

Indonesian National Digital Library: A national collaboration for preserving national heritage and information access

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Abstract:

Indonesian National Digital Library is a nation-wide project initiated by the National Library of Indonesia in collaboration with all provincial and regional libraries in the country. The project was officially launched in 2010 for its first five-year term. The Digital Library is aimed at encouraging the availability of information resources that deliver the value of local content in particular. Therefore, the project is expected to develop awareness and understanding about cultural diversity in Indonesia. Furthermore, it is also intended to support various researches and to preserve national heritage ultimately. On top of that, the main purpose of the project is to build a network of libraries that is based on collaboration between the National Library and all provincial and regional libraries and the use of Information Technology (IT) to support those objectives.

This paper will first discuss about the background and the significance of the project. Second, it will describe the progress and the challenges faced during the process. It is expected that this article will provide valuable experiences that will be beneficial for similar projects.

Keywords: digital library, local contents, national heritage, Information Technology.

Introduction

The National Library of Indonesia has set up an initiative to build a national digital library in 2010. This initiative is a realistic response to the implementation of information technology

in libraries for providing access to information for the society. As defined by IFLA/UNESCO, a digital library is a collection of digital materials collected from either born-digital or made-digital objects that are available and accessible online for users to retrieve and use. However, the National Library of Indonesia has taken this definition further. A national digital library in its context is not merely a digital service but also a collaborative effort that involves every public library to preserve national heritage to ensure access to such information for every citizen.

Taking national heritage preservation into the scope of the digital library development is actually based on the National Heritage Preservation Charter of 2003. The Charter entrusts to libraries in particular the primary responsibility for disseminating awareness of preserving national heritage particularly that of cultural dimension. In regard, the National Library of Indonesia has adapted this recommendation into its programs covering research, planning, protection, preservation, usability and supervision of library objects and media as much as what is done in the digital library project.

National heritage consists of tangible and intangible knowledge and information that both represent local customs and wisdom. Some of them may be difficult to find due to the lack of access or moreover, no one knows where they actually are kept. This happens because local authorities are mostly unaware of the importance of preserving such knowledge and information for everlasting access.

Based on this condition, the National Library has come up with an idea to involve provincial and public libraries in a collaborative project to preserve national heritage that is represented within local contents. In line with the implementation of information technology, the National Library has put this initiative into its digital library program scope. Thus, the digital library program has been set up as an extensive project of both preserving national heritage and providing online access to digital information.

However, since Indonesia is an archipelago, a country made up thousands of islands, it has been difficult to create a national network that supports the digital library program. Furthermore, there is a significant gap of digital divide between regions. The dissemination of information technology infrastructures is not evenly spread. Therefore, the National Library of Indonesia has come up with a set of strategies to solve these issues.

There are five strategies in general that are used to develop the national digital library: creating standards, building system and infrastructures, preparing human resources, building digital collection and providing online access. This paper aims to discuss the implementation of these strategies, outcomes and lesson learnt from the project. It is expected that the shared information will provide a new perspective of digital library development from collaborative point of view for future works.

Strategies

As recommended within the Report of the Tunis phase of the World Summit on the Information Society (WSIS 2005, p. 19), national strategies need to be created as a firm basis for making action plans of digital libraries. The National Library of Indonesia has translated the strategies to five development scopes as mentioned above. In fact, the five strategies are aligned with issues underlined by IFLA/UNESCO including trained personnel, adequate infrastructures, integrated planning, funding and target setting (IFLA/UNESCO 2011, p.4).

1. Creating Standards and Guidelines

The grand design of the digital library was created as a reference for action plans, implementation, monitoring and evaluation of the performance and accomplishment. The grand design documents were compiled and disseminated internally and externally to partner libraries. The documents includes:

- Technical Standards and Guidelines for Developing Center of Excellence for Local Content-Based Library Services
- Technical Standards and Guidelines for Digital Object Management
- Technical Standards and Guidelines for Web Archiving
- Technical Standards and Guidelines for Networking Management
- Technical Service and Guidelines for Website Management
- Technical Standards and Guidelines for Information System Management
- Technical Standards and Guidelines for Library Cooperation
- Standards for metadata and subject heading

2. Building Information and Communication Technology Infrastructures

ICT infrastructures are critical requirements in developing digital library. These include networking system, hardware, data management software, peripheral devices, data repository system, access system, and security and inventory system. The development of the infrastructures has been done gradually each year.

3. Preparing Human Resources Capacity

Human resources capacity building is critical to achieve the goals of digital library development. Therefore the National Library of Indonesia has tried to prepare effective training and education for creating skilled staff to support the program. The training covers:

- Indonesian version of MARC cataloguing training
- Library Information System operational training that includes membership modules, acquisition modules, OPAC modules and circulation modules.
- In particular, the Library Information System training for internal purpose has been added with digital object management module, ISBN module, deposit registration module and thematic website application module. The training has also prepared skilled staff for media transformation.

4. Building digital collection

The National Library of Indonesia has been building its digital collection in multiple media be it books, cartography materials, computer files, images and graphics, microfiche, moving images, physical objects, voice recordings, video recordings, films, manuscripts, maps, rare books, music notations, printed materials, photographs, architectural images, metadata records, various thematic web contents that contain local and national cultural information.

There are two approaches used by the National Library in building its digital collection:

- Digitization

Printed and non-printed collection such as rare books, photographs, paintings, newspapers, magazines, sound and video recordings are digitized to build the digital collection. This approach is done as a preservation strategy as well. Digitized collection is that of public domain publications, government publications, internal publication and permitted copyrighted materials.

- Acquisition

The National Library of Indonesia also purchases electronic resources through subscriptions. E-resources are available online in full-text. By 2014, the National Library of Indonesia has subscribed 170,353 titles of e-journals, purchased 20,394 titles of e-books and 6,362 titles of digital videos. All of these collections are available online.

5. Developing Online Services

The National Library of Indonesia has built a web portal that contains links to four web-based database: National Catalogue, National Bibliography, National Web Archives and Heritage of Indonesia.

- National Catalogue

The database contains catalogue information of all materials kept in all libraries in Indonesia. This database is intended to enable users to find whatever the need.

- National Bibliography

This database contains bibliographic information on all kind of publications published in the country. The scope of this database includes the number of publishers, quantity of publication, subject/topic of publication.

Both National Catalogue and Bibliography Databases are called the national metadata database that contains metadata resources.

- Heritage of Indonesia Web Portal

This website contains digital local contents that are created and collected by respective provincial libraries.

- Web Archives

Web archiving has been done as an effort to preserve online information to provide resources for the purpose of future studies and research.

- Building Partner Libraries' Website

As a form of collaboration and to encourage regional public libraries in supporting the project, the National Library of Indonesia has been also giving incentives for the public libraries to build their own websites.

The Road Map

The first phase of the National Library of Indonesia's digital library project is set up as a five-year program that officially started off in 2010. In the first year, the program was focused on the development of IT management, facilities and infrastructures. During this year, the National Library has implemented digital library's facilities and infrastructures through the building of data centers, library application software development, network system development, inventory system development, security system development, repository system development and data access system within the National Library scope. In the external scope, the development of IT management, facilities and infrastructures were conducted through sets of grants that included the installation of data management hardware and library information system software, data communication internet network including human resources trainings in 33 provincial libraries, 2 regional units of the National Library, 120 public libraries through several phases that has been accomplished in 2014.

Second phase was focused on the development and implementation of information system. The National Library has developed an open library application system called INLIS that stands for Integrated National Library Information System). The application is built upon Indonesian MARC-based metadata standard called IndoMARC. It has been used for supporting acquisition, management, services and preservation internally within the National Library. For external scope, the National Library has also developed a program called INLIS-Lite that is merely an extension of INLIS system that has been used by provincial and public libraries for technical processes such as acquisition, circulation, and membership.

The third phase was focused on the development and integration of information system. Since one of the National Library's roles is acting as the center for library network in Indonesia, it is important to ensure that the National Library is able to manage the integration of library information systems used by the libraries. In regard, National Library of Indonesia has set up an information and communication network through Internet connection with the 33 provincial libraries and 120 public libraries in Indonesia. The Internet network has been used as a medium for integration and bibliographic data communication in order to develop the National Catalogue and National Bibliography. Currently, there are 2,252,088 records in the National catalogue and 1,495,892 records in the National Bibliography. Both record databases are tools to ensure that information is available for the society in general and to improve the usability of library materials.

The fourth phase conducted in 2013 was focused on the usability of the digital library services. In regard, the National Library of Indonesia has developed 46 web portals and thematic websites. Digitized objects, subscribed journals, e-books, and digital videos are all available online. The National Library of Indonesia has also supported the regional libraries in developing their own websites to provide the online services for their local users and communities. A number of digital objects that were created by the regional libraries from their local content works has also been collected to be provided online through both the national Library and the regional libraries' websites.

The last phase of the first term in 2014 was focused on the evaluation and the extension of the usability of the digital library.

Lesson Learnt

In general, all goals have been accomplished within the first five-year term of the project. However, there are few points that need to be evaluated for continuing this project into the next phases. First, since the project involves collaboration with other provincial and public libraries in the country, extensive monitoring of the regional libraries management is critically needed. Second, a total attention on the maintenance and management from the partner libraries is an absolute requirement. Third, systems interoperability and security need to be considered since the project involves different libraries particularly when it extends to higher education and special libraries. Lastly, in implementing digital library, the National Library of Indonesia needs to create national policies related to procurement, management, service provision, and preservation of digital objects including policies to revise cataloguing and subject heading standards.

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References

National Library of Indonesia 2014, *Report on Indonesian Digital Library Development 2014*, National Library of Indonesia.

IFLA/UNESCO 2011, *IFLA/UNESCO Manifesto for Digital Libraries*, International Federation of Library Association, viewed 28 April 2015, <<http://www.ifla.org/publications/iflaunescomanifesto-for-digital-libraries>>

WSIS 2006, *Report of the Tunis phase of the World Summit on the Information Society, Tunis, Kram Palexpo, 16-18 November 2005*, World Summit on the Information Society, viewed 28 April 2015, <<http://www.itu.int/wsis/docs2/off>>