Legal Deposit Development in Singapore: Future Challenges and Issues


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Abstract

Singapore’s National Library Board (NLB) Act 1995 established a legal deposit mechanism to secure two copies of all published materials in Singapore for preservation for posterity. The proliferation of online electronic publications and the advent of the World Wide Web in the last decade have changed the landscape and scope of legal deposit publications and given rise to new challenges.

In July 2004, NLB formed a Legal Deposit Task Force to review this changing landscape with reference to the recent international legal deposit developments. This paper discusses some ideas to tackle a number of challenges and issues that surfaced during the task force deliberations. These include the following: proposed adoption of a hybrid and decentralized strategy to develop a comprehensive legal deposit collection framework and a national documented heritage collection through collaboration with relevant national agencies, institutions and organizations; exploration and development of Web archiving for the collection and management of online publication; and introduction of new legislation for online materials and provision of enhanced access and use of legal deposit materials.

Background

The National Library Board of Singapore (NLB) is empowered by its Act of 1995 to collect two copies of all materials published in Singapore under legal deposit for preservation for posterity. To date the Act allows NLB to collect print and handheld electronic publications only. The proliferation of online electronic publications and the advent of the World Wide Web have changed the landscape and scope of legal deposit publications in libraries the world over, and given rise to new challenges.

In July 2004 a Task Force on the Legal Deposit of Materials was set-up following from a request made by Chairman, National Library Board (NLB), Singapore, to form a team to
review NLB’s legal deposit function, to address issues arising from the increase in online electronic publications and explore collaboration possibilities with Singapore institutions and agencies towards developing a more comprehensive national heritage collection.

The Task Force was chaired by Professor Schubert Foo, Vice Dean, School of Communication & Information, Nanyang Technological University who is also a NLB Board Member. Members comprised representatives from the Nanyang Technological University, National Archives of Singapore, National University of Singapore, Library Association of Singapore and National Library Board. They included Dr Paul Wu (Nanyang Technological University), Mr Lim Guan Hock (National Archives of Singapore), Mr Tim Yap Fuan (National University of Singapore), Mr Idris Khan Surattee (Library Association of Singapore), Mrs Lim Siew Kim (Library and Professional Services, NLB), Mdm Noryati Abd Samad (Lee Kong Chian Reference Library, NLB), Mr Mohamed Salim (Library and Professional Services (Legal Deposit), NLB), Ms Haliza Jailani (Digital Library Services, NLB) and Ms Kong Leng Foong (Library and Professional Services, NLB).

The primary roles of the task force were to review the current legal deposit policy and function of the NLB with a view to acquiring online electronic materials published in Singapore; to identify gaps in the current legal deposit framework and strengthen the collection; to advise on strategies to develop a more comprehensive legal deposit collection noting its importance in relation to Singapore’s literary heritage; and to promote an interest and awareness of these collections. Along with these, legal deposits policies of key national libraries of the world were also explored to identify best practices that can be adopted to suit the needs of Singapore. The work of the task force spanned through 6 meetings over a 8-month period from July 2004.

The remainder of the paper highlights key findings of the task force, followed by the treatment of the various issues and challenges pertaining to the development and management of legal deposits from the Singapore perspective, and finally a set of strategies to create a more comprehensive Singapore legal deposit and documented heritage collections, and awareness of legal deposit.

**Key Findings of Study**

A study of legal deposit practices of the National Libraries of the world that included Australia, Canada, China, Denmark, Japan (National Diet Library), Netherlands, New Zealand, Singapore, United Kingdom and United States (Library of Congress) revealed a number of characteristics and observations. For deposit of online electronic resources, these national libraries face a number of common challenges that include the definition of what constitutes “publications”, the development of a technical infrastructure for managing dynamic online resources, protecting the copyright owner, providing for preservation, obsolescence and loss of access, and web-archiving.

The number of physical copies deposited in most of the national libraries is two. Most libraries do not use legal deposit as a mechanism to develop the library’s collection, rather it is to secure a copy for preservation for posterity. Some libraries do not have legislation for legal deposit, but use the Copyright Act, such as NL of Australia and Library of Congress. Deposit of materials is, in many instances, on a voluntary basis based on
agreement with the publishers, such as NL of Netherlands. Legislation that is in force in most of the libraries currently does not cover online electronic publications, such as NL of Australia and the British Library. NL of Canada and the NL of the Netherlands both have voluntary deposit arrangements with publishers for networked electronic publications while NL of Australia has acquired online publications through projects, such as the PANDORA project.

In Singapore, under the National Library Board Act (Chap 197, No. 5 of 1995, Part II Section 10), every publisher in Singapore is required to deposit 2 copies of every publication published in Singapore with the NLB within 4 weeks of publication. The purpose of legal deposit is to preserve the national literary heritage and make them accessible to present and future generations. This existing two copies deposit guideline could be maintained to achieve this purpose. If more copies were required for collection development in public library branches, or for exchange purposes with overseas libraries, particularly those in ASEAN countries, these are best purchased outside the scope of legal deposit.

One challenge that surfaced in Singapore’s legal deposit collection arose from the non-deposit and/or irregular deposit of annual reports of Singapore companies and the non-deposit of materials published by small publishers in the country. Small publishers, who through ignorance or lack of motivation, sometimes do not approach NLB for the ISBN (book) or ISSN (serial) numbers, thereby making it more difficult for NLB to track such publications. This situation may have arisen because it is not mandatory for publications to carry an ISBN or ISSN number.

Collecting heritage materials that are not under the legal requirements of the existing NLB’s legal deposit framework is also another challenge as these resources are equally significant as such materials represent a unique representation of the culture and history of the country for future generations to appreciate and discover.

However, the biggest current challenge faced by NLB and the rest of the national libraries is that pertaining to the glut of online materials that are constantly being created by the many “publishers” on the Web. The concern of web-archiving of these materials is the current area of focus of study and research.

**Challenges of Web Archiving**

Web-archiving of Singapore-related materials was discussed and learning points from a web-archiving congress held in the National Library of Australia (NLA) in late 2004 were shared and discussed by the Task Force. The four key decisions which institutions performing web archiving have to be concerned with include (1) which websites to archive, and to which level of depth, (2) how to archive them, (3) how frequently to archive, and (4) how to present the archived sites to users. From current practices from the viewpoint of legal deposit, the quality of the website largely determines whether one is selected or not. In this respect, the following factors are considered important considerations in gauging the quality of websites: reference, authoritativeness and accuracy, accessibility, being a primary source, and whether it is of national significance.

Generally, the content of a website will be considered rather than its presentation, with the exception of websites deemed innovative and unique (eg. award winning sites), for which
snapshots only should be taken. In terms of exclusion, the following types of contents found in websites are generally omitted from the archives: blogs; CAMS (websites employing a web camera that uploads digital images for broadcast); discussion lists, chat rooms, bulletin boards, news groups; works in progress, websites under construction; advertising and promotional websites; affiliate Marketing websites; product listings; illegal and inappropriate websites; and sites which are compilations of information from other sources.

Archived websites can be arranged using different criteria according to the needs or preference of the archival institutions. Among the criteria commonly used are by theme (e.g. Library of Congress), by format such as maps (e.g. Geosciences Australia), or full domain of government activities and functions (e.g. National Archives of UK). However, in general, no one criterion could be considered ideal as it all depended on the needs of the institutions.

Likewise, many different types of approaches have been adopted for archiving. These include the use of legislation (e.g. British Library, with trial projects), collaboration with publishers (e.g. NL of Netherlands), collecting all but archiving selectively (e.g. Royal Library of Sweden), or the use of a selective approach based on selection policies (e.g. NLA which has blanket approval to collect websites of government departments). As for frequency of archiving, there was no fixed frequency since website updates vary greatly. As for access, some restrict public access for two years. All the institutions involved in web-archiving generally form part of consortiums or national initiatives.

It was also learnt, from a session by a representative from International Internet Preservation Consortium, that Internet Archives (IA), a non-profit organization based in US, archives all websites. Rights and permissions were handled by removing websites from the archive only upon protest. Internet Archives holds the most number of Singapore websites dating back six to eight years. Budget and resources for the web-archiving model of two libraries, NLA and Bibliothèque National de France (BNF), were studied. NLA started early with a selective model, but is presently moving towards a comprehensive model. With an annual budget of $360,000, it has 12 staff members, inclusive of full-timers and part-timers. Its archive size is 353 gigabytes and is developed with domestic partners. BNF has a comprehensive archiving model with every website produced in the country collected. It has 5 full-time staff member and 1 part-timer, and outsources its work to Internet Archives. Snapshots are used in the archiving process. BNF’s archive is about 1 terabyte and its annual budget is more than £1m. These data would serve as a reference when estimating for resources for web archiving.

In Singapore, the School of Communication & Information, Nanyang Technological University (NTU), has been conducting web archives research and in March 2005, completed a web archive on the Asian Tsunami Disaster (URL: http://tsunami.archive.org) in collaboration with Internet Archives and WebArchivist.org. The Tsunami collection adopts the thematic/selective approach to web archives with the aim of studying the impact of Web on communication, as well as the ramification of it on the community and the ways people respond to natural disasters. The research findings of this project will be reported in the annual meeting of Association of Internet Researchers in Chicago in October 2005.
This work will prove useful with the recent funding approval for NLB and NTU to develop a web archive prototype to gain experience in web archiving for legal deposit purposes. Although the project would run for one year, the Task Force suggested that the project go hand-in-hand with other recommendations from the Task Force for trial, before NLB proceeds with full implementation of a web-archiving solution for Singapore related materials. Areas to be explored in the trial included the process of co-ordination among libraries/agencies and implementing a suitable architecture and infrastructure including defining metadata or attributes of the archived collection. In terms of architecture, the project has established that Open Archives Information System (OAIS) will be the reference model for the Web Archives pilot system to be developed. As for tools for developing the system, two candidates are being studied: one is the Heritrix suite of tools from the Internet Archives and the other is the PANDAS platform from National Library of Australia. Issues such as storage media, web harvesting (crawling), computer security and metadata management will be considered for the final choice of the tool.

From the above, it is evident that deposit of online electronic publications is still new and evolving in most countries and the issues to be dealt with are mainly technical and are dependent on the infrastructure to host the dynamic nature of the online materials.

**Strategies for More Comprehensive Legal Deposit and Singapore Documented Heritage Collections**

In terms of legal deposit materials, the Task Force suggested that the responsibility for the deposit, archiving and preservation of the legal deposit and the national heritage collections need not rest entirely with NLB due to the variety and complexity of the materials. This could instead be collectively shared with other agencies and institutions, such as the Registry of Companies and Businesses (RCB), Registry of Societies, Stock Exchange of Singapore (SGX), Media Development Authority (MDA), National University of Singapore, Institute of Southeast Asian Studies, Singapore Tourism Board, etc. as each of these institutions and agencies has been the authoritative focal point of collection for certain types of materials. For example, RCB would have a complete set of companies’ annual reports as a result of legislation that requires all registered companies to submit such reports when they are published annually.

In this respect, two main approaches, namely, the hybrid approach and one-to-one collaboration, could be adopted to engage these agencies and institutions to work with NLB to develop a more complete legal deposit collection.

The hybrid approach, for reasons of efficacy, would enable NLB to be the main repository for the bulk of legal deposit materials while other agencies or libraries could be appointed as collecting points of published materials under their special domain. For example, RCB could be assigned a statutory role and be designated as a repository of annual reports of publicly listed and private companies since all companies are already depositing their annual reports with it.

In the one-to-one collaboration approach, NLB could request agencies to submit copies for deposit. For example, RCB and SGX could submit additional copies of company reports to NLB. Similarly, annual reports of societies could be submitted by the Registry of Societies, which deals with the registration and regulation of societies and has a collection of reports relating to societies in Singapore. Other forms of collaboration could include
help in keeping track of what is published. One example is working with MDA, which issues permits to print serials. This would enable NLB to track journals and magazines being published. Incentives schemes via statutory requirements could be proposed so as to achieve a win-win outcome.

Apart from the published materials deposited under legal deposit, there are also national heritage materials that would be valuable to NLB, but which do not fall under the ambit of “published material”. These include ephemeral materials such as dissertations, occasional papers, conference proceedings, literary manuscripts, brochures, programme leaflets, etc. As sourcing and organizing these materials are very labour intensive, the Task Force recommended that resources for these should be provided to ensure comprehensiveness of Singapore documented heritage.

MDA is responsible for licensing arts entertainment, and has synopses and scripts of Singapore plays and drama submitted with applications for licenses to perform in public. Although not covered under legal deposit, such materials would provide a rich resource of the documented heritage of Singapore. NLB could work with MDA to collect these as national documented heritage materials.

Research documented in doctoral theses/dissertations related to Singapore forms a valuable contribution to scholarship and national heritage. They are comparable to the quality of an article in a learned journal. The Task Force felt that these should be made publicly available to the research community. However, as there are issues related to access and copyrights, NLB would need to explore collaboration with the higher learning institutions. As an interim measure, NLB could offer to house such collection, if these institutions do not have the resources or space to accommodate the back runs of such materials.

For materials such as international conference proceedings, the contents of which have an impact on Singapore, NLB could work with the Singapore Tourism Board to source for them. Private sector organizations could also be included, where relevant. With regard to donated Singapore documented heritage materials, it was noted that there might be substantial duplications in the collections of NLB and National Heritage Board of Singapore. The Task Force suggested that appropriate agencies should keep donated items according to their functions.

**Strategies to Create Greater Awareness of Legal Deposit**

Public education programmes are important means to create greater awareness of legal deposit. Most publishers are only aware of legal deposit when they need to apply for ISBN/ISSN. This awareness is especially necessary for the smaller publishers who may not even know of the need to apply for ISBN/ISSN. Regular sharing sessions with publishers, printers (although the responsibility to deposit falls under the publishers) and producers of non-print materials can be held by NLB to create awareness. Through such sessions, more publishers may come forward to deposit their publications.

NLB had previously published a compilation entitled “Memoranda of books registered in the Catalogue of books printed at Singapore’ under the provisions of the Printer's and Publisher's Ordinance for the quarter ending 31st March”, for the period 1977 to 1994. To create awareness of its legal deposit function, and to keep Singaporeans updated of
ongoing publications in Singapore, NLB can compile publications from 1995 to 2004 in a similar work. The titles of works deposited and registered at the National Library Board should subsequently be made available on the web to the general public. This would be of particular interest to librarians in other libraries, researchers and anyone interested in the Singapore publishing industry.

Conclusions

With the rapid growth of online electronic information, national libraries around the world are facing increased challenges in selecting and preserving the significant cultural and literary heritage of a nation. In view of these challenges, National Library Board of Singapore commissioned a Legal Deposit Task Force July 2004 to study the issues and recommend strategies for legal deposit development. As a result, gaps have been identified, specifically in the areas of legislature and infrastructure requirements for legal deposit. After reviewing the strategies in other national libraries that address similar gaps, the Task Force recommended a series of steps, some concurrently, to be taken to close the gaps.

These steps include starting the process to amend the legal deposit legislation in the National Library Board Act and piloting a Singapore Web Archives project to identify an appropriate Web Archives business model and technology platform to manage online materials published on the Web. Last but not the least important, the Task Force acknowledges the vast amount of digital information generated daily has rendered the traditional centralized approach to manage legal deposit insufficient. Instead, a collaborative approach led and coordinated by NLB with partner institutions and agencies will be more feasible. By promoting the importance and awareness of legal deposit collections, it is hoped that organizations in Singapore will join forces with NLB to preserve the national documented heritage for the future generations.
References


Appendix:

References of Web Archiving Organizations and Congresses


References On Singapore Agencies


NUS Research Centres. Retrieved November 23, 2004 from:
- Asia Research Institute (http://www.ari.nus.edu.sg/)
- East Asian Institute (http://www.nus.edu.sg/NUSinfo/EAI/)
- Institute of South Asian Studies (http://www.isas.nus.edu.sg/)

References used for Comparative Study of Legal Deposit Practices of National Libraries around the World

National Library of Australia (NLA)

The British Library (United Kingdom)
- http://www.bl.uk/about/policies/legaldeposit.html
- http://www.bl.uk/about/policies/codeprac.html

National Library of Canada
- http://www.collectionscanada.ca/window/s24-1010-e.html

Library of Congress (United States)
- http://www.copyright.gov/circs/circ07d.html#brief

National Library of the Netherlands

Denmark (Royal Library of Copenhagen)
- http://www.kb.dk/kb/dept/nbo/da/pligtafl/explanation.htm#general

National Diet Library (Japan)

National Library of New Zealand
• http://www.natlib.govt.nz/files/bim/1.htm

National Library of China (NLC)
• http://www.anu.edu.au/caul/preservation/DigHeritageBackgroundPapers.doc
• http://www.library.hn.cn/difangwx/lunwen/luwen2000/038.htm,

National Library Board, Singapore
• http://statutes.agc.gov.sg/non_version/html/homepage.html
• http://www.nlb.gov.sg/fr_abtUs_legalDep.html

Other General References
• http://www.unesco.org/webworld/memory/legaldep.html
• http://www.collectionscanada.ca/8/7/r7-100-e.html
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