The Hong Kong Legal Information Institute (HKLII): Its role in free access to global law via the Internet

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The importance of free access to essential legal information to the rule of law is outlined, and the role of Legal Information Institutes (LIIs) in providing such access. The main features of the new Hong Kong Legal Information Institute (HKLII) are described, and its differences from pre-existing systems. HKLII is the first LII in Asia: a free, independent, and non-profit Internet facility providing relatively comprehensive coverage of the essential legal information of a jurisdiction (Hong Kong). This paper describes HKLII's first year (July 2001 - July 2002), from the first discussions on its possible creation to the installation of its own server in Hong Kong. It explains that the development of HKLII has been made possible by the policies of the HKSAR government and judiciary supporting access to legal information. Future development of HKLII is discussed, and its potential impact on free access to legal information elsewhere in China and in Asia.

HKLII is a partner in the development of the World Legal Information Institute (WorldLII). The scope and facilities of WorldLII are described briefly, and its relationship with HKLII is used to demonstrate how legal resources from one jurisdiction can be incorporated into a global and comprehensive approach to free access legal research.

Introduction: Free access to 'essential' law

[1] Why should we value free access to legal information? Most obviously, access to legal information supports the rule of law. People should not be governed by laws to which they do not have effective access. Businesses have much the same needs as individuals. From a national perspective, attraction to foreign investment is enhanced by free access to information about the operation of a country's legal system. Transparency of a country's legal system is one of the three legal and administrative requirements for WTO membership, and this is enhanced by free access to at least regulatory materials.

[2] At least in relation to 'essential' legal information, free access to the laws of one's own country is an important support for the rule of law. By 'essential legal information' we mean primary legal materials (legislation, case-law, treaties etc) and some secondary materials (interpretative) legal materials (law reform reports, travaux préparatoires, investigative commission reports etc). The test is something like 'legal information produced by public bodies which have a duty to produce it and to make it public'.

[3] Since the advent of widespread Internet access in the mid-1990s, the availability of a relatively inexpensive but sophisticated means of access to information has provided for the first time the prospect of effective popular access to at least 'essential' law. Government agencies, Courts, NGOs, Universities, law firms, and others have created numerous web sites in every jurisdiction in the world as a result. However, the proliferation of legal web sites has not provided a satisfactory answer, as their existence may not be known to users, and they are likely to have inconsistent means of both browsing and searching (if searching is even possible).

[4] One answer to these problems[1] has been the attempt to create comprehensive law sites for all the essential law from a jurisdiction, country or region. There is an occasional governmental attempt to create such comprehensive sites [2], but the attempt has been made more often by independent, often University-based, Legal Information Institutes (LIIs).

Legal Information Institutes (LIIs)

[5] We use the term 'Legal Information Institute' (LII) to refer to a provider of legal information that is independent of government, and provides free access on a non-profit basis to multiple sources of essential legal information[3], including both legislation and caselaw (or alternative sources of jurisprudence). Ideally, a LII should attempt to provide comprehensive coverage of at least the most important sources of essential legal information for the jurisdictions that it covers, and should allow simultaneous searches of all its databases (so that it is not a collection of isolated databases). Systems which approximate these criteria can reasonably be called 'LIIs'.

[6] Examples of LIIs include Cornell's Legal Information Institute (LII - 1994) for US federal law, and the systems of particular relevance to this article: the Australasian Legal Information Institute (AustLII 1995) for Australian law, the British & Irish Legal Information Institute (BAILII 2000) for the jurisdictions of the UK and Ireland; the Canadian Legal Information Institute (CanLII - 2000) for Canadian law; and the Pacific Islands Legal Information Institute (PacLII - 2001) for thirteen island countries of the Pacific. There are also a few similar systems (notably the Unidad de Documentación de Legislación y Jurisprudencia in Mexico[4]) which provide information satisfying the definition of a LII, but necessarily using the name[5].

[7] In many jurisdictions there are comprehensive sites run by the government. In civil law countries none of these contain caselaw but may contain other forms of jurisprudence. These include systems in Argentina, Brazil, Spain, Austria, Belarus, Denmark, Estonia, France, Switzerland, Sweden and Romania[6].

[8] Throughout the world there are many free Internet sources of caselaw[7], legislation[8] and other essential legal information, but seven years after the creation of the first LIIs it is still only a minority of jurisdictions around the world that have accepted the need to provide comprehensive free access to essential legal information, either through creation of government sites, or by providing the data to independent free access publishers such as LIIs.

[9] Throughout Asia there has as yet been only limited progress in the provision of systematic free access to essential legal information. In some jurisdictions there is now access to comprehensive sets of legislation (eg Singapore, Japan), and isolated Courts have made their decisions freely accessible (eg the Supreme Courts in Korea and India). However, there have been no examples of attempts to create systematic access to the essential legal information of a jurisdiction. In the worst case, government agencies and Courts are still being tempted to regard the provision of legislation or Court decisions as a revenue-generating opportunity, limiting access to the law to those with the capacity to pay high access fees.

[10] These LIIs are now joined in 2002 by the Hong Kong Legal Information Institute (HKLII[9]) < http://www.hklii.org/ > .

Electronic access to Hong Kong law: background

[11] As with most jurisdictions, the history of electronic access to Hong Kong legal information is complex, and only those aspects of it most relevant to the development of the Hong Kong Legal Information Institute are sketched here. In particular, the development of print resources, and the electronic legal databases of commercial legal publishers are not discussed, but are analysed in other sources[10].

[12] Prior to HKLII, the University of Hong Kong Faculty of Law had already been involved in a number of pioneering projects in relation to the computerisation of legal information from Hong Kong and China. The two most important were the HK Unreported Judgments Database Pilot Project (1990-95) and Law-On-Line (1995-97). Although these developments did not lead to HKLII, databases created during these projects have survived to become parts of HKLII.

[13] The HK Unreported Judgments Database Pilot Project[11] obtained funding of HK$132,000 from the CRGC[12] in 1990-95 to create the first electronic database of Hong Kong judgments. By 1993 a substantial database of cases from most of Hong Kong's Courts had been created, extending back to the mid-1980s. Access was from within the University's network, not via the Internet. Judgments were scanned from paper, and it became apparent that the high costs involved in this meant that the project could not be continued from University funding. Arrangements were therefore made for the database to be taken over by the Legal Department of the Hong Kong Government, which was at the time starting to develop the system which eventually became BLIS (discussed below), and by Butterworths. The decisions were included in Butterworths' Hong Kong Cases (in print and CD-ROM form) and in LEXIS[13]. The Legal Department retained a copy of the database, and provided it to HKLII for incorporation as the database 'Miscellaneous Court Judgments 1982-1991'.

[14] The Law-On-Line (LOL) Database and Public and Comparative Law Project was funded by the University Grants Committee (UGC) and other sources of funding[14] from July 1994 to December 1996, as a Faculty of Law project under its new Centre for Comparative and Public Law (CCPL)[15]. LOL provided access via the Internet and was an early service attempting to utilise the capacities of the then-new graphical web browsers such as Mosaic. The principal and innovative aspect of LOL was that it provided primary and secondary legal materials from the People's Republic of China (PRC), in Chinese, and with a search engine that allowed free text searching of Chinese materials (as well as English materials). Some of the PRC databases were developed in collaboration with the Legislative Affairs Bureau of the State Council of the PRC. It did not provide databases of Hong Kong primarily legal materials other than Bill of Rights cases, but did contain a number of substantial databases of Hong Kong human rights bibliographic and press clipping information. Due to the costs of sustaining the service, updating of the databases ceased in September 1997. Some of its databases are still available on the Internet[16]. Attempts are being made to transfer some of the databases to HKLII, but this is being hindered as yet by difficulties in exporting data from the system. In a global perspective, Law-On-Line was an ambitious and pioneering project very early in the history of the provision of legal information via the Internet.

[15] During the 1990s two major developments also took place in the provision by Hong Kong public authorities of free access to legal information via the Internet. From the early 1990s the Department of Justice has developed the Bilingual Laws Information System (BLIS)[17], which contains the statutory Laws of Hong Kong and selected constitutional documents. It was originally only available by modem access to selected users, but then moved to free Internet access. Legislation is available in both English and Chinese. One of the most innovative aspects of BLIS is that since 1997 it has included a form of 'point-in-time' presentation of data. 'The first version of the Laws captured in BLIS

is the Law as it was at 30 June 1997. All changes to the law after 30 June 1997 are stored as separate documents with separate commencement dates as the version dates. Users can use advanced search to search for different versions'[18]. Glossaries of English-Chinese legal terms are also provided.

[16] The Hong Kong Judiciary has developed its Judgments and Practice Directions service[19], which from the late1990s provided access the judgments of the Court of Final Appeal, and from October 2001 provided access to decisions delivered since 1993 of all the Courts of Hong Kong and some tribunals[20]. Decisions are normally available on the system within 72 hours, and very important decisions on the day they are handed down. The system is updated daily. Judgments are available in English and Chinese.

[17] Access to both the Judiciary's service and to BLIS is free. The development of HKLII was and is possible because Hong Kong, has led all jurisdictions in Asia in the extent to which its public policies support free access to legal information, and in its implementation of those policies in a number of official Internet sites providing much of that information in a systematic and sophisticated form.

Public policies supporting access to law

[18] We have argued elsewhere[21] that official bodies should accept that they have seven obligations in the provision of essential legal information in order to provide the best support to the rule of law and other values:

1. Provision in a completed form   (including additional information best provided at source)

2. Provision in an authoritative form (examples are court-designated citations and digital signatures)

3. Provision in the form best facilitating dissemination

4. Provision on a marginal-cost-recovery basis to anyone

5. Provision with no re-use restrictions or licence fees (subject to preserving integrity)

6. Preservation of a copy in the care of the public authority

7. Non-discriminatory recognition (end the privileged status of 'official' reports)

[19] A corollary of these propositions is that it is not sufficient for official bodies only to publish essential legal information for free access on their own web sites. Provision to other publishers (whether LIIs or commercial publishers) is also necessary for sound public policy, and is more important than official self-publication. Such dissemination is necessary to ensure that free-access is not second-rate access.

[20] The government and Judiciary of the Hong Kong SAR satisfy most of these criteria to a high degree, with matters concerning Court-designated citations yet to be addressed. The most explicit illustration of these policies (other than the existence of HKLII) is the 'Yes you may copy and link ...' policy on the BLIS web site[22] which states in part in relation to the whole of the Hong Kong Ordinances and other legislation:

1. It is the policy of the Government of the Hong Kong Special Administrative Region[HKSAR] that the electronic publications of the laws of Hong Kong should be

freely available to all persons.

2. Visitors to this web site are permitted to

   ○ download, print, make copies of and distribute HKSAR legislation on this site, and

   ○ include the HKSAR legislation in a text book or other educational materials, whether in electronic or paper form.

[21] Overall, the HKSAR satisfies these seven criteria more than any other jurisdiction in Asia and more than most jurisdictions in the world.

[22] It has therefore been possible to build on these developments in Hong Kong to create in HKLII one comprehensive, independent source of free access to essential Hong Kong legal information.

The Hong Kong Legal Information Institute (HKLII)

[23] The Hong Kong Legal Information Institute (HKLII) - http://www.hklii.org/ has been developed jointly by the University of Hong Kong Faculty of Law and the Australasian Legal Information Institute (AustLII). The Department of Computer Science and Information Systems (CSIS) at the University of Hong Kong has now joined the project and will be responsible for the ongoing technical operation and development of HKLII. Access to HKLII and to all data on it is free.

A brief history of HKLII

[24] From 1995 AustLII - http://www.austlii.org/ - has developed into a comprehensive source of legislation, caselaw and secondary materials for all of Australia's nine jurisdictions, and now receives over 400,000 'hits' per working day. It is one of the largest free access sources of law on the Internet. AustLII is a joint facility of two Law Faculties at Australian universities, the University of Technology, Sydney (UTS) and the University of New South Wales (UNSW)[23]. AustLII has developed all of its own key software, including its search engine (SINO) and its hypertext mark-up software[24]. AustLII also contributes to the development of standards for computerisation of legal information[25].

[25] AustLII's policy is to make this software, and assistance in its use, available to other organisations, particularly universities, which wish to create free access law facilities in their own jurisdictions, provided they have the technical capacity, resources, and access to data necessary to make a project viable. Since 1999, this policy has resulted in AustLII cooperating with local organisations to help create three other LIIs (in addition to HKLII). The British & Irish Legal Information Institute (BAILII - http://www.bailii.org - 2000) for the jurisdictions of the UK and Ireland, was developed with the BAILII Trust in the UK and Ireland, and the Institute of Advanced Legal Studies. The Pacific Islands Legal Information Institute (PacLII http://www.paclii.org - 2001) for thirteen Pacific Island countries, was developed in conjunction with the School of Law at the University of the South Pacific in Vanuatu. The Canadian Legal Information Institute (CanLII - http://www.canlii.org - 2000) for Canadian law, was developed independently by LexUM at the University of Montreal, but using AustLII's search engine and mark-up software[26].

[26] Cooperation between AustLII and the Faculty of Law at the University of Hong Kong commenced when one of AustLII's Co-Directors was appointed as a Visiting Professor at HKU in July 2001[27]. Following agreement by the Law Faculty to investigate the feasibility of the project, discussions were held with the Hong Kong Judiciary and the Department of Justice, and it was established by September 2001 that both were

enthusiastic to cooperate in HKLII's development by providing the complete contents of the case-law on the Judiciary's site, and the legislation on the BLIS site, for republication in HKLII. Discussions with other bodies such as the Hong Kong Law Reform Commission, the Hong Kong International Arbitration Centre (HKIAC) and the Hong Kong University Libraries resulted in approval of provision of data from those and other bodies which resulted in the initial set of databases on HKLII (detailed later).

[27] From October to December the first version of HKLII was built[28]. All of the data available from the Judiciary, BLIS and other sources were converted into the data formats used by HKLII, which are the same as those used by AustLII. The system was created on the AustLII servers located in Sydney, which is where it resides as at the date of writing. All the necessary initial infrastructure and costs were provided by AustLII, partly under an Australian Research Council grant to AustLII for the development of regional and common law databases.

[28] HKLII's first public demonstration was at the *Third Law via Internet Conference*, held at AustLII in Sydney on 28-30 November 2001. It was made available for public access on 13 December 2001. It was formally launched by the Hon Andrew Li, Chief Justice of Hong Kong, on 17 January 2001, as part of the *Fourth Conference on Asian Jurisprudence* at the University of Hong Kong.

[29] From around the time of the launch of HKLII, discussions commenced between the initial HKLII partners (the Faculty of Law and AustLII) and the Department of Computer Science and Information Systems (CSIS) at the University of Hong Kong, as a result of which that Department agreed to take over the technical operation of HKLII, and to establish servers in Hong Kong to run it. The two Faculties at HKU (Law and Engineering) jointly provided HK$500,000 (approximately US$60,000) for the initial hardware and personnel costs, and a technical officer was appointed within CSIS to work on HKLII development under the supervision of CSIS academic staff[29]. A mirror of HKLII was established on CSIS existing servers[30]. By July 2002 a separate server and data storage for HKLII were installed, and development of the processes of obtaining feeds of new data direct from the Judiciary, BLIS etc to the HKLII server at CSIS had commenced, in parallel with maintenance of the existing server at AustLII (which will eventually become the mirror server). Monthly meetings of HKLII's management committee[31] and staff, and AustLII staff, take place by use of web meeting software.

[30] The independent technical development of HKLII has already commenced, with work underway on a Chinese language interface for HKLI (discussed later), which it is planned will be launched in September 2002.

[31] In a related development sparked by their cooperation in relation to HKLII, the Department of Law and the Department of Computer Science and Information Systems have decided to created a joint Centre at HKU entitled 'China Information Technology & Law Centre' which will be a Centre for research in IT and IP law, and in the computerisation of law. The management of HKLII will now fall under the new Centre. The Centre proposal has been approved by both Faculties but awaits approval by the University Senate at the time of writing.

[32] HKLII has a secure home within the University of Hong Kong, and good prospects of continuing to obtain significant funding within the academic sector for innovative projects in computerisation of law, and providing database development necessary for other legal research projects (eg the current WTO projects). However, HKLII will require funding other stakeholders from outside the academic sector in order to reach its full potential. Free-access LIIs like HKLII are very efficient and cost-effective ways to provide legal information to the general public and to particular interest groups such as the legal profession, but they do require modest amounts of funding. System like AustLII are able to provide free access to legal information at an all-inclusive production cost of less than 5 ¢ HK per judgment or legislative provision. As a result of this cost-efficiency, they have developed a successful 'stakeholder model' where the costs of running the system

are contributed by a mix of contributions from government agencies that wish to better provide legal information to the public, private sector organisations that wish their members to have free access to some types of legal information (eg employers re industrial law), and publishers who wish to use a LII as the basis for value-added publishing ventures[32] . CanLII, on the other hand, has obtained funding from the combined Law Societies of Canada[33]. BAILII's funding has been something of a mix of the Canadian and Australian models and has a very diverse range of stakeholders, though many of them are small[34]. A LII is more independent and secure the more diverse is its range of stakeholders. HKLII will aim to develop as broad a range of stakeholders as possible.

Motivations for the creation of HKLII

[33] There were many motivations for the creation of HKLII, including the following:

> To provide more effective access to Hong Kong law by providing technical features not found in the existing free-access services, and by providing access to new databases of Hong Kong legal information not previously available.

> To support the rule of law in Hong Kong by providing an alternative form of free access, and in particular one which was operated independently of either government or commercial concerns.

> To provide a platform which would be suitable for the provision of free access to legal information from other parts of China, as and when circumstances permit.

> To add Hong Kong legal information to the WorldLII cooperative global network of free access legal research facilities, thereby extending the global development of such services.

> To encourage the development of similar policies toward free access, and access facilities such as LIIs, in other parts of China and throughout Asia, by providing a good example in an Asian jurisdiction.

> To provide a facility within which innovative research on computerisation of legal information may be carried out at the University of Hong Kong.

> To enable Hong Kong to contribute to the global development of free access to law.

[34] The rest of this article explains some of the ways in which these motivations are being pursued in the development of HKLII.

Initial databases on HKLII

[35] The initial contents of HKLII are:

> *Court and Tribunal Judgments* (approximately 10,000 in full

text) from the Court of Final Appeal 1997-, Court of Appeal 1993-, Court of First Instance 1982-, District Court 1993-, Family Court 1999- and Lands Tribunal 1994-. The judgments are provided by the Judiciary of the Hong Kong SAR.

Miscellaneous Courts of Hong Kong Judgments 1982-1990 (approximately 2000 judgments in full text) including decisions from the Supreme Court and High Court as they were then, provided by the Department of Justice. This database will be largely replaced as the Judiciary's own databases extend back in time.

Practice Directions, provided by the Judiciary of the Hong Kong SAR.

All *Current Ordinances* of Hong Kong, and all *Regulations*, provided by the Department of Justice and its BLIS service.

The table of contents of *Historical Law of Hong Kong*, an image database of Hong Kong's Ordinances back to 1844 created by the Hong Kong University Libraries. Search results on HKLII link users to the image of the Ordinance held by the Libraries.

Recent law reform reports and discussion papers, provided by the *Hong Kong Law Reform Commission*. The Commission is currently capturing all its past reports, and these will then be provided on HKLII.

Domain name arbitration decisions under the .hk domain, provided by the Hong Kong International Arbitration Centre (HKIAC).

The *Hong Kong Treaties Index*, provided by the Centre for Comparative and Public Law of the Faculty of Law, University of Hong Kong.

[36] HKLII is, from its initial release, the most comprehensive collection of Hong Kong law available for free access which can be searched with a single search (as described below). At present only English language versions are provided on HKLII, but Chinese language versions of some data (including Ordinances and some caselaw) will be provided later. The Chinese language versions will initially be browsable only, not searchable, but the development of the search facility is underway (as discussed later).

[37] The caselaw on HKLII has added to it 'HKLII citations' which follow the method of citation used by AustLII and BAILII and now adopted by most Australian and UK courts as an official method of 'Court-designated citations'. For example, a recent Court of Final Appeal decision has the citation '*The Ka Wah Bank Ltd v. Bhagwan Shankardas Moorjani* FACV000013A/2001 - [2002] HKCFA 11'. The citation '[2002] HKCFA 11' is the 'HKLII citation', indicating that this is the 11th decision released by the Court of Final Appeal in calendar year 2002. The Hong Kong Judiciary is considering adding this form of citation to its decisions published on the Judiciary's Legal Reference Service, in which case it will also become a 'Court-designated citation' in Hong Kong. One advantage of such as system is that cases have a useable form of citation as soon as they are handed down.

Future development of databases on or by HKLII

[38] The priority in HKLII's development at present is the migration of the technical operation of the system from AustLII to Hong Kong, and the completion of the continuous updating arrangements for existing caselaw and legislation databases. Development of additional databases will then commence, and a staff member for database development is currently being employed.

[39] A number of new Hong Kong databases are planned, including those of decisions by Tribunals not currently included in HKLII (including such areas of law as administrative decisions, revenue and intellectual property). The Intellectual Property Department of the Hong Kong government has agreed to assist in building a number of primary and secondary materials databases on HK intellectual property. A subject-specific database on HK WTO compliance will be created as part of a broader WTO project.

[40] It is also intended that HKLII will include selected databases from other parts of China, and the technical structure of HKLII is designed to accommodate that. Depending on the opportunities available, these databases might be from particular regions of China (discussions are starting in one other region), or they might be subject-specific (funding has been obtained for databases relating to WTO compliance and banking and finance law).

[41] Databases concerning other Asian countries will also be developed by staff at HKLII, but will have their home on WorldLII (see discussion following), including databases on WTO compliance from at least seven Asian countries[35]. HKLII will therefore contribute more to WorldLII than just the HKLII databases.

WorldLII Catalog content on HKLII

[42] HKLII also includes a catalog and search engine for other legal resources on the web from Hong Kong and elsewhere in China. These HKLII resources are the part of the WorldLII Catalog[36] which is being developed by contributing editors at the University of Hong Kong Faculty of Law, using the catalog software and indexing framework developed by AustLII[37]. HKLII's role as a contributor to a collaborative law catalog is another facet of its involvement in the WorldLII project.

[43] Other World Law pages associated with HKLII are the pages for the jurisdictions China, Macau SAR, and Taiwan, and the subjects WTO, Arbitration/ADR, Banking and Finance and Human Rights. Other subjects are being added. The China pages include an index of regional legal information.

HKLII search options

[44] HKLII uses the SINO search engine developed by AustLII and used by AustLII, BAILII, CanLII, PacLII and WorldLII. SINO (which stands for 'Size Is No Object') is a fast search engine which provides a full range of boolean and proximity operators.

[45] All HKLII databases may be searched simultaneously, and may also be searched in groupings ('All caselaw', 'All legislation' etc) or by each individual database. Customised selections of individual databases may also be made. The example below shows a selection of three collections of caselaw, plus practice directions.

[46] In default, searches are over the whole of HKLII, and the results are ranked in order of likely relevance to the search query. The example search results below (a search for 'arbitration near (appeal or review)') show in the first six items retrieved a section of an Ordinance, a Practice Direction, and decisions from three different Courts. The effectiveness of the relevance ranking is indicated by the titles of the first two items retrieved.

Differences between HKLII and existing facilities

[47] Many of the resources on HKLII, including Ordinances and much of the caselaw, are already available for free access via the Internet, due to the policies of the Hong Kong SAR government and Judiciary in favour of free access and the very good official web sites already available for Hong Kong law (as discussed earlier).

[48] HKLII nevertheless adds value to this information by providing different ways of accessing it. Some examples of the additional functionality of HKLII are as follows:

Different types of legal materials (caselaw, legislation, law reform reports etc) can be searched simultaneously.

Individual court databases can be searched, or selections of only some courts.

The SINO search engine has a full range of Boolean and proximity operators.

Tables of contents of Ordinances are available, and can be accessed from any section of an Ordinance, more easily than on BLIS.

Relevance ranking of search results, which is not provided by the Judiciary's system.

Automated hypertext linking within legislation, between legislation, between caselaw and legislation. HKLII already has some millions of automatically inserted hypertext links.

Each section of legislation on HKLII contains at its head a '[Noteup]' button which causes an automated search for all cases, other Ordinances or other documents that refer specifically to that section. An example is given below of a 'Noteup' of s11 Immigration Ordinance producing 55 cases ranked in likely order of relevance.

A similar 'Noteup' facility is being progressively provided for all cases on the system, commencing with the Court of Final Appeal. The comprehensive development of this facility will be based on a table of comparative citations being developed by the University of Hong Kong Law Library.

These legislation and case 'Noteup' facilities are being developed into 'global noteups', through WorldLII, as discussed below.

[49] One the other hand, the 'official' sites have some features and forms of value-adding that HKLII does not have as yet. In particular, Ordinances and some caselaw are available in Chinese as well as English. BLIS provides historical versions of Ordinances, but HKLII does not as yet. The Judiciary's Legal Reference System provides some additional fields for searching cases.

[50] The relationship between HKLII and the 'official' sites of legal information in Hong Kong is as it should be: each provides forms of value-adding to the underlying legal information that the technology chosen to implement each makes possible, and they each stimulate the other to improve the quality of the services they provide.

[51] The relationship between HKLII and the commercial publishers of Hong Kong legal information is twofold. HKLII does not attempt to provide the forms of value-adding that can only be provided by extensive editorial input, such as headnotes on cases, legislative annotations, and expert commentary. However, by providing such value-adding as can be achieved by automated means, HKLII may stimulate commercial publishers to re-examine both the facilities provided on their own services, and the extent to which those facilities sufficiently differentiate them from a free-access facility.

Chinese language data and interface on HKLII

[52] Much of the Hong Kong legal data on HKLII is available in Chinese as well as in English, including all of the legislation, and a significant amount of caselaw. At the time of writing, HKLII only provides access to the English language versions as our development of the best method of presenting the Chinese language data is not yet complete. If and when HKLII expands to include data from other regions of China, this will of course be essential.

Issues in Chinese language presentation

[53] Difficulties arise from the fact that there are two major encoding schemes to handle Chinese characters, Big5 and GB. They are inherently incompatible, and they address the needs for two different ideographic writing systems. In mainland China, the government has promoted the use of more modern, simplified forms of the ideographs over the older, more traditional forms used in Taiwan, Hong Kong and overseas Chinese communities.

[54] GB (Guo Biao or national standard) is an encoding scheme proposed by the PRC government in 1981[38]. GB caters for simplified Chinese characters only and consists of over 7000 ideographic characters and symbols.

[55] Big5 was an encoding scheme for Chinese characters developed by five Taiwan software developers in 1984 and revised in 1995[39]. Big5 covers over 13,000 traditional Chinese characters and is widely adopted in Hong Kong and overseas. However, the original set of Big5 characters is not capable of dealing with all Chinese characters used in Hong Kong mainly because thousands characters used only in particular regions of China are missing from the standard. These characters are used in the names of local people and places, and also in the Cantonese dialect and colloquial speech. These texts are especially important in the case of courts when recording testimonies authentically.

[56] In 1995, the Hong Kong government published a set of supplementary characters named GCCS, Government Common Character Set, to extend the Big5 scheme. As Unicode became more widely adopted, the government published a revised version called HKSCS-2001, Hong Kong Supplementary Character Set, to supplement ISO/IEC 10646-2:2001. The character set was submitted to the Ideographs Research Group of ISO. Among the 4818 submitted characters, 4783 of them have been included officially in the standard and the rest 35 are placed in the "Private Use Area" of the encoding space[40].

Unicode and Chinese characters

[57] The Unicode Standard, proposed by the Unicode Consortium, is the universal character encoding scheme which defines the Universal Character Set (UCS) and facilitates the encoding and exchange of multilingual text, thereby creating the foundation for global data exchange. The Unicode Standard 3.0 is code-for-code identical with another standardisation effort, ISO/IEC 10646, proposed by the International Organization for Standardization (ISO)[41]. The latest version of the standard (November 2001)[42] covers over 42000 Chinese characters as well as other

ideographs from Japan, Korea, etc. Software developed to handle Unicode will be able to process both traditional (Big5) and simplified (GB) Chinese characters.

Approach being taken by HKLII

[58] The Chinese language data representation and interface for HKLII is to be based on Unicode. Text will be converted into the UTF-8 encoding format, a Unicode transmission format for backward compatibility with existing byte-oriented systems such as the Internet. The UTF-8 encoding format is a variable-width format that supports Unicode and allows text containing ASCII data to be stored more efficiently.

[59] HKLII inherits the same set of indexing and searching software developed for AustLII. Some of the core programs were originally designed to support the ISO-Latin character sets. These were developed using the C programming language which at the time, did not have good Unicode support. Several major efforts have been made elsewhere which have brought full capability of handling UTF-8 characters to C programs.[43] The existing C programs used for HKLII are being examined and rewritten using new versions of library functions to enable better support for Unicode.

[60] AustLII makes use of Mason, a website templating, development and management tool. Since Mason is based on Perl, a scripting language which has included UTF-8 support in the more recent versions, HKLII can directly reuse all of the existing Mason code without modifications.

HKLII's role in global free access to law

The World Legal Information Institute (WorldLII)

[61] The World Legal Information Institute (WorldLII) - http://www.worldlii.org - is a free, independent and non-profit global legal research facility developed collaboratively by a number of Legal Information Institutes and Law Faculties around the world. HKLII is one of the collaborating parties in WorldLII, the only one in Asia at present.

[62] The name 'WorldLII' was used to describe the challenge of developing a global free access legal research facility at a meeting of parties interested in free legal information at the *LII Workshop on Emerging Global Public Legal Information Standards*[44] held at Cornell in July 2000. Various possible models were discussed at the Cornell workshop, the most detailed of which was a distributed search system described by Tom Bruce[45]. This implementation of WorldLII does not rely as much on distributed searches as Bruce's model.

Collaborating parties

[63] WorldLII is principally a collaboration between existing LIIs, as indicated on its front page, with AustLII taking the leading technical and organisational role in the initial implementation. However, WorldLII is also developing to include databases that come from organisations other than LIIs, and are hosted only on WorldLII and not on another LII.

[64] Databases accessible through WorldLII are located on the following LIIs:

> Australasian Legal Information Institute (AustLII) - http://www.austlii.org/
>
> British and Irish Legal Information Institute (BAILII) -

http://www.bailii.org/

Canadian Legal Information Institute (CanLII) - http://www.canlii.org/

Hong Kong Legal Information Institute (HKLII) - http://www.hklii.org/

Pacific Islands Legal Information Institute (PacLII) - http://www.paclii.org/

[65] In addition, databases hosted only on WorldLII include those from South Africa (provided via Wits Law School), Cambodia, East Timor and Vietnam. Databases of decisions of international courts and tribunals are also being added.

Technical development and hosting

[66] WorldLII's user interface, the WorldLII Catalog discussed above (previously called World Law), and those databases hosted on WorldLII (discussed above), are all located on WorldLII's server located at AustLII in Sydney, and the initial WorldLII implementation is by AustLII. CanLII and HKLII are involved in technical enhancements to WorldLII.

[67] At the time of writing, the first version of WorldLII has existed for only as long as HKLII and has not been launched officially, so this description of its features is relatively brief. It was first demonstrated at the *Third Law via Internet Conference*, held at AustLII in Sydney on 28-30 November 2001, and has been available for public access since then.

[68] WorldLII has been designed with an appearance and functionality similar to the other LIIs collaborating in its operation, to assist user recognition and ease of use. What does the logo mean? Well, it is vaguely world-shape ...

Content of WorldLII

[69] WorldLII commences with databases from most continents, particularly those with jurisdictions with a common law tradition. As the front page indicates, there are databases from jurisdictions in Africa, Asia, Australasia, Europe, North America and the South Pacific. WorldLII has a global rather than regional approach, and starts life with a more extensive range of databases than any other free access facility, even though it is still only a fraction of what it may be possible to achieve. Almost all of WorldLII's initial databases come from its collaborating LIIs, as follows: AustLII (120); BAILII (19); PacLII (25); CanLII (41) and HKLII (13). At its inception there were searchable on WorldLII 218 databases from 43 jurisdictions in 20 countries. About 20 have been added since then.

[70] At this stage, the only databases on WorldLII that are not included on one of the other collaborating LIIs are the two databases provided by Wits Law School (Supreme Court of Appeal of South Africa, and Constitutional Court of South Africa), and one legislation database from each of Cambodia, Vietnam and East Timor. We intend that, subject to limitations of resources, we will host on WorldLII significant databases made available to us by Legislatures, Courts, Law Reform Commissions, and the like from jurisdictions where there is currently no national or regional LII that can act as a host, particularly from Asian countries. Decisions of international courts and tribunals will also be included.

[71] WorldLII also includes the WorldLII Catalog (formerly World Law) and a web-spider search facility for sites listed in the catalog, covering law sites not on WorldLII. It is

probably the largest law catalog on the Internet[46].

Search options

[72] The most obvious strength of WorldLII is that it already allows over 200 databases from 20 countries to be searched simultaneously, and this is in fact the default scope of searches. However, the most valuable search feature of WorldLII will often be that it allows narrower searches over particular types of materials, but across a wide range of jurisdictions. This is illustrated by the range of selections already provided.

[73] The following search options have been implemented:

WordLII: All Databases [Default] - All caselaw, legislation and secondary materials from all available jurisdictions.

WorldLII: All Legislation Databases- Legislation from all Australian jurisdictions (10), six Paciific Island jurisdictions, Ireland, Northern Ireland, UK, Hong Kong, Cambodia, East Timor and Vietnam (including historical collections from Northern Ireland and Hong Kong). Legislation from the following Canadian jurisdictions is also being made searchable from CanLII: Federal, British Columbia, Ontario and Québec[47].

WorldLII: All Case Law Databases - All courts and tribunals available.

WorldLII: All National Highest Courts - including High Court of Australia; NZ Court of Appeal; Privy Council; House of Lords; Supreme Court of Ireland; the Hong Kong Court of Final Appeal; the highest Court of each of ten Pacific Island countries, the Supreme Court of Appeal of South Africa, the Constitutional Court of South Africa, Court of Appeal of England and Wales; Scottish Court of Session; Northern Ireland Court of Appeal. The Supreme Court of Canada is being added.

WorldLII: All Superior Courts - This collection is essentially the highest court of any jurisdiction, particularly of the states, provinces and territories of any federations, plus of course all of the National Highest Courts listed above.

WordLII: All Treaties - Australian, Hong Kong and Pacific treaties databases.

WorldLII: All Law Reform - Law reform databases from Australia, Ireland and Hong Kong.

WorldLII: All Law Journals - Ten Australian law journals.

WorldLII: All Secondary Materials Databases - This includes all Law Reform databases (Australia , Ireland and Hong Kong), all Treaties databases (Australia, Pacific Islands and Hong Kong), all Law Journals (10) , and all other secondary materials (including Australian indigenous law databases, Hong Kong Practice Directions, human rights databases, plain English guides to law, and much more).

[74] These options are important as they will provide WorldLII with a logical structure within which to place databases which become available from jurisdictions which do not have a separate LII providing a 'home' for databases. We hope that by providing these options they will encourage leading Courts, Law Reform Commissions, Law Journals and the like to discuss with us the possible inclusion of their databases in WorldLII. We expect that some databases will be included in WorldLII's own databases only temporarily, and that WorldLII will act as an 'incubator' for the development of separately operating LIIs.

[75] Geographically-based search options will become particularly interesting when WorldLII expands to include databases from more than one LII or other source in a region. The geographical options provided at present include (with current content listed):

Africa: All databases - South Africa and Privy Council

Asia: All databases - Hong Kong, Cambodia, Vietnam, East Timor

Australasia: All databases - Australia, New Zealand and Privy Council

Europe: All databases - UK and Ireland

North America: All databases - Canada

South Pacific: All databases - Pacific Island countries and Privy Council

[76] An interesting inclusion is that the Privy Council's decisions in WorldLII include appeals from so many geographically disparate regions. Those listed above are only from regions where we already have other databases, but when appropriate they can also be added to regional collections from the Caribbean and from the Indian subcontinent.

[77] Finally, users may choose their own combinations of the over 200 databases accessible from WorldLII: 'customised' searches. It may also be valuable to provide for users a selection of the most obviously valuable subject- specific customisations, such as 'All administrative review Tribunals' or 'All unfair competition tribunals' or 'All anti-discrimination tribunals'.

Cross-LII hypertext links

[78] The development plans for WorldLII include the creation of mark-up software which automates the creation of hypertext links where cases (or other documents) from one national jurisdiction cite case or legislation from another national system.

[79] In WorldLII and its collaborating LIIs, cross-national hypertext links are only implemented to a limited extent as yet. For example, on WorldLII and BAILII in the database 'England and Wales Court of Appeal (Civil Division) Decisions', the decision *Yasin Sepet And Erdem Bulbul V. Secretary Of State For Home Department (UNHCR Intervening)* [2001] EWCA Civ 681 http://www.bailii.org/ew/cases/EWCA/Civ/2001/681.html contains two automated hypertext links to Australian High Court decisions on WorldLII (and AustLII), as shown in the following extract (at para 88).

[80] This example also shows a UK court citing an Australian decision by its Court-designated 'HCA' citation, rather than a publisher-designated citation. Because AustLII and BAILII identify all cases by their Court-designated citations, these links can be created automatically between and within national collections on WorldLII.

[81] For examples of such cross-LII hypertext links on HKLII, the decision in *Sin Hoi Chu & others v. The Director of Immigration* [2002] HKCFA 3[48] (10 January 2002) provides good examples, as it includes hypertext links to cases on BAILII (eg, at [90], *R v. Secretary of State for the Home Department, Ex parte Bajram Zeqiri* [2001] EWCA Civ 607)), to legislation on BAILII (eg at [131], UK *Education (Schools) Act 1997*) and to cases on AustLII (eg at [323], to *University of Wollongong v. Metwally* (1984) 158 CLR 447).

[82] Where Courts cite cases by use of publisher-designated citation, the task of recognising the location of cases on WorldLII from the citation is much more difficult and is a major research and development task for the future development of WorldLII and for national LIIs. HKLII is developing, with the assistance of the Law Library of the University of Hong Kong, a comparative case citation table for all Hong Kong courts, to enable comprehensive hypertext links to be created.

Future development of WorldLII

[83] It is not easy to predict how WorldLII will develop, or what tools will be needed to best assist that development. Systems like this tend to develop something of a momentum of their own, depending on the wishes of data providers, users and funding organisations. Some of the further developments which would assist WorldLII's growth and quality include:

> methods for faster inclusion of search results from fully distributed databases;

> development of case citation tables for all cases on all LIIs (underway for AustLII and HKLII), and tools to utilise those citation tables;

> automation of cross-LII hypertext linking irrespective of the jurisdiction the case comes from and the citation used to identify the case;

> utilising the above development to enable 'global noteups' of cases (underway on HKLII);

> legislation citation standards which would assist automated linking to point-in time legislation;

> 'global noteups' of legislation so that cases in any LII database are found whenever a noteup of a section of legislation is done (development has commenced).

> most important, a search engine which has the same functionality as SINO, but can handle non-European languages as well (development has commenced).

> further refinement of the methods of integrating the different types of searches available over WorldLII and specific LII databases, World Law web sites and catalog, and general search engines such as Google, as discussed below.

HKLII and WorldLII: A model for systematic global legal research

[84] The relationship between HKLII and WorldLII gives for the first time a working model for systematic global legal research over free Internet law resources. Such research involves the following five separate steps, each of which is now possible using WorldLII and its collaborating LIIs:

1. Start search on the most relevant law site (eg HKLII)

2. Expand search to cooperating standardised law sites (mainly LIIs) (eg WorldLII)

3. Expand search to non-standardised law sites   by a law-specific web spider (eg WorldLII Catalog's search facility)

4. Expand search over general (non-law) search engine (eg Google)

5. Browse and search a global catalog of legal web sites to find sites the content of which cannot be searched from a central facility (eg sites listed in the WorldLII Catalog)

[85] The research task is made more complex by the fact that we often need to make our research specific to particular types of legal materials (eg legislation, caselaw or law reform reports). As illustrated earlier, such type-specific research can be done using WorldLII or its collaborating LIIs.

[86] This systematic approach to legal research is implemented in two different ways in WorldLII and its collaborating LIIs: (i) invitations in search results to repeat searches over different collections; and (ii) the WorldLII Catalog interface which provides search options of different scope over different collections. They are outlined below (some still use the old terminology 'World Law' rather than 'WorldLII Catalog'). Other implementations of a systematic approach will no doubt be implemented as WorldLII develops.

Repeating searches for comprehensive research

[87] In order for WorldLII to be part of as comprehensive a legal research system as possible, the presentation of search results for searches over the WorldLII Databases, WorldLII Catalog and in the collaborating LIIs all invite users to broaden their research by automatically repeating it over the other relevant systems. In addition, users are invited to repeat their search over Google, and their SINO search (from any of the systems) is translated into the most suitable search over Google[49].

[88] Where a user starts research from a single LII (eg HKLII), search results appear headed by a message such as the following:

> World LII Catalog - Categories found: 2 Repeat search
> over WorldLII Databases ; WorldLII Websites

[89] The user is therefore invited to broaden their research by repeating the search automatically over WorldLII Databases (represented by the bold lines in the diagram below). When the search is repeated over WorldLII Databases, the search results invite the user to repeat the search over the World Catalog. When the user repeats the search over World Catalog, the search results then invite them to repeat the search over Google (and translate the search into Google syntax).

[90] Similarly, anyone who commences research on the WorldLII Catalog is invited to

repeat their search over WorldLII Databases (represented by the lighter lines in the diagram below). Both the WorldLII Databases and WorldLII Catalog searches invite a further search over Google.

[91] Our aim is therefore to assist (and encourage) users to do comprehensive searches over WorldLII Databases, WorldLII Catalog and Google without having to re-key searches or learn different search commands for each system.

An interface for comprehensive research

[92] The limitations of the above approach of inviting users to repeat searches are that it is not as intuitive as a interface which provides search alternatives, and that it does not so easily allow for searches of limited scope.

[93] How can this be achieved through one reasonably transparent interface? We propose to implement it through the World Law interface, as shown below for the 'Legislation' page of the WorldLII Catalog. The fourth option 'Only WorldLII Legislation' is additional to the options available now.

[94] When this is implemented fully in the WorldLII Catalog, the user's context in browsing the catalog (eg 'Legislation') will determine the scope of the second and fourth options offered. So, for example, if the user is at the World Law page for all 'Law Reform' then the available options will include 'Only WorldLII Catalog - Law Reform' and 'Only WorldLII Databases Law Reform'.

Conclusions

[95] This paper has reported on HKLII's first year (July 2001 - July 2002), from the first discussions on its possible creation to the installation of its own server in Hong Kong and the commencement of 'repatriation' of its data from AustLII. It will be an independently operating Legal Information Institute within another couple of months. We hope it can become a model for the development of similar LIIs in other parts of Asia, and that it will encourage free access to law in other parts of China through the quality of its example. We hope it will also demonstrate how legal resources from one jurisdiction can be incorporated into a global and comprehensive approach to free access legal research.

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[1]   Another answer to providing comprehensive access is to have all significant legal websites in a jurisdiction adopt a standard format for their materials, and to return results of distributed searches to a centralised search facility. There are no successful examples of this approach yet known.

[2]   LawNet in the Australian State of New South Wales is one example, but even it lacks the capacity for users to search all of its databases in one search.

[3]   We are not suggesting that LIIs should only provide essential legal information. They are likely to be involved in the provision of other types of secondary materials such as law journals, in the provision of 'plain English' guides to the law and in other approaches to improving public access to the law. These sources require different considerations from 'essential' legal information, particularly because their publication is less likely to be pursuant to a duty to publish, or public subsidies to do so.

[4]   See http://www.juridicas.unam.mx/infjur/leg/ - It is maintained by the Instituto de Investigaciones Jurídicas (Legal Research Institute) de la UNAM (Universidad Nacional Autónoma de México).

[5]   The Zambian Legal Information Institute (ZamLII) http://zamlii.zamnet.zm/ (1996) no longer seems to be updated; There is a list of LIIs at http://www.worldlii.org/catalog/52806.html .

[6]   Links to these key government sites, and to LIIs, can be found at http://www.worldlii.org/catalog/52806.html .

[7]   See http://www.austlii.edu.au/links/2172.html for a global list.

[8]   See http://www.austlii.edu.au/links/2027.html for a global list.

[9]   HKLII is pronounced 'H K Lee'.

[10]   *See* Jill Cottrell "The State of Hong Kong's Legal Literature: Law Reports, Legislation and Current Awareness' (1998) HKLJ Vol 28 Part 1, 5-15.

[11]   The investigators included Sarah Nield, Rick Glofcheski , Gary Heilbronn and Andrew Byrnes of the Law Faculty.

[12]   Committee on Research and Conference Grants at the University of Hong Kong.

[13]   *See* Cottrell (note 10 above) for details of these services.

[14]   For details see *Law-On-Line Review Special 1995*, published by the Faculty of Law to commemorate the opening of the service, particularly the acknowledgments of support by Prof. Peter Wesley-Smith.

[15]   The project was supervised by the initial Director of CCPL, Andrew Byrnes, and the Manager of Law-On-Line was Jo Jo Tam Yee Wa.

[16]   See home page at http://lawhk.hku.hk/ and databases page at http://lawhk.hku.hk/Database.shtml .

[17]   See the home page at < http://www.justice.gov.hk/index.htm > and 'What is BLIS? at http://www.justice.gov.hk/what.htm .

[18]   See 'What is BLIS? at http://www.justice.gov.hk/what.htm and Advanced Searches

at < http://www.justice.gov.hk/how.htm > .

[19]   See http://legalref.judiciary.gov.hk/cgi-bin/lrs/menu.pl .

[20] Court of Final Appeal (since its establishment in 1997); Court of Appeal of the High Court ; Court of First Instance of the High Court; District Court; Family Court; Lands Tribunal .

[21]   See G Greenleaf, A Mowbray G King 'New directions in law via the internet - The AustLII Papers' *Journal of Information, Law and Technology* (JILT), Issue 2, 1997, University of Warwick Faculty of Law, at http://elj.warwick.ac.uk/jilt/issue/1997_2 , and G Greenleaf 'Free the Law: How the Australasian Legal Information Institute (AustLII) Achieved the Free Availability of Legal Information on the Internet' 2000 (1). *The Journal of Information, Law and Technology* (JILT) at http://www.law.warwick.ac.uk/jilt/00-1/transcript.html.

[22]   See http://www.justice.gov.hk/index.htm .

[23]   See Greenleaf, Mowbray and King (n19 above), and Greenleaf (n19 above).

[24]   D Austin, D, A Mowbray and P Chung 'Scalability of Web Resources for Law: AustLII's Technical Roadmap: Past, Present and Future', 2000 (1) *The Journal of Information, Law and Technology* (JILT) http://www.law.warwick.ac.uk/jilt/00-1/austin.html.

[25]   P Chung, A Mowbray and D Austin 'A Defence of Plain HTML for Law: AustLII's Approach to Standards', 2000 (1)*The Journal of Information, Law and Technology* (JILT) http://www.law.warwick.ac.uk/jilt/00-1/chung.html .

[26]   Daniel Poulin 'CanLII 2000-2004 - a Canadian Model for a LII ' *Proc. AustLII Law via Internet 2001 Conferenc*e, AustLII, Sydney, 2001; Ernst Perpignand and Daniel Poulin 'CanLII 2000-2004 - Technical Strategy' Proc. AustLII Law via Internet 2001 Conference, AustLII, Sydney, 2001 .

[27]   Graham Greenleaf was appointed under HKU's Distinguished Visiting Professor scheme from July 2001 to December 2002.

[28]   It was built principally by AustLII Executive Director Philip Chung, with assistance from AustLII staff and Co-Director Graham Greenleaf.

[29]   Ka Po is the initial technical officer, with support and direction provided by Kevin Pun.

[30]   http://www2.hklii.org/.

[31]   Benny Yiu-ting Tai and Robyn Emerton from the Law Faculty and Dr K P Chow and Dr Kevin Pun from CSIS are members of the management committee, as well as Graham Greenleaf and Philip Chung.

[32]   See Greenleaf n21 above for a discussion of AustLII's cost structure and funding, and http://www.austlii.org/austlii/sponsors/ for a list of funding sources.

[33]   See Poulin n26 ahove

[34]   See http://www2.bailii.org/bailii/support/sponsors.html for a full list

[35]   This is under a project for which Dr Matt Bushehri has obtained funding.

[36]   The WorldLII Catalog was previously known as 'World Law'.

[37]   See for background G Greenleaf, D Austin, P Chung, A Mowbray, J Matthews and M Davis 'Solving the Problems of Finding Law on the Web: World Law and DIAL', 2000 (1) *The Journal of Information, Law and Technology* (JILT) http://www.law.warwick.ac.uk/jilt/00-1/greenleaf.html .

[38]   The   official   standard   is called GB2312-80, see http://www.haiyan.com/steelk/navigator/ref/b5index1.htm .

[39]   A revised version was released by the Taiwan government in 1995 as the standard CNS11643, at http://www.cns11643.gov.tw/web/index.jsp .

[40]   http://www.info.gov.hk/digital21/chi/structure/cli_main.html .

[41]   Since January 1992, close cooperation and formal liaison between the two committees have been established. All additions to either standard will be coordinated and kept synchronised: see http://www.unicode.org/unicode/standard/standard.html .

[42]   ISO/IEC 10646-2:2001.

[43] For example, see http://www-124.ibm.com/icu/ and http://sources.redhat.com/glibc/ for C libraries that can handle Unicode.

[44] See http://barratry.law.cornell.edu/Summit/index.htm .

[45]   Tom Bruce 'WORLDLII: A sketch for a distributed search system' at http://barratry.law.cornell.edu/Summit/worldlii.htm .

[46]   See, for a detailed description, Graham Greenleaf, Philip Chung and Russell Allen 'World Law: Finding law after Google' *Proc. AustLII Law via Internet 2001 Conferenc*e, AustLII, Sydney, 2001.

[47]   Canadian data is available when all WorldLII databases are searched, but becaue it is received by a different method than other data, we are still developing the best way to incoroporate it into searches with more limited scope.

[48]   At http://www.hklii.org/hk/cases/HKCFA/2002/3.html .

[49] See n 43 above.