DIGITAL LIBRARIES IN INDONESIA WITH SPECIAL EMPHASIS TO ACADEMIC LIBRARIES

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INTRODUCTION

There are many definitions about digital library, however, this paper used the definition taken from Digital Library Federation which stated that digital library as organizations that provide the resources, including the specialized staff, to select, structure, offer intellectual access to interpret, distribute, preserve the integrity of, and ensure the persistence over time of collections of digital works so that they are readily and economically available for use by defined community or set of communities (http://www.clir.org/diglib/about/strategic/htm). The elements that have been identified as common to those definitions are:

1. A digital library is a managed collection of digital objects
2. The digital objects are created or collected according to principles of collection development.
3. The digital objects are made available in a cohesive manner, supported by services necessary to allow users to retrieve and exploit the resources just as they would any other library materials.
4. The digital objects are treated as long-term stable resources and appropriate processes are applied to them to ensure their quality and survivability (Deegan and Tanner 2002).

HISTORICAL BACKGROUND

The establishment of digital library in Indonesia began in 1999 (Fahmi 2001) when the team of Computer Network Research Group (CNRG) of Bandung Institute of Technology (hereafter called ITB), Knowledge Management Research Group (KRMG) ITB and the ITB Library are working together in developing a system called Ganesha (the name of wisdom god in Hindu belief) Digital Library (GDL) which explored the possibility of research document digitalisation. In 1999 the GDL version 1 and 2 was tested at the ITB Library conducted by librarians, students and lecturers attached to the KMRG.

In June 2000 International Development Research Center (IDRC) of Canada provided a grant of US $ 60,000 for the development of the system, ordering software, training, the instalment of the hardware and software, seminar, workshops and the dissemination of the result. As the first step, the KRMG set up an Internet site called *Indonesian Digital Library Network* with its sites http://www.itb.ac.id. The website launching was conducted in August 2000 covering the project's mission, method, framework, development, a mailing list and others. GDL version 3 was launched in October 2002, covering *skripsi*, (undergraduate final works), master's theses, dissertation produced by ITB through its Websites http://digital.lib.ac.id.

In October 2000 in a workshop in Bandung, the participants agreed to change the name from IDLN to IndonesiaDLN which destined to be the first digital library network in Indonesia (http://ideln.itb.ac.id) IndonesiaDLN's mission is to unlock knowledge of Indonesian people, especially the local content, and share it nationally (Fahmi 2002). It means to provide information about Indonesia such as students' final project, theses, dissertations, research reports, heritage, regional potency etc. Aftermath the librarians which participated in the seminar established a form called The Indonesian Cyberlibrary Society (ICS) with its forum i_c_s@yahoogroups.com, making it as the first virtual discussion forum for Indonesian librarians.

Meanwhile Menteri Negara Riset dan Teknologi (State Ministry of Research and Technology, here after called KMNRT) issued a software for digital library called *Docushare*. KMNRT awarded the software to the higher education institutions.This software pushed the development of academic digital library faster because the awardees can utilized the software. By early 2003 there are 3 institutions which got the Docushare and there is a programme to widen its by the year 2003.

Pendit (2002) classified the initiatives toward the development of digital ,libraries in Indonesia into 4 groups. The first group is in the university, pioneered by research group in ITB with its software Ganesha Digital Library and latter on with Indonesia Digital Library network, commonly shortened into IndonesiaDLN. The second group located in the government offices like *Warung Informasi Teknologi* or Warintek which as a goal to reach the greater part of the community. From digital point of view the mission content education and appropriate technology. The third group also located at the government offices however it has bigger mission and wider than the second group. This digitalisation activities conducted as a part of e-government. This group include the department offices in Jakarta as well as at regencies and towns which provide information through Internet. The fourth group focused on arts, more on preservation of national and local heritage such as conducted by Universitas Kristen Petra (Petra Christian

University) in Surabaya with its project called Surabaya heritage and the National Library which digitised Johannes Krachts drawings.

UNIVERSITY-BASED DIGITAL LIBRARY

1. IndonesiaDLN

This is the first digital libraries set up by universities and academic libraries. The first to be set up is Ganesha Digital Library Network which by March 2003 has 87 partners consist of 73 institutions, 11 individuals and 3 *Warnet* or *Warung Internet* (Table 1).

Table 1 University member library at IndoensiaDLN

#	Institution	City
1	Universitas Syah Kuala	Banda Aceh
2	Universitas Cenderawasih	Jayapura
3	IAIN Sunan Gunung Djati	Bandung
4	ITB Central Library	Bandung
5	Pusat Studi Urban Desain ITB	Bandung
6	Departemen Teknik Industri ITB	Bandung
7	LSIK PSTI Universitas Islam Bandung	Bandung
8	Sekolah Tinggi Ilmu Ekonomi Kesatuan	Bandung
9	Lembaga Penelitian Universitas Padjadjaran	West Java
10	Universitas Terbuka	Jakarta
11	IAIN Sunan Ampel	Surabaya
12	STIKOM Surabaya	Surabaya
13	Universitas Pendidikan Indonesia	Bandung
14	Universitas Muhammadiyah Malang	Malang
15	Universitas Airlangga	Surabaya
16	Universitas Bina Nusantara	Jakarta
17	IAIN Syarif Hidayatullah*	Jakarta
18	Sekolah Tinggi Ilmu Ekonomi Perbanas	Jakarta
19	Universitas Indonesia	Jakarta
20	Universitas Katolik Atma Jaya	Jakarta
21	Universitas Al Azhar Indonesia	Jakarta
22	IAIN Wali Songo	Semarang
23	Universitas Tanjungpura	Pontianak
24	IAIN Antasari	Banjarmasin
25	IAIN Raden Intan	Lampung

26	IAIN Sultan Syarif Qasim	Jambi
27	Universitas Sam Ratulangi	Manado
28	IAINAuludin	Makasar
29	IAIN Raden Patah	Palembang
30	IAIN Sumatera Utara	Medan
31	IAIN Sunan Kalijaga	Yogyakarta

*Now Universitas Islam Jakarta

IAIN stands for Institut Agama Islam Negeri or State Islamic Institute

Source :http://digilib.itb.ac.id/statistics-hide (March 2003)

The requirement for membership is that the institution is requested to send two documents or more in digital form to the coordinator in ITB Library.

2.   Docushare Project.

KMNRT awarded docushare, a software for digitalisation, to three universities in early 2002, they are IPB, Institut Teknologi Nasional (hereafter called Itenas in Bandung) and Jaringan Perpustakaan Asosiasi Perguruan Tinggi Katolik di Indonesia commonly shortened to APTIK (Association of Catholic Universities in Indonesia).

2.1.   Institut Pertanian Bogor (Bogor Agricultural University hereafter called IPB).

IPB Library has been digitising the master theses and doctoral dissertation for sometimes. Based on interviews with the university librarians, by May 2003 about 630 doctoral dissertation and 800 master's theses has been digitised.

2.2.   Institut Teknologi Nasional (Bandung)

Institut Teknologi Nasional Library has complete digitised *Jurnal Itenas* covering 18 issues, 24 research reports produced by Itenas lecturers and 9 Itenas products.

2.3.   Jaringan Perpustakaan APTIK

APTIK stands for Asosiasi Perguruan Tinggi Katolik di Indonesia (Association of Catholic Universities in Indonesia) Library Network covers 13 Catholic-denomination-higher institutions. For document digitalisation, APTIK Library Network appointed Universitas Parahyangan as the project leader based on its computer capacity and readily-available manpower. Formerly the digitalisation activities is limited to Universitas Katolik Parahyangan Library, then widened to other member libraries. By April 2003 APTIK Library Network has more than 14,000 digitised documents making JPA as the largest digital library in Indonesia at the present time although most of the

digitised documents is held by Universitas Katolik Parahyangan library. (Table 2)

Tabel 2 Document digitalisation among APTIK Library Network members

#	Institution	Location	Digitised documents	Remarks
1	Universitas Parahyangan	Bandung	13, 912 titles	*Skrispi*, master theses, research reports, in-house journal, all full-text, multimedia
2	Universitas Katolik Widya Mandala	Surabaya	373	Skripsi and research reports
3	Universitas Katolik Widya Mandiri	Kupang	121	*Skripsi* abstract, in-house journal
4	Sekolah Tinggi Keperawatan St. Carolus	Jakarta	31	*Skripsi* abstract
5	Universitas Katolik Widya Karya	Malang	26	*Skripsi* (full text)
6	Universitas Katolik Atma Jaya	Jakarta	16	Journal and *skripsi* (full text)
7	Atma Jaya Catholic University	Makasar	5	*Skripsi* full text
8	Universitas Atma Jaya	Yogya	4	*Skripsi* abstract
9	Universitas Sanata Dharma	Yogya	2	*Skripsi* abstract
10	Universitas Katolik Soegijapranata	Semarang	1	*Skripsi* full text
11	Sekolah Tinggi Musi	Palembang	0	
12	Universitas Katolik St. Thomas	Medan	0	
13	Ujniversitas Katolik Widya Mandala	Madiun	0	

Source: Agus Sukmana (April 2003)
Website: http://library.aptik.or .id
http://library.unpar.ac.id

2.4. Indonesian Christian University Virtual Network

This is a Christian (Protestant) based-university-virtual-network, commonly known as InCU-VL, established in 1999 under Universitas Kristen Petra in Surabaya as its organizer. By the end of 2002, InCU-VL has 17 member libraries (Table 3).

Table 3 Member of inCU-VL

#	Institution	City
1	Sekolah Tinggi Theologia Indonesia Timur	Makasar
2	Sekolah Tinggi Teologia Rantepao	Rantepao (South Sulawesi)
3	Universitas Kristen Artha Wacana	Yogyakarta
4	Universitas Kristen Indonesia	Jakarta
5	Universitas Kristen Toraja	Rantepao
6	Universitas Kristen Krida Wacana	Yogyakarta
7	Universitas Kristen Petra	Surabaya
8	Universitas Metodis Indonesia	Medan
9	Universitas Kristen Pelita Harapan	Jakarta
10	Universitas Kristen Satya Wacana	Salatiga
11	Universitas Kristen Tomohon	Tomohon
12	Sekolah Tinggi Theologia Jaffray	
13	Universitas Cipta Wacana	
14	Sekolah Tinggi Teologi HKBP	Pematang Siantar
15	Universitas Kristen Maranatha	Bandung
16	Universitas Kristen Paulus	
17	Universitas Kristen Palangkaraya	Palangkaraya

Source:http://incuvl.petra.ac.id (May 2003)

No data is available yet albeit it is presumed that the majority of digitised documents is held by Universitas Kristen Petra Library in Surabaya.

2.5 Other universities

By mid 2001 Universitas Syiah Kuala library has master theses in digital form covering the field of engineering, industrial engineering, information communication and technology. Meanwhile Faculty of Computer Science Universitas Indonesia has collection in digital form covering *skripsi*, master's theses and research reports while Faculty of Medicine has been digitising its lecturers' scholarly works for some time. The portal for long distance learning in library science by the time of this writing is still in construction.

3. Constraints.

Academic libraries encountered various constraints when they digitised the documents. Those constraints are as follows:

a. Manpower. Digitising documents need computer-literate-library staff while some of the library staffs belong to techno-phobia category .

b. Policy for publishing point-of-view. The cons originated from those who are afraid of plagiarism owing to the accessibility of the digitised documents .and the heavy burden of digitising activities. The pros argued that by digitising the documents, the result increased the university's prestige as well as has social value for the society.

c. From cultural point of view. Access to Internet is still very low, less than 4% of the population. The users still use the printed matters because it is more convenient than the electronic ones. However, behind this resistance also the technology awkwardness among the users including the university lecturers.

d. Copyright infringement. Many university rectors are still afraid of copyright infringement caused by the easy character of the digital library.

4. Remarks

The development of digital library among academic libraries in Indonesia is relatively new. It was pioneered by Bandung Institute of Technology covering various university libraries which must submit at least two digitised documents. The other university followed the digitalisation using Docushare software. What ever their progress, usually the digitalisation encountered three constraints that are administrative, technical and cultural ones.

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