with partners on joint problem solving, including governments, the legal information publishing industry, the information technology industry, computer scientists, and other interested stakeholders. What is at stake is the transmission of official documents, "the word of the law," to future generations (Germain, Here 1999). This is an area where there is a great role for libraries to preserve the digital heritage of mankind (Germain, Introduction 2006). The field of digital preservation is in a constant state of flux depending on technological advances. Much progress has occurred over the past decade, and a number of interesting projects and organizations have emerged, together with new tools, services and best practices for the preservation of digital content. (Rhodes, Preserving, 2010). Some of the issues relate to what intellectual content to preserve, in what systems and formats, and what standards to use, currently OAIS and TRAC.⁷⁹ Another issue is whether to have two systems, an open access online repository which offers digital preservation functionality, and a separate dark digital preservation system (Rhodes Preserving, 2010).

The most prominent archival systems today are HathiTrust, LOCKSS/CLOCKSS, and Portico. There is, however, no single solution. The following guidelines from Portico, an archiving service, help understand the principles of digital preservation, and although Portico is mainly meant to preserve the content of scholarly journals, these principles can be extended to the preservation of legal information. 1. The integrity of the scholarly record must be preserved. The archive must accept the content as it was published and should not correct or alter the record. 2. The archive must preserve the intellectual content of the electronic journal as completely as possible, although we recognize that some electronic content may have already been lost. [...] 4. Portico's primary preservation methodology is migration, which involves transitioning content from one file format to another as technology changes and as file formats become obsolete. An initial migration is performed when the source files are received and normalized to the archival format. 5. Portico's archival format is based on the open standard Journal Archiving and Interchange DTD and it uses the Metadata Encoding and Transmission Standards (METS) and the Open Archival Information System (OAIS) Reference Model⁸⁰

Among recent noteworthy efforts, the Library of Congress's National Digital Information Infrastructure and Preservation Program (NDIIPP) has funded several projects to preserve state government digital information, and implement a trustworthy information management system,⁸¹ to capture, preserve and provide access to "at-risk" digital content from state legislatures⁸² The Chesapeake project involving three partners, preserves online publications of the Virginia Supreme Court and other entities in the Virginia judicial branch (Dockendorf Chesapeake, 2009). The Legal Information and Preservation Alliance (LIPA), founded in March 2003 has the mission to provide the leadership, work, and the

professional commitment necessary to preserve vital legal information by defining objectives, endorsing and promoting the use of appropriate standards and models, creating networks, and fostering financial and political support for long term stability.⁸³

Several organizations exist which can host the content at a secure off site location and manage system updates and migration. Non profit organizations, such as Portico and LOCKSS function as preservation systems. The Internet Archive offers the Archive-It service for the preservation of web sites. The U.S. Department of Labor contracted with it to take a digital 'snapshot' and archive the content of all departmental Web sites.⁸⁴

DuraSpace recently launched DuraCloud and has embarked on a one-year pilot program, to test the use of cloud technologies to enable perpetual access to digital content, with the Library of Congress (www.loc.gov) National Digital Information Infrastructure and Preservation Program (NDIIPP).⁸⁵

LOCKSS (Lots of Copies Keep Stuff Safe), based at Stanford University Libraries, provides libraries with digital preservation tools and support so that they can easily and inexpensively collect and preserve their own copies of authorized e-content.⁸⁶ The technology is an open source, peer-to-peer, decentralized digital preservation infrastructure, for all formats and genres of web-published content. The intellectual content, which includes the historical context (the look and feel), is preserved. It is OAIS-compliant; the software migrates content forward in time; and the bits and bytes are continually audited and repaired. CLOCKSS (*Controlled* LOCKSS) is a not for profit joint venture between the world's leading scholarly publishers and research libraries whose mission is to build a sustainable, geographically distributed dark archive with which to ensure the long-term survival of Web-based scholarly publications for the benefit of the greater global research community.⁸⁷

Conclusion

The future looks promising, and it will be interesting to see what systems develop further as the legal information systems mature. One question is whether the funding and sustainability of free open access systems will continue in the future. The WorldLIIs, developed since 1992, which have been so influential a in positive way, are not funded by usage charges or advertisements. Funding is provided by contributors who have an interest in facilitating access to legal information of particular types. Within the various LIIs, an issue currently under discussion is that CanLII prefers a federated search model (with searches sent to cooperating systems) rather than a replication / synchronization model, but AustLII considers that federated search cannot be operated with fast enough access speeds or useful relevance ranking. Another model is one where a world where all legislatures and

courts will publish laws online free of charge and with standards. In either model, another issue is whether there is a need for a global legal information service, where everyone could search all the world laws. The world legal information institutes provide some of that, primarily with an English language interface. Other issues are seen as essential by different groups. For the LIIs, the key test is whether republication of government information is allowed, because the freedom to republish official sources is at the heart of the Free Access to Law Movement, and essential for the operation of LIIs. Authenticity is seen as an essential issue by some who want to guarantee the integrity of official information. Citation and standards will continue to be discussed.

In our global environment, English is the major language, but it will be important to respect all languages, and some languages may become more important.

In short, the future is bright and exciting, and there is a great role for librarians as the research experts in providing access to legal information, and as custodians of information for the long term, in any format, print or digital. The successful advocacy efforts of AALL show that librarians can influence information policy decisions for the benefit of all citizens. There is a great interest in bringing the advocacy to the international level and help develop international standards, possibly within the International Federation of Library Associations, which is the recognized stakeholder by international organizations.

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