

The World Digital Library

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1. Introduction

It is now more than seven years since Librarian of Congress James H. Billington first proposed the establishment, in a June 2005 speech at Georgetown University to the U.S. National Commission for UNESCO, of a World Digital Library. At the time, the United States was in the process of rejoining UNESCO after a nearly twenty-year absence. The U.S. national commission was soliciting projects that the United States might bring to the organization. Billington called for a cooperative project, to be undertaken by the Library of Congress and partner libraries from around the world in cooperation with UNESCO, to digitize and make freely available over the Internet primary source documents that tell the stories and highlight the achievements of all countries. Such a project, he argued, “would hold out the promise of bringing people closer together precisely by celebrating the depth and uniqueness of different cultures in a single global undertaking.”²

In December 2005, the Library of Congress announced that it had received initial financial support from Google, Inc. to begin planning the WDL. The announcement of funding led to a flurry of interest in the WDL. UNESCO welcomed the initiative, but understandably had questions about how it fit with the organization’s program and priorities. The Governing Board of the International Federation of Library Associations and Organizations (IFLA) was briefed on the initiative and expressed interest. A number of heads of national libraries offered to participate. But there was also skepticism. European libraries were embarking on their project to create a European digital library, and some wondered how a WDL would mesh with this effort. In developing countries – and not just developing countries – there were the usual suspicions about American cultural imperialism. Many librarians and academics in the United States and Europe saw the WDL’s initial association with Google, even if limited to a no-strings-attached financial contribution, as problematic. At the very least, some in the library community saw in the declared intention to create a *world* digital library a certain over-ambitiousness, a grandiosity that they found off putting.

Within the Library of Congress, a team was established to begin the internal deliberations and external consultations aimed at translating Billington’s vision into reality. Exactly what that reality would be was as yet wide open. General objectives had been set, but decisions needed to be made about technical architecture, content selection, target audience, modes of participation, and much else.

¹ The opinions expressed in this paper are personal and do not express the views of the Library of Congress or the United States government.

² James H. Billington, The Librarian of Congress, Remarks to the Plenary Session, The U.S. National Commission for UNESCO, Georgetown University, June 6, 2005. Text at: <http://www.loc.gov/about/librarianoffice/speeches/060605.html>

This paper will review the main decisions that the Library of Congress team and its leading external collaborators made in planning the WDL and the implications those decisions had for the subsequent development of the project. Its purpose is not to recount history for its own sake, but to draw lessons with the goal of applying these lessons to the overall session topic: “Beyond Access: Digitization to Preserve Culture.”

2. Decisions and Choices

The WDL planning team was aware of the skepticism in some quarters about the idea of a world digital library. Indeed, some at the Library of Congress who had participated in various national and international digital library projects had reasons of their own to wonder whether such an ambitious undertaking could succeed. So they proceeded cautiously and incrementally. They decided that the first question to be answered was not, “how do we create a world digital library?” but rather “What should a world digital library look like in order to be worthy of the name?” What capabilities, features, and content should be offered to create a digital library that people will actually find useful? What added value must it offer to attract users who already have access to Google? And how should it differ from or complement the array of national and international digital library projects to which people already have access?

It was also important to plan the WDL with reference to evolving user expectations and emerging technologies. By 2006, when work on the project got underway, the World Wide Web was thirteen years old. At the Library of Congress, projects such as *American Memory* had been underway for a decade. A series of bilateral international digital library collaborations, beginning with the *Meeting of Frontiers* project with Russia, went back to 1999.³ A growing body of evidence, both anecdotal and statistical, existed about what Internet users liked about the digital library projects that cultural institutions such as the Library of Congress were undertaking – but also about what they disliked and found frustrating.

The applications and devices by which people accessed online content also were changing. The introduction of smart phones and the explosion in use of eReaders were just over the horizon (Steve Jobs introduced the iPhone in January 2007, Amazon the Kindle in November of that year), but Google had already revolutionized the world of search. *American Memory* had been designed to enable a student looking, for example, for photographs of the American Civil War to go to the Library of Congress website, to proceed from there to *American Memory*, to look within *American Memory* for the photograph collections, to choose from among the photograph collections that of Mathew Brady, and then to search or scroll through a browse list to find the desired picture. This hierarchical approach, which had grown out of the early attempt to mirror in cyberspace the internal structures of the Library and its custodial units and collections, was now obsolete. Users wanted to type “Civil War soldier pictures” into a search box and be taken directly to the photos they were seeking. This and other changes in user behaviour needed to be factored into the planning.

And, as if Google had not already caused enough havoc in the library world, what was at the time called “Google Print” was announced in November 2004 at the Frankfurt Book Fair. A month later, the first set of agreements between Google and leading research libraries -- Harvard, the University of Michigan, the New York Public Library, Oxford, and Stanford -- for what would become Google Books was announced. This soon led to talk about “every book in the world” being digitized, which at least for some observers created further confusion with a projected “world digital library.”

³ This project remains online, and can be seen at <http://frontiers.loc.gov>.

Against this background, the planners came to focus on three main sets of requirements for the proposed WDL: (1) multilingualism; (2) universality; and (3) a high level of functionality and added value aimed at actual users.

Multilingualism. A true WDL had to be multilingual, with regard both to content and to access. The Library of Congress alone collects in more than 400 languages, and there was no reason why each of these 400 languages (and possibly many others), including endangered languages of particular interest to UNESCO, should not be represented on the WDL.

Access also had to be multilingual. This was a much greater challenge, but one that would be impossible to avoid. The question was how multilingual access would be provided and in what languages. It was decided to offer the WDL interface in the six official languages of the United Nations: Arabic, Chinese, English, French, Russian, and Spanish. A seventh language, Portuguese, was added, as the National Library of Brazil became a co-founder of the project and a major early contributor of content. For each of these languages, the goal was to provide a uniform user experience, with all navigational information and metadata in all seven of these languages.

It was further decided to offer translation by professional translators and subject matter experts. Machine-assisted translation tools would be used to boost productivity and lower costs, but qualified humans would remain in the loop. Notwithstanding the incredible progress made in recent years in machine translation, the assumption was that only translation by qualified professionals would do justice to the type of content being presented: rare and historic documents, which by their very nature are deeply embedded in national cultural and linguistic contexts. Various other choices in theory might have been made (e.g., use of volunteers on the “wiki” model or resort to “on the fly” machine translation) that might have allowed for a larger number of languages (or freed up resources spent on translation for other tasks, e.g., faster growth in adding content to the WDL), but these approaches were rejected, at least for the moment, as inappropriate for what the WDL was attempting to achieve.

Universality. By definition, the WDL had to be universal, both with regard to participation and content. The WDL had to be open to libraries, archives, and museums from every country in the world: to any institution that held and was ready to provide important content with bearing on the collective history of humanity. It also had to include material from and *about* all countries and cultures, on the assumption that all had contributed to the heritage of humanity and all had material worthy of inclusion – over a range of time periods and in different formats.

The requirement for universal participation immediately raised the question of capacity. It was obvious that cultural institutions in many countries, particularly but by no means exclusively in the developing world, had little or no capacity to digitize their collections for inclusion in the WDL or in any other project. To aspire to the goal of universal participation, the WDL thus had to include from the beginning a commitment to capacity building and technical assistance -- to working with libraries and other partner institutions on acquiring the equipment and skills that would enable these institutions to participate.

The Library of Congress already had experience in the early 2000s in providing equipment, software, and training to libraries in Russia (Moscow, St. Petersburg, and Novosibirsk) and Brazil (Rio de Janeiro) in support of bilateral cooperative digital projects with these countries. Creation of a world digital library with universal or near-universal participation would require replication of these efforts on a vastly wider scale. The Library of Congress lacked the mandate and the resources (financial and human) to take on such a task, but it was hoped that assistance would be provided by the wider international community.

Functionality and user added value. This third set of projected requirements encompassed numerous dimensions and involved a great deal of discussion in the planning, prototyping, and development stages of the project, both within the Library and with prospective WDL partners. Content selection was arguably the first and most important area in which the WDL needed to add value. Selection in turn was linked to preferences and assumptions about the desired end-state size of the WDL. At one extreme, a WDL could be designed as very small and selective: for example, a “top ten treasure” list of items from each of the 193 UN member countries, or fewer than 2,000 items in all. At the other extreme were examples of vast projects such as Europeana and Google BookSearch, which aimed to gather on a single portal tens of millions of metadata records and/or digitized works.

In the end, it was decided to adopt a middle course: to build a representative body of content relating to the history and culture of all countries, with culture defined in the broad anthropological sense, with a heavy focus on special collections and rare and unique documents. Selection criteria were elaborated by a content selection working group (subsequently transformed into the Standing Committee on Content Selection), which met in Paris in October 2007 and again in Cairo in January 2009, and which endorsed the idea of showing content important “for the history of humanity.”⁴ Particular emphasis was placed on including collections already listed on the UNESCO Memory of the World registry, a pre-existing list drawn up by an established nomination and vetting process, and which the WDL had no need to reinvent.

The second area in which the WDL needed to add value was in the discovery and display of content. This related fundamentally to metadata and, by extension, to the search and browse capabilities that particular sets of metadata would enable. The WDL’s declared emphasis on promoting intercultural understanding implied that it should enable users to access sets of content by which they could, for example, compare the achievements of different civilizations in the same historical time period (e.g., 16th century maps or printing in China, Europe, and the Islamic world), track developments over time in the same country (e.g., Egypt in the Pharaonic, Hellenistic, and Islamic periods), and search and browse objects or topics relevant at different times in different periods (e.g., pyramidal structures built in ancient Egypt, ancient Mesopotamia, and pre-Columbian America).

This requirement implied a heavy reliance on traditional metadata, much of which would need to be enhanced by adding new fields and values to the bibliographic records provided by contributing libraries. To the extent possible, metadata had to be provided at the item level, with the item defined, as often as feasible, as a single photograph within an album or a single map within an atlas. Only in this way could the individual photograph or print in one album be located and paired with an analogous photograph or print from a different album (or with a book, manuscript, map, and so forth). This approach was certain to be expensive and time-consuming, and it to some extent cut against the broader trend in the library community, in which users and providers of content alike were looking either to open-ended search or to user tagging to replace (or at least supplement) traditional metadata.

Going beyond improved discovery and display of content, it was also decided that the WDL would *explain* and *interpret* content. This was to be done primarily through descriptions, which were made an integral part of the WDL metadata scheme and provided for all items, as well as through curator videos for selected items. Users of many first generation digital library projects had been complaining about what they perceived as libraries’ practice of throwing vast amounts of content up on the Internet and leaving it to the users to figure out what it was. So the decision was made to enhance every item-level

⁴ <http://project.wdl.org/content/contentguidelines.html>.

display record with a paragraph-length description. Detailed instructions on how to write and edit descriptions have since been developed, but in essence the descriptions were and are intended to answer a simple, two-part question: “what is this thing and why does it matter?” The answer to this question was to be given in straightforward, non-technical, jargon-free language, accessible to the interested general public and readily translatable into the seven WDL languages. Many bibliographic records already contained note fields with detailed information about particular rare books, manuscripts, maps and so forth, or such information could be gathered from exhibit catalogues and labels, scholarly journals, and finding aids. However, in many cases this information did not exist and would need to be researched and written from scratch.

These early choices regarding how content would be catalogued and displayed, along with the requirements of multilingualism, largely determined the choice of technical architecture. A distributed system that simply aggregated metadata or provided a federated search was rejected in favour of centrally gathering the content, which then would be distributed worldwide through a content delivery system to maximize speed and performance. All metadata and images would be ingested from partners, and the WDL would use a standard metadata scheme for all items, with values provided for all essential fields and translated into the seven interface languages. This approach was intended to ensure a uniform user experience for all content, regardless of the institution providing the content and the manner in which that content was displayed on the institution’s own website (which the WDL always linked back to at the item level in any case). This choice of architecture in turn made possible certain other features, for example text-to-speech conversion for metadata and descriptions and standardized content download options.

In setting these requirements, the planning team did not completely disregard questions of cost, but it treated these questions as something to be considered in a second stage of the analysis. As indicated, the first set of questions revolved around what a WDL should look like and what would make the project really “worth doing.” They did not focus on what it might cost to build and sustain the WDL and on what combination of government, private, and foundation sources might be prepared to meet this cost. But considerations of cost were not entirely overlooked. Some rough initial estimates regarding costs were put forward. In the discussion paper prepared for the December 2006 UNESCO Experts Meeting, for example, the figure of \$27,000,000 over a five-year period was floated as a credible estimate.

3. Implementation and Results

Having settled on and defined these three main sets of requirements, the Library of Congress and its international collaborators began to implement the project. There is no need to recount in detail this process, but a few milestones are worth mentioning.

In December 2006, the Library and UNESCO jointly convened an experts meeting at UNESCO headquarters in Paris to solicit input about the proposed project from librarians and technology experts from around the world. The results of the Paris meeting included the establishment of working groups for technical architecture and content selection and a decision that the Library of Congress would develop the prototype of a future world digital library for presentation at the October 2007 UNESCO General Conference. The prototype was presented as planned, with content provided by six partner institutions: the National Library of Brazil, the Bibliotheca Alexandrina of Alexandria, Egypt, the National Library and Archives of Egypt, the National Library of Russia, the Russian State Library, and the Library of Congress.

There were also breakthroughs in technical assistance and capacity building. As a pilot project to gain experience and help in better understanding the challenges and costs of providing such assistance, in 2006 the Library of Congress concluded an agreement with the National Library and Archives of Egypt to provide high-end equipment to NLAE for the purpose of digitizing Arabic scientific manuscripts for inclusion in the WDL. Similar agreements were concluded with and similar sets of equipment provided to the Iraqi National Library and Archives and to the National Library of Uganda (the latter with funding from Carnegie Corporation of New York).

Following eighteen months of intensive planning and development, www.wdl.org was officially launched at UNESCO headquarters in Paris on April 21, 2009. Developed at the Library on the basis of the 2007 prototype, the site featured content contributed by institutions from eighteen countries, including the national libraries of China, France, Israel, Japan, Russia, Serbia, and Sweden as well as major university libraries from several nations.⁵ The national libraries of Egypt, Iraq, and Uganda were all “founding partners,” and some content scanned at their newly established WDL digitization centres was included in the launch version of the site.

Following the launch, developing a governance structure for the WDL became a priority. To get the project off the ground, in 2006-2009 the Library of Congress concluded a large number of agreements with WDL partner institutions regarding the use of their digital images and metadata on www.wdl.org. These agreements differed with respect to the wording of key provisions, duration, the rights and responsibilities of the parties, the language of the agreement, and so forth, with variations being the product of the different legal offices involved in the drafting of such agreements. In 2010 the WDL was restructured to become a loose multilateral institution with a uniform set of rules, a permanent governance structure, and a simple statement of rights and responsibilities, including intellectual property rights. These provisions were codified in a charter that all partners were to sign and that was made equally authoritative in the seven interface languages. Adopted in March 2010, the charter provides for an annual partner meeting, an Executive Council elected by the partners, and permanent committees for Technical Architecture, Content Selection, and Translation and Language. The charter also provides for an institutional project manager, responsible for maintaining and building the WDL website, and designates the Library of Congress as the institutional Project Manager for the period 2010-2015.⁶ Partners join the WDL by acceding to the charter, in effect concluding an agreement not just with the Library of Congress, but also with all of the WDL partners.

Since the early startup phase, the WDL has continued to grow, operating under the terms of the charter. For the most part it has continued along the lines set in the initial planning stage, with some inevitable adjustments in response to changes in technology, user feedback, and partner preferences. Progress has been made on all fronts, and the basic decisions made in the planning stage appear to have been validated, in the main if not in all particulars.

The commitment to multilingualism has paid off. Content on the WDL is in 86 languages, with the most heavily represented languages being Spanish, English, Arabic, German, Russian, French, Chinese, Latin, Japanese, and Portuguese (ranked by number of items; the number of pages/images would yield a

⁵ “Build It, and They Will Come,” *Library of Congress Information Bulletin*, May 2009, <http://www.loc.gov/loc/lcib/0905/wdltech.html>

⁶ Information about organization and governance – including the charter in the seven WDL languages -- can be found on the WDL project website at <http://project.wdl.org>.

different result). More can and will be done in this area, and the WDL especially welcomes content contributions in lesser known and endangered languages.

Providing multilingual access also has been a success. Each of the seven interfaces is extensively used, with the Spanish-language site by far the highest. In 2009, the Spanish-language interface accounted for 33.1% of all pages viewed, followed closely by English (30.6%), French (11.3%), Russian (8.8%), Portuguese (7.7%), Chinese (6.5%), and Arabic (2.0%). By 2011, Spanish had surged even further into the lead, with the Spanish interface accounting for 58.4% of pages viewed, followed by English (17.1%), Portuguese (14.4%), Russian (4.0%), Chinese (2.9%), French (2.5%), and Arabic (1.4%). A key task for the future will be to sustain and continue building on the high levels of usage in Latin America and the Iberian Peninsula, in both Spanish and Portuguese, while increasing usage of the other languages, Chinese and Arabic in particular.

The commitment to universality remains valid. As of this writing (mid-September 2012), the WDL has 159 partners from 75 countries, in all continents and UNESCO regional groups, in both the developed and developing world. This is still a long way from universal participation, but it clearly represents progress in that direction.

Universal content coverage remains a value and is reflected in content selection priorities and the setting of production schedules. The WDL website contains 6,330 library items comprising a total of nearly 300,000 images, contributed by 84 institutions in 42 countries. Some content about each UN member country is included and has been since the 2009 launch. Significant amounts of content from numerous partners are at various stages of the production pipeline, and new partners from additional countries are in the process of joining the project. Comprehensive coverage of all countries is still a long way off, but the project has set a goal of having a minimum of 100,000 rare and unique items on the WDL to provide such coverage.

High levels of usage and user satisfaction suggest that the decisions regarding functionality and user value-added have paid off. On its first day, the WDL received over 600,000 visitors from every country in the world. Since then, more than 21 million people have visited the site, accounting for some 135 million page views. Various web awards have been won, and thousands of user comments have been received, in each of the seven WDL languages, for the most part overwhelmingly positive. Nearly 5 million other sites link to the WDL, testifying to the enthusiasm with which the project has been embraced and ensuring high rankings on Google and other search engines. Total users averaged about 420,000 per month in 2011, with the highest numbers by country from Spain, Mexico, Brazil, the United States, Argentina, Chile, Colombia, Portugal, the United Kingdom, Russia, and France.

The decisions to standardize metadata and provide item-level descriptions have contributed to the appeal of the project with users, and the choice of technical architecture, originally quite controversial, seems to have been vindicated. Even at its current, still relatively modest size, a search of the WDL for the term “Islam” yields 365 books, manuscripts, prints, newspapers and maps, provided by 21 institutions in 16 countries.⁷ The architecture and metadata enable the user to quickly browse through all 365 items, narrow the search by place of origin, date, language of the document, format, other or additional subject (beyond Islam), and contributing institution. The user can instantly see the full item, zoom in to high levels of detail, access all of the metadata in six additional languages, listen to the metadata using voice to speech conversion, download the content in PDF form, and learn a lot more about the item from the

⁷ Bosnia, Brazil, Egypt, Germany, India, Iraq, Kazakhstan, Lebanon, Mali, Morocco, the Netherlands, Pakistan, Qatar, Saudi Arabia, Slovakia, and the United States.

description, written by a qualified expert. These features would be impossible to provide in a distributed system, particularly one involving links to partner institutions in parts of the world still struggling with poor connectivity and low bandwidth.

Sustaining high levels of quality and added value for users will be an ongoing challenge for the WDL. So far, however, there has been no deterioration – indeed the trend has been in the other direction, as quality and standards have consistently risen as the project gains experience and benefits from new contributions from new partners. The launch version of the WDL was developed with a tiny staff and against enormous time pressure. Since that time, the quality of translations has been upgraded by the recruitment of dedicated staff, deployment of new translation management tools, and the putting into place of mechanisms to respond to comments and feedback from users, who are often quick to detect errors and omissions. The quality of the metadata also has been improved, through the recruitment of a full-time professional staff, the development of a new metadata application, continued refinement of standards, and integration of the Virtual International Authority File and other tools into the cataloguing process.

The quality of the descriptions has been steadily upgraded. Partners providing content to the WDL have been given better guidance and now have more time to work with their curators to explain their content in appropriate depth and detail, with time and procedures available for back-and-forth between the WDL production team and the content providers to check facts and clarify ambiguities. In the startup phase of the process, many descriptions were written quickly or cobbled together from pre-existing sources. Now, the annotation of certain collections at the item level has become a much larger and better organized operation, encompassing within it several major subprojects that are producing high quality primary research by recognized experts.⁸

Most importantly, the overall quality level of the content, in terms of rarity and cultural and historical importance, continues to rise, as new partners join and contribute marvellous items from their collections. The launch version of the WDL contained a fair share of top treasure content – *Miroslav's Gospel* from the National Library of Serbia, the famous “Devil’s Bible” from the National Library of Sweden, anthologies of very old and rare Asian materials from the National Library of China and the National Diet Library of Japan, and similarly distinguished content from other partners. But many of the approximately 1,200 items initially in the WDL were included to provide minimal coverage of each of the 193 UN member countries. The latter items were carefully chosen and of generally high quality – mostly maps, photographs, or 18th and 19th century books – but they were not in most cases “top treasures.” This material is now being supplemented by a steady wave of rare treasures from such great institutions as the Bavarian State Library, the national libraries of France and Spain, the Laurentian Library in Florence, the Estense Library in Modena, and many others. It will take some time before all countries, particularly those in the developing world, are represented by the rarest and most important documents from and about those countries, but the trend is in this direction.

The level of quality of the content in the site also has benefited from the designation, endorsed in the 2011 WDL business plan and discussed at the 2011 partner meeting in Munich, of several areas in

⁸ Examples include the item-level descriptions for the photographs in two major collections held by the Library of Congress that are on or being added to the WDL: the 1871-72 *Turkestan Album* survey of Central Asia and the *Prokudin-Gorskii* collection of early photographs of the Russian Empire, by Professor William Brumfield of Tulane; annotations of Arabic and Persian scientific manuscripts by academics from Columbia and Cambridge universities; and the annotation of rare Chinese books and manuscripts by retired Chinese-language experts from the Library of Congress.

which the WDL will develop concentrations of important content, working proactively with partners and prospective partners. These areas include Mesoamerican codices, Chinese rare books and manuscripts, Arabic scientific manuscripts, early photographic surveys of empires, and treasures from medieval and Renaissance Europe. The WDL has made great progress in all of these areas, and the long-term potential of this approach can be seen most clearly in the case of the codices, where documents from the 11th to the 16th centuries relating to the history of the Aztec and Mayan peoples have been contributed, so far, by libraries, archives, and museums in Mexico, Spain, Italy, Germany, Sweden, and the United States.⁹

4. Lessons and Implications

So what have been the lessons learned? What about the WDL has worked, and what has fallen short of expectations? And what implications might the WDL experience have for other digital library projects and for the overall theme, “Beyond Access: Digitization to Preserve Culture”? A few conclusions can be drawn.

Multilingualism has been a big success for the WDL, with users if not necessarily with international funding sources. Heavy usage of the Spanish, Portuguese, and other interfaces suggests that, while the volume of content on the Internet in languages other than English has grown astronomically in recent years, there remains a demand for sites that provide high-quality cultural and historical content in a range of languages. International library projects can draw from the WDL the lesson that investment in providing multiple-language interfaces pays off in increased access. But multilingualism is an expensive proposition, and human and financial resources will be needed to encourage and sustain the development of multilingual digital library projects.

The capacity building mission of the WDL has been at best a very mixed success. Staff at the Library of Congress and at partner institutions in Cairo, Baghdad, and Kampala made heroic efforts in 2006-2009 to install equipment and train staff and to scan initial batches of content for inclusion in the launch version of the WDL. Production has continued at these three centres, and various other capacity building activities – training workshops, visits, and the provision of software tools – have taken place. But generally speaking there has not been much interest in or many resources available for expanding digitization capacity in developing countries in connection with this project.

The WDL has called for interested institutions and organizations – WDL, IFLA, UNESCO, and perhaps others – to work together on a comprehensive needs assessment of digitization in developing country institutions and on the development of low-cost solutions and sources of support for implementation. But so far little has happened in this regard, even as documents continue to be destroyed by war and natural disaster in many parts of the world. Capacity building remains, like multilingualism, part of the WDL’s core mission and efforts along these lines will continue, but the volume of resources committed by the international community devoted to work in this area has been disappointingly limited.

Judged by user responses and the enthusiastic participation of so many great libraries, the WDL’s effort to provide a high level of intellectual and functional added value – metadata, descriptions, translations, and other features – also seems to have been validated and would appear to be worthy of emulation by other projects. Already in 2006 it was becoming clear, and it is even more apparent in 2012, that non-profit cultural institutions cannot compete on quantity with large commercial firms, and

⁹ For documentation regarding this focal area, see Mesoamerican Codices Meeting, May 19-21, 2010, Mexico City, Mexico, http://project.wdl.org/content/mexican_codices/index.html.

especially not with commercial firms able to access vast amounts of free, user-generated content which these firms can then monetize in one way or another. They can compete qualitatively, by presenting and interpreting the treasures in their vast holdings and drawing upon the intellectual capital embodied in their metadata, finding aids, exhibit catalogues, collection guides, and the minds of their current body of curators.

This is the path that the WDL and some other projects have chosen, and one that would seem worthy of emulation. At the very least, it is to be hoped that cooperative international projects such as the WDL will continue to remind people that cultural heritage -- what the organizers of this conference have chosen to call the “memory of the world” – must be primarily about content, about the cultural artefacts and information that carry the collective memories of countries and peoples. Whether this will happen remains to be seen. Cultural institutions are under financial strain and trying to focus their available resources. As they do so, many appear to be downplaying their traditional strengths in curatorial and subject matter expertise in favour of a concentration on information science.

Resources are a serious issue. As noted, the WDL did not start out asking the question: how can we use our available funding to create a World Digital Library. Rather, the question was, what should a WDL be and do? The question then became what will it cost and can the needed resources be found to support the effort. This to a great extent remains a question that members of the international community need to debate and resolve, not just with regard to this one project, but also with regard to the overall issue of “Memory of the World in the Digital Age.”