

An Analysis of Digital Library initiatives in India

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Abstract:

The emergence of Internet has added a new dimension to information technology which gave birth to the new concepts of Digital Libraries (DLs), Knowledge Management (KM), and archiving of indigenous culture and heritage materials. The Digital Libraries have emerged as a crucial component of global information infrastructure, adopting the latest Information and Communication Technology (ICT) to promote an organizational structure that encourages communication and resource sharing between the academicians and scholars across the nations. In India, a number of digital library initiatives and digitization programmes have been initiated across the country. Most of the digital library initiatives are government funded. The Ministry of Communications and Information technology has also established the Digital Library of India. This paper discusses various problems, challenges and issues involved in design and development of digital libraries in India.

KEYWORDS: Digital Library, ICT, Knowledge Management, DLI, NSF,

NDLTD, NASA, Consortium

Introduction

Information is considered as the fulcrum for power and prosperity and very essential for economic and social development of the society. The revolution in Information and

Communication Technology has bridged knowledge gap by providing free flow of information. With this technology driven revolution, information was started delivering in digital format with greater speed and economy which triggered in development of digital library. It has provided wider opportunities in archiving accessing digitizing and preserving the traditional knowledge. The open source software movements added weightage in proliferation of digital libraries worldwide. Traditional knowledge available in one and another form was being explored, documented preserved and made accessible through networks of digital archives. The formal project of digital library under the Digital Library Initiative (DLI) was started in 1994 as a joint initiative of the National Science Foundation (NSF), Department of Defense Advanced Research Projects Agency (DARPA), and the National Aeronautics and Space Administration (NASA), in 1994. Six universities were given the funds for investigation and development of underlying technologies for digital libraries. The second phase of the project was initiated in February 1998. (Devika, 2003). The landmark initiatives that led the path towards the Digital Library movement are the CMU, MERCURY project; CORE project at Cornell University the TULIP project and ENVISION, Cornell Institute of digital collection, Yale University Open Book Project, Networked Digital Library of Theses and Dissertation (NDLTD), National Science, Mathematics, Engineering

and Technology (SMET) Education Digital Library (NSDL), National Policy, Digital

Library development in emerging country like India is taken up with preserving art culture and heritage of India in mid 1990s. India became de-facto signatory of the UNESCO Universal Declaration on Cultural Diversity, adopted unanimously by the UNESCO General Conference at its 31st session held on 2 November 2001 to strengthen the access to diverse cultural resources available across the country. Indian state and non-state agencies in collaboration with the Carnegie Mellon University, Universal Digital Library project of the US-NSF (under and Indo-US Science and Technology Collaboration initiatives) have taken significant initiatives in digitization and preservation of vast pool of knowledge available in the physical forms of manuscripts, rare books, out-of-print books and archival materials and also with neighboring South Asian countries and shared to a networked community using an online platform. Indian universities are participating as members in the Networked Digital Library of Theses and Dissertations (NDLTD). Library and information centre of higher education and research institutes have taken up task for creating website with in-house digital content like research reports, publications of researchers, theses and dissertation etc. Later on eminently practical approach was evolved for building operational digital library, their maintenance, operations and services. The problem encountered for digitization initiatives in India, National Policy and existing digital library initiatives of India are discussed below.

National Policy on Digital Library

The National Task Force on IT and Software Development (2003) has given some valuable recommendations for development of DLs in the country related to development of pilot

project on Digital Library, preservation of vast wealth of Indian traditional knowledge, digitization of Indian Theses and Dissertations and copyright protection. However, there is no any clear cut national policy on Digital Libraries. In India digitization initiatives are in need of national policy on Digital Library to indentify framework and best practice in all spheres for development of Digital Libraries. There is also need of preservation policy, Intellectual Property Rights policy for content development, collection development policy, digital information rigidity in the publishers' policies and data formats etc.

Current Digital Library Initiatives in India

Government institutions of national importance, national level institutions, research organization, universities, state government institutions, financial institutions, private institutions are key player for initiating digital libraries in India. Some of the important digital library initiatives and programmes initiated across the country are as follow:

Problems & Challenges

In India, the digitization initiatives are encountered with the problems such as lack of national policy, lack of preservation policy, no intellectual property rights policy for content development of digital information, rigidity in the publishers' policies and data formats, lack of multiple Indian language OCR facilities etc.

Jeevan (2004) mentioned following problems for digital library developments in India i) Lack of Interest from Parent Institutions, ii) Copyright, iii) Implementation of Access Right iv) Selection and Security of Content v) Efficient Internet bandwidth vi) Financial

Support vii) Proper documentation, retrieval and access of indigenous knowledge have gained more prominence viii) lack of ability, lack of incentives, and lack of role model initiatives ix) acute shortage of competent personnel to take up the task of digitizing local content and evolving digital information repositories.

According to Bhattacharya (2004) the challenges that libraries in India face are: Intellectual property rights, security, technological change, lack of expertise, inadequate finance and infrastructure, suitability, information explosion on the internet, cost of regular refreshing, preservation existing infrastructure, bandwidth problem, political and social constraints, lack of training.

The above factors affect the success of digitization initiatives and the creation of digital libraries. These problems have to be addressed positively for development of digital libraries in the country. According to Dr. Gurram Sujatha three factors- national policy for digitization, sustainability issues and digital divide should be taken into consideration to ensure planned digital resource development programmes and digital libraries in the country.

Conclusion

With the availability of advanced information and communication technologies (ICTs) and information infrastructure, India becomes an active contributor in digital library movement by digitizing and providing free access traditional knowledge, century-old publications and rare documents, theses and dissertation and journals available in Indian libraries. The Digital Library of India is one

major initiative that is striving to create a truly digital library. Online availability of electronic theses through centrally-maintained digital repositories called Shodh Ganga does not only provide easy access and archiving of Indian doctoral theses, it also helps in raising the standard and quality of the research. Open courseware and cross- archive search services are also being developed by different organizations, including the apex higher education agencies. India has spearheaded the digital library movement in developing countries.

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