ISSN 2278-3083
Volume 3, No.1, January - February 2014
International Journal of Science and Applied Information Technology
Available Online at http://warse.org/pdfs/2014/ijsait06312014.pdf

Information and Communication Technology used in digital Libraries : An Overview

[1] **Dr. N Kalpatha**
Librarian, Padmavathi Womens College, Tirupati
[2] **Dr. V S Giridhar Akula**
Principal, MallaReddy Institute of Engineering and Technology
Hyderabad
email: seshagiridhar.a@gmail.com

ABSTRACT

The main aim of the proposed review is to highlights how the computer technology is used in the present scenario and how many libraries have been exaggerated with the advent of Information and Communication Technology based products & services and their priorities have been shifted to on ICT for instance library automation, digital archives, library 2.0 and library services on mobile phone. By the help of this paper the authors have draw their attention towards the innovation & development of ICT and its implications in library services, it create much changes in entire library management system. With the development and application of ICT, the libraries have shifted from the traditional to hybrid library, then automated library, digital archives stages etc. With the effect of these changes, the structure of libraries has also changed in a dynamic way, as in a continuous process. Indian universities and professional institutions have to adopt these policies widely in their libraries.

Keywords: Information and Communication Technologies, RFID, ICT based products &services Library Services, ipad, Digital Archives, Library 2.0, Global System for Mobile Communications.

1.INTRODUCTION

In the era of information explosion, the tremendous amount of information is being generated and transmitted from every corner of the world in the form of print materials, research articles, lectures, presentations video conferencing, technical reports, standards and patents etc. In the early stages of 20th century, libraries were facing the problems, of how to cater and fulfill the users' demand in minimum span of time. The solution was to adopt the ICT based products & services. To deal with new challenges and increasing demand of users, libraries are reconsolidating; reshaping, redesigning and repackaging their services and information products by incorporating ICT based products[5] & services. Owing to ICT enabled products & services, libraries have changed the way, in terms of the provision of information services. These products and services are the integration of computer and communication technologies, which can be, apply, to store and disseminate the information. They have changed the traditional practices of libraries in delivery of services[2]

In the present situation, users can have access to a variety of information and digital archives of libraries from any corner, as well as can get update activities of libraries by the SMS on their mobile phones. It also helps to users to access, manage, integrate, evaluate, create, and communicate with other users more easily than ever; it can made possible by the emergence of library 2.0. The significant developments in ICT have forever changed the way of information gathering, processing and disseminating.

2.LIBRARY AUTOMATION

Library automation was the first major step towards the use of ICT based products &services in libraries. It brings great revolution and save tremendous time of users and library staff for collecting and disseminating information. The libraries started for automation in middle 1950's until 1980's.

Library automation refers to use of computers, associated peripheral media such as software for automation, magnetic tapes, disks, optical media etc. Library automation[4] makes the provision to provide the 'right information to right reader at the right time in a right form in a right personal way' it is the basic aim of libraries. Library automation fulfills the above demand of libraries [7] by providing the library activities as: very efficiently, rapidly, effectively, adequately and economically.

Thus, the ICT made possible for automation in libraries [3]. Now libraries are using the RIFD (Radio-frequency identification) to prevent the the ftof library resources. The RFID is the use of an object (typically referred to as an RFID tag) applied to or incorporated into an information product for the purpose of identification and tracking using radio waves. For library automation, there are some open source software available: Evergreen, CDS Invenio, Koha, NewGenLib, PMB, Php My Library, Open Biblioas well as many commercial software: SOUL, Alice for windows, Netlib, LibSys etc.

3.DIGITAL ARCHIVES

Libraries must provide the best services to its users, in order to meet the user's requirements, libraries in the past have updated their collections. Nevertheless, in the present scenario, libraries must not only update their collections but also provide better access to information through the new information highways. This can achieved through digital archives. Digitization in libraries are today's response towards a faster delivery of information to its users through the digital archives. The concept of digital archives emerges after the rapid advancement of ICT. The advent of digital archives has great impact on libraries. It provides information very speedily to the end users. The digital archives means: collect the information & stored it, in machine-readable format or digital format for dissemination to end users. The digital content can easily reproduce at globally.

Digital Library

A digital library[6] is a library in which all collections of a library are stored in digital formats, and anyone can access to this collections without any barrier. The digital content may be stored locally, or accessed remotely via computer networks. A digital library is a highly organized collection of electronic resources.

The digital era started a long time ago. E-mail, online invoicing, Kindles and iPads have brought immense value to society. Life cycle assessment (LCA) shortcomings have also been here for quite some time. More recently, information and communication technology, or ICT, has been highlighted as the solution to reduce environmental impact in communication.

In order to be equipped for an informed and balanced stake in that debate, the Confederation of European Paper Industries (CEPI) commissioned the author, Dr. Peter Arnfalk, to conduct an independent study on the interplay between the use of paper and of ICT with a special focus on the environmental impact. We wanted to promote the understanding of how the debate has to be put into perspective and how using electronics is not the only direct line to saving the planet, as some claim.

e-book reader

The on-line book retail company Amazon naturally focuses on selling books via their e-book reader Kindle (with more than 500 000 book titles available) but users can also subscribe to newspapers and magazines such as the New York Times, Le Monde, Frankfurter Allgemeine and Time. Moreover, via Kindle you also get access to dictionaries such as the New Oxford American Dictionary and Wikipedia.

Apple released its iPad in April 2010 and it has been a tremendous sales success so far with about one million iPads expected to be sold only the first month. The iPad is a tablet computer meant for Internet browsing, media consumption, gaming, and light content creation. It runs iPad-specific applications as well as those written for the iPhone and iPod touch, including e-book readers. Hence, it is not exclusively or even primarily an e-book reader, but rather a small computer on which you can read e-books.

Google runs a project on digitalizing books, and currently they are stocking up to about 10million titles. A smaller rival, the Gutenberg project, offers out-of copyright works for free. In the US, out of the 50 000 bestselling book titles, already 90% are available as e-books.

Institutional Repository

It is a web-based database (repository) of any institute's scholarly materials. Include works of various stages in the process of scholarly inquiry. In addition to published works, an IR may include pre prints, theses & dissertations, images, data sets, working papers, course materials, or anything else a contributor deposits. The main task of institutional repository is to collect the scholarly materials to store and disseminate in digital format for widely used.

Benefits of Digital Archives

Some basic benefits of digital archives, which are as follows:

1. Ability to provide a large number of users' at single time access to unique or special collections, this is the most attractive feature of digital archives.

2. Easily accessibility to information and content can be delivered directly to end-users and retrieve remotely.

3. Flexibility of the digital material, since the data is not "fixed", as with paper or printed text, it is easy to reformat, edits and prints.

4. Providing access to primary material can help to "publicize" the material to other departments and peers, and to demonstrate the importance of the collections.

5. Digital archives are very useful to save the place.

6. It saves a lot of time of the users in searching of information

Mobile phone services of the library

ICT has collapsed all the barriers and promoted fast communication by across boundaries. To cope with the basic challenges of life and responsibilities has informed the invention and the use of information technologies. Before the advent of ICT, communication in the library was possible through notices, circulars etc. in libraries' notice boards, means users had to come to library to get the update about the library activities. As scientific knowledge has increased, electronic communication systems began to develop. The library can inform through a single SMS on his users' mobile phones [1] about any new activity. Means it is not necessary come to the library for its users. Therefore, we can say, now libraries are without walls.

With dawn of ICT, libraries may have started exploring the feasibility of its products& services. These would support library-to-user, user-to-library, and user–to–user online interactions. It made possible by

Global System for Mobile Communication (GSM). Mobile phones have revolutionized the daily lives of all over the word. The GSM also enhance library operations. The application of telecommunications to an automated library can bring more efficiency of library services on mobile phones. Libraries are investigating ways to deliver their services to mobile phones so their users can access them any time anywhere. Further mobile phones can be use for sending text message alerts about their reservations becoming available or overdue books.

Moreover, some vendors are having mobile version of catalogue for their customers or announced plans to produce an iPhone-optimized version of their catalogue, such as Sirsi/Dynix and Innovative

4.CONCLUSION

The current scenario of world's libraries are changing very fast by ICT based products& services. The change enforced by ICT, to adoption of products and services of ICT in libraries are robust indicator of this response. It provides a means for overcoming historically intractable problems of isolation and lack of access to information and knowledge, crucial impediments to libraries development. The ICT products and services have reshaped the educational landscape by transforming the content and modes of release of information. Apart from facilitating the global networked ICT, also enhances knowledge creation and innovation. Indian libraries should also follow certain strategies in this paper to develop digital libraries in a more efficient way. Only the top engineering/degree colleges and few government universities in India have incorporated these policies in their libraries.

REFERENCES

1.Adomi, Esharenana E. (2006), "Mobile phone usage patterns of library and information science students at Delta State University, Abraka, Nigeria", Electronic Journal of Academic and Special Librarianship,Vol. 7 No.1

2.Ahmad, Naved and Fatima, Nishat (2009), "Usage of ICT products and services for research in social sciences at Aligarh Muslim University", DESIDOC Journal of Library & Information Technology, Vol. 29 No.2, pp. 25-30.

3.Ahmad, Parvez and Iqbal, Jafar (2009), "Library Automation of Al-Barkaat Institute of Management Studies, Aligarh with the help of Alice for Window (AFW) Library Software", Indian Journal of Library and Information Science, Vol. 3 No. 2, pp. 81-86.

4. Akinfolarin, W.A. (1998), "Automation in the Adeyemi College of Education Library, Ondo", Library Management, Vol. 19 No. 1, pp. 26–28.

5. Akintunde, Stephen A. (2004), "Libraries as tools for ICT development",42nd National Conference/Annual General Meeting of the Nigerian Library Association(NLA), http://dspace.unijos.edu.ng/handle/10485/79?mode=simple&submit_simple=Show+simple+item+record

6. Arora, Jagdish (2009), "Library 2.0: innovative technologies for building libraries of tomorrow",in ETTLIS proceedings of Bridging the Digital Divide in JIIT University, Noida, 2009,pp.49-65.

7. Bhardwaj, Rajesh Kr. and Shukla, R.K. (2000), "A practical approach to library automation", Library Progress (International), Vol. 20 No. 1, pp.1-9