Website short link:
http://goo.gl/VGhkd5

Mobile User Scan QR Code

EDITORIAL

Teacher-cum-Librarian Vs. Librarian-cum-Teacher

Dear Friends,

During March-April 2016, discussions were coming in some LIS forums regarding pros and cons of appointing Teachers as Professor-cum-Librarian of University libraries. Some LIS experts opined that it is good to appoint LIS professors as Processor-cum-Chief Librarian in University libraries because they can share their theoretical experience with the library staff. But they were silent about appointing Chief Librarians as Librarian-cum-Professor in LIS Department, though the academic qualification and requisites are the same for both the posts .

Such dual mind hampers the development of LIS profession and professionals. The LIS teachers never treat librarians at par with them. As a result librarians have limited or no scope to undertake UGC projects, act as PhD supervisor , to shift form librarianship to the posts of professors and so on. Further, for any practical examinations of LIS courses, PhD evaluation, guest faculty, resource persons of seminars and workshops , LIS teachers are mostly preferred by the LIS Departments than librarians— making the departments as safe heaven for the former. Due to such group-ism in academic activities, the quality of LIS education and research are declining day by day. The prevailing practice of Prof.-in-charge or Officer-in-charge of library is also the contribution of LIS teachers to the profession. Does this practice yield anything at all or is just governed by fancy only ?

Questions arises why librarians can not take classes in LIS departments, particularly in university libraries where LIS department exist. Rather they can share their practical experience and expertise better than the teachers to students. Further, librarians job is a full time job. Besides taking classes, how a teacher who is guiding scholars for dissertations, research projects etc., making self study, performing other official assignment, will be able to look into the day-to-day activities of library? Also, if the trends of appointing professors as professor-cum-librarians of university libraries continues, then what will be future of LIS professionals who deserve for the post. They can not be appointed or promoted to the post of Chief Librarian till their retirement. Consequently the libraries will suffer a lot with such type of ornate heads instead of functional ones.

Hence, the practice of appointing Professor-cum-Librarian must be stopped. Yes, if any professor want to shift to LIS profession and become a full-fledged librarian, then it may be welcome, otherwise, it will be injustice to both LIS Department and also libraries. Similarly , Librarian may also be given chance to become full-fledged faculty members. Also they need to get all facilities of teaching and research at par with faulty members. A healthy environment must prevail between LIS departments and libraries which will facilitate exchange of theoretical ideas and practical knowledge between them for the all-round development of LIS profession. If not, for the professionals of other subjects we all shall be subject to laughingstock .

I am highly thankful to the members of Editorial Board ,contributors of write ups for this issue for their support and cooperation for this. I am also greatly grateful to Dr. Prof B. Ramesh Babu, Professor (Retd.), University of Madras for contributing a write-up for the Guest Column of this issue.

Regards,

Dr. Sunil Kumar Satpathy, Editor

GUEST COLUMN

LIS Research in India at Crossroads?
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Professor (Retd.), University of Madras

LIS education in India has completed more than a century and the research has completed about sixty years. Research in Library and Information Science plays a very important role in shaping the future of this profession. LIS research has given a new height to this profession and given a chance to the professionals for uplifting their career.   LIS research in India was very slow till the last quarter of 20th century. The research in LIS in India started at a very slow pace because of the lack of proper identity to the subject. Since 1980s the research in LIS has spread its roots in various branches of LIS and it has grown both qualitatively and quantitatively. The research in LIS has surpassed the various branches of knowledge. There is no comprehensive bibliographic control on the list of theses awarded PhDs in LIS, although some attempts have been made here and there. In the span of six decades a large number of doctorates have been awarded and it is estimated that by 2016 it might cross more than one thousand doctoral degree holders in LIS. The trends in LIS research and reveled that scientometrics/bibliometrics is the single largest area of research, followed by user studies, library practices such as indexing, cataloguing, collection development, information seeking behavior of users, library automation, use of ICT in libraries, and so on. Of course there are critics with regard to the quality of LIS research in India.

Dr S.R. Ranganathan has influenced not only India but also the Asian nations in the teaching, research and publication. Research in LIS is uneven and oriented to practice/ applied than basic research. Descriptive research is very prevalent. Most research is quantitative in nature. Most of the research topics are irrelevant to the practical situation and the implementation of the research findings is far from reality. There exists lack of research competencies in some individuals; obstacles in putting the research into practice; lack of recognition of the importance of research by the policy makers and the administrators and lack of rigour and also non-cumulative and often episodic without connection to previous research; and poor research design and poor quality. Some of the topics are irrelevant to the needs of the users, and the libraries. Some of them are not oriented towards the practice and some are too idealistic.

mentioned that earlier, in almost all the universities, the adjudication of PhD theses was done by both Indian and foreign examiners. But in the recent years in most of the universities this system has been dispensed with and only Indian examiners alone are evaluating. In some universities it so happens that all the examiners represents the State where the university situated.

Certainly research in LIS in India is at crossroads. Can we compromise with the quantity for quality? This is a million dollar question to be answered by the research supervisors more particularly the young and budding guides. What is quality perceived by one person's view is not quality in other person's view, since there are no established guidelines to qualify a quality research.

A lot needs to be done to revitalize and reengineer the research in LIS. The LIS schools shall strive for high standards both in education, training and research. Of course already UGC has taken certain measures with regard to the research such as admission test, compulsory course work to be completed, periodic presentations by the candidates before the Doctoral Committee about the progress in research, publication of articles in peer reviewed journals on the research before the thesis submission are some of the measures already initiated and made mandatory.

There is need to critically question and find sustainable answers to bring back the status and recognition to LIS as an acceptable professional course. It is high time, librarians and teachers should come together to overcome the shortcomings and take LIS education and research to a greater heights. Quality in teaching and research is the backbone for LIS as a discipline to stand up as a strong professional course. There is every need to concentrate on the quality in research to claim LIS as a profession and to place on par with the other professions.

Dr. B. Ramesh Babu was Professor in the Department of Library and Information Science, University of Madras and former Visiting Professor at the Mahasarakham University, Thailand (2012-2013). He has been awarded Dr. S.R. Ranganathan Memorial Gold Medal from the University of Mysore for the First Rank in M. Lib. Sc., degree. He has been awarded Commonwealth Fellowship for Post-Doctoral research for the year 1999/2000 and worked on "Web OPACs in the UK Academic Libraries" at the Department of Information Science, Loughborough University, United Kingdom. He has also visited France, Nepal, Muscat, Thailand, Laos, Bangladesh, Germany and South Korea on academic invitation. Received a number of awards both national and international. He is a member in Editorial Boards of journals and also serving as referee / reviewer for a number of journals, both Indian and foreign. Twenty eight candidates were awarded Ph. D degree under his guidance. He has successfully completed 5 major /minor projects at national and international level.

FEATURE ARTICLE

Implication of QR Code in information sharing and services

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Abstract

QR Code study in the context of data scanning and e-services is guided by the mobile-based shared technology or bridged learning system. The simplest way of using QR code is serving a piece of information which is not only a single entity but a set of data. This article attempts to explore the simplest uses of QR Code and demonstrates   how to serve the data/information to a mobile device or user with the help of QR Code tool .Also it provides practical documentation on processes and steps.

Keyword

QR Code, Quick Response, Mobile Technology, Information Sharing,

Introduction

Day to day, we get lots of information which we wish to share among the user's communities who could get benefited with that product or piece of information. Three primary questions come; how? Which mode? To whom? These questions filter our problem and help us to solve it. Since the Library Science is a service-oriented domain, it must be continuously updated and up to date, galloping with changes taking place in its periphery. QR Code service primarily based on the growth of smart phone users and libraries. Libraries are to play the secondary role in order to support and promote of uses of QR Code by following the users. It gives the same as digital barcode provides a simple and inexpensive method to present diverse commercial data in electronic commerce and m-commerce, including product id and the detailed product information, advertisements, and purchasing and payment information (Prasanna & Mathew, 2014), but it is much more advanced than the traditional barcode.

Fig. 1: Sample QR Code
(Encoded article information)

QR or Quick Response is a kind of code in image form. It is readable by moderately equipped mobile phones with cameras and QR scanners. Information such as URL, SMS, contacts information and plain text can be embedded in the two-dimensional matrix (Prasanna & Mathew, 2014).Here it targets only to mobile users who are pre-assumed to have QR code scanner and reader on their mobile devices, to avail the services offered by the library by means of QR code. Library marking it fairly possible with QR Code. The researches done in this context is are vividly enlarged the size and scope of QR code in the context of Library Science.

Features of QR Code and reason behind its adaptabilities

There are lots of best features exists with QR code which leads to its adaptabilities and reason implementations and acceptance for promoting services. QR code has many advantages over other types of mobile tag or barcodes (Yoon, Park, Lee, Jang, & Woo, n. d.).

Error Correction–Simply error correction is features of security of data despite damaged or segmented code. Technically there are 4 error correction levels, data recovery depends on the damage level in the intended environment and the correction level varies with that, ("QR Code Error Correction", 2016).

Fig. 2: Error Correction

    Level L – up to 7% damage
    Level M – up to 15% damage
    Level Q – up to 25% damage
    Level H – up to 30% damage

Height &Width - No restrictions on size and width, QR code reader can read the smaller size of code easily same as bigger size.

X-Dimension – No restrictions of dimension, it is up to the choice and need of matter o content size or dimension.

Prints Quality – Resolution affects the print quality. It is measured in DPI ("What is Print Quality? - Definition from Techopedia", 2016). QR Code can be printed in different size and shape with color and background.

Cost – QR code implementation is the cost is not much higher. It covers only the cost of scanner and printer of optimum quality as per the nature of use. Easily a library can bear the implementation cost.

Simples Process of making/creating QR Code-QR codes can be decoded using mobile phones equipped with a camera and an appropriate scanner (Vazquez-Briseno et al., 2012). It can be in different colors and shapes, but you get the picture and can be found often on direct mail, signage, billboards, maybe even

in commercials. The important websites for creating QR Codes are; Kaywa, GOQR.me, Visualead, and QR Stuff etc. (Wainwright, 2015). It is very simple to create and use. As shown here below;

The above picture shows the process of creating a QR code image and getting the same result as decoded. First, opened the website, www.qoqr.me and typed the matter from predicted-
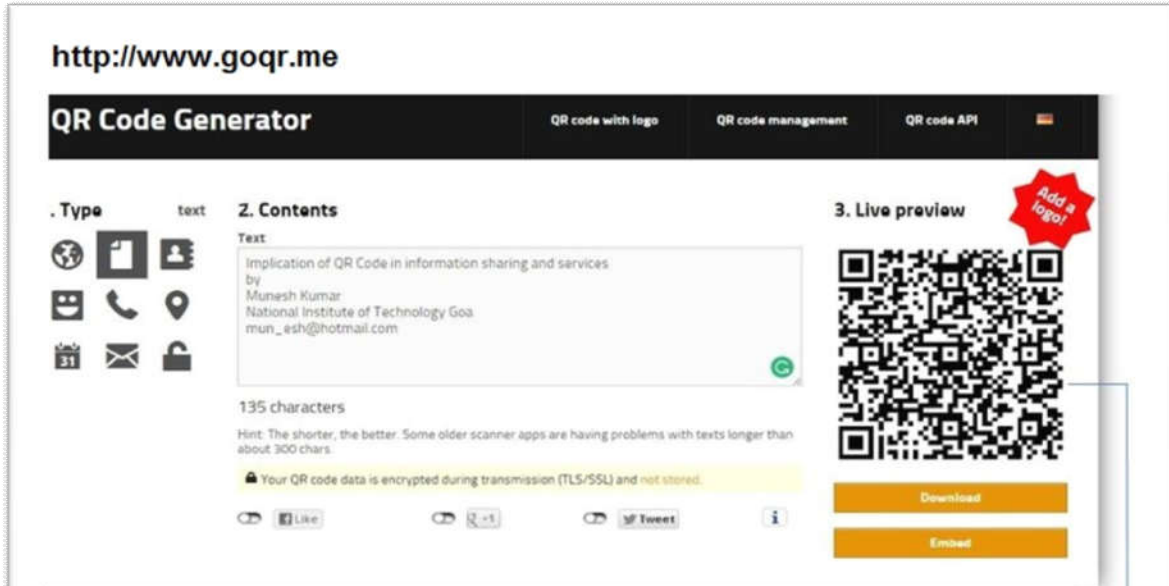

Fig. 3: Process of coding and decoding information by QR Code

format(1) what we wished to encode in a QR Code. The sample text is typed (2)content zone and live preview is available as we proceeded further in order of filling the data, text in live/ preview zone(3). Once, the desired word is typed we may download the QR Code image or directly can be embedded in any webpage. In this example, it is

downloaded and used in a dummy profile or file for the users of the detailed regarding text on the page. For scanning the QR Code there must be a software/apron a mobile phone. If the desired app is not installed in your devices you may try below utility table as suits with your smart phone. Go to the particular location and open the software, initially named QR Reader in almost all the devices irrespective of OS (Operating System) platforms.

Required Tools &Utility to scan QR Code

Important tools are be downloaded from respective stores depending on the smart phone. Few popular stores are as follows.

Name of reader/ scanner	Device based on/ running on	Location/shop Name and website link
QR Code Reader	Android OS	Google Play Store https://play.google.com/store/apps/details?id=me.scan.android.client&hl=en
QR Code Reader and Scanner	iPhones OS	iTunes https://itunes.apple.com/in/app/qr-code-reader-and-scanner/id388175979?mt=8
QR Code Reader	Windows Phone and Nokia OS	Microsoft Store https://www.microsoft.com/en-in/store/apps/qr-code-reader/9wzdncrfj1s9
QR Code Reader	Blackberry OS	Appworld Blackberry https://appworld.blackberry.com/webstore/content/91062/?lang=en
NeoReader	Palm OS	Mobile Barcodes.com http://www.mobile-barcodes.com/qr-code-software/neoreader/

Utilization of QR Code

The article, "Advancing storage and services by QR Code: a cost effective tool" (Kumar & Kumar, 2014)has stated the 14 effective uses of QR code in libraries in lesser cost. Here the primary motive of utilizing the QR Code is to handle the rapid need for information sharing to the mobile users. In short, those can be; encoding URL, URI, DOI, pasting at notice board in the corner of notice so that targeted audience can download that information directly from web, server instead of clicking and keeping the picture. The periodical section must use QR code to share the information on, about the periodicals. User's id card and a library card, book cards may be equipped with QR Code. Another utilization with local effects is being recommended.

Conclusion

QR Code is easy, convenient, and powerful effective tool. Mostly, used for the marketing advertisement of product, services or brand information from traditional desktop to mobile based users. It is a patent, copyrighted IP of Denso Wave who has invented. It is was implemented as a mechanism in tracing auto parts but later on it as accepted in almost all the industries experiencing marking and advertisements. The acceptance of QR from country to country and from phone to phone varies. It is mostly used in phones OS and geographically in the USA. It is used in marketing and packing industries but libraries can start entertaining the practice of QR Code in delivering the effective services. In our country, very few libraries have started practicing the QR Code in services. Library, NIT Goa practices the use of QR Code and shares the links, important information to its users. Apart from the service related uses, QR code can be used to preserve the data and information for longer time use.

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TRADITIONAL LIBRARIANSHIP CAN NOT BE OBSOLATE

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The importance of Librarian was started with the publication of printed materials, though the concept of library was existed in different forms. When the number of publication increased the need arise for the safe keeping of documents and the concept of librarianship came into existence. The basic duty of the librarian is to keep the documents in safe custody and to make provision and environment for the maximum utilizations of these. For this Ranganathan had rightly coined the 'Five basic laws' for the library. These laws are coined for the best utility of the library i.e. the books/documents and the users are indispensible to each other. The users and library are also indispensable to each other. As a result the library, users and documents make a triangle. Within the triangle Librarian is placed in the center with equidistance from each of them.

The traditional librarianship is usually user oriented where the users are coming to the library personally. But today the users are virtual and they are not coming to the library rather they are sitting in their own seat and try to get the documents/information online. As a result the numbers of visitors to the library are drastically reduced. Since change is inevitable, the form and function of library shall be changed with the passage of time. When the world is changing and everyday the process of change continues, the library cannot be escaped from it, so also the library professionals. There was a day when the librarians were taught how the papers of card catalogue were manufactured. But now a day the card catalogues are going to be outdated. Now the library professionals are taught about the computer software programs and how to handle the library software. As a result the library services become easier and users are getting information instantly.

In spite of all the developments and advancement in computer facilities in library, the importance of traditional service cannot be denied. As on today there are many users who are not computer proficient and don't have the computer facility to get all the information every time. Further many users have the habit of reading the hard copy form of the document. A majority of the users those who are computer savvy have collected the information in soft copy form and take the print out for reading and research. This shows that till date the users have the habit of reading the hard copy. Since they are not getting the hard copy of

Of the document they are collecting it from the e-resources. If it could have been available in hard copy form they might have consulted it. So it can be said both the e-resource and the traditional library service shall be provided and steps shall be taken for digitization of documents for preservation. Time has not been ripen to say that only the e-resources will be available and the traditional documents will be outdated rather the library shall function as a hybrid one where both the e-resource and traditional library service shall be provided with equal importance. The library professionals shall not ignore or avoid their involvement in routine activities / services of library otherwise it will have negative impact on users and services of the library though they are expert in e-services.

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TYRO LIBRARIAN

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The scope of librarianship through the ages has taken many dimensions. We may ask our seniors and they will depict the history of Indian librarianship at least over three decades. Lately, the advent of information technology to this field marks a new dawn and the late-riser professionals have been left behind with some sorts of bugbear for the newly developed gadgets and their related activities. However, the new generation librarians are adept at handling modern implements. Many of them may perhaps surprise you by their swift fingers, though not typing-hand, on computer keyboard and mouse clicking on different icons before a bystander or onlooker could recognize those. They are equipped with their Master's degrees in librarianship, good academic records, NET, PhD, Diplomas in Networking, HRM, marketing, Russian or German language and whatnot. One of the interesting things is— be it older or new generation, we librarians are very fond of acquiring degrees. Sometimes those surpass even our employers'/bosses' too. Because of this, imaginably, being unclear of whether a single name-plate can encompass all those acquired degrees, the bosses are hesitating to get us our name-plates at work places (those who have ones, congratulations!).

Am I going some other-where? Oh! Let me back to basics. It is found that the new entrants in the field of library and information service are more techno-savvy. This is no doubt a good thing for our profession because as libraries throughout the world, with their interactive interfaces, are trying to reach to their reader communities at the latter's mouse click, as opposite to the previous practice where users were trying hard to reach library. And someday these people would be instrumental to serve better we hope. They wish to be in constant touch with the users and fellow professionals on Net. For instance, in Lisforum, if a query is submitted or an article is requested one can very fast get the mail back with some suitable suggestions from many members of the forum or the desired article within ten to thirty minutes. This indicates the agility and promptness the librarians in fresher-group are possessing and the fondness to work with the modern technologies they have built up.

Mathews and Purdue observed that "*librarians continue to look more like IT professionals*." Becoming techno-savvy is no doubt a plus point for us but sitting glued to the computer system and judging the gadgets as everything in a library set up of Indian context is, perhaps, judging the means as end. Most of them are hardly showing their eagerness to organize the reading materials other than in soft form. For many, Google is the only answer instead of their own in-house databases or vast printed collections their seniors or precursors have developed in the course of decades. Pretty good numbers of information may be available for one's general reference in Google. But are they of serve-worthy and beneficial for serious readers or scientists? The answer is in negative.

Ben Bunnell, the Manager of Library Partnerships for Google Book Search (GBS) is an MLS from University of Michigan. He is of the opinion on GBS as: *"the way we display the books from libraries differs from the ones we get from publishers. Library books in the public domain are 100% viewable from cover to cover. For books whose copyright status is indeterminate, we only show bibliographic information about a book and at most a few lines of text for a given search. We work with publishers and copyright holders to provide a limited preview of their books, with at least 20% of the pages available for viewing (or as much as the copyright holder allows).*

On asking whether or not GBS itself could be considered a library, he comments— *"Libraries have become centers of our community, and librarians have become stewards of information. GBS is just a tool for libraries and librarians."*

In their freshman-ship they are also serving the users with the information, may be data therein and creators are of dubious in nature and uploaded in Internet. For example, in automation work when they are putting data in the field 'access point' they hesitate to consult the AACR2 where a specific chapter on 'Choice of Access Point' is dealt with. They find it taxing to handle the hard copy of DDC Schedule when organizing the documents in a given library for relying on OCLC Classify. One (I must secure his anonymity) once classify a fiction work in poetry and when asked how did he build the number he just put all the blame on OCLC classify. Friends, consulting any experimental service in not a fault, but totally relying on it and not consulting and ignoring our own basic principles and tools with those we have had the ABC of librarianship is just improper. Basic theories must not be ignored. Another thing one may come across that they are very productive of LIS literature. If somebody somewhere has written something theoretical they are blindly following it, repeating it in their own papers, without verifying its veracity and feasibility or workability in their own environment. For this reason, one can bump into thousands of articles on a given topic of librarianship without their practical applicability. This is because of availability of articles galore in the Internet sites wherefrom one can just cut and paste as they like. Dr D B Ramesh, caustically calls it LFT— *"lift and fit technology*."   Please, successfully implement a technique or methodology practically in your own library and write down a success story thereof, and I will wager, it would be more precious than a ton of bogus literature following others.

The idea of library traineeship, after a degree from any university, in a reputed functional library is definitely welcoming one. The university gives them degree but the library grooms them; here, they metamorphose into working librarians. Now-a-days better, brighter students are coming into the field of librarianship. They are quite conversant with modern technology—a new feather on degree cap. 'Fine feathers make fine birds' and the new folk we hope no doubt make the profession a finer one by bringing in new stuffs. But being gadget-friendly is not the entire things in librarianship. They will be marching forward with the changing environment and demand of society. On their march, in organizing a library every stride they take, have to back to basics. If not, there is every possibility the experts of this field will call them – tyro librarians.

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PROFESSIONAL ATTITUDE OF LIBRARIANS IN ICT ENVIRONMENT

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"KNOWLEDGE IS POWER", society must admit it.
Library is such a house where knowledge is well organized. Library professionals should help their users to possess the requisite knowledge through different library services. The LIS professionals who are in the working environment should be determined towards their responsibility. Now you can find vast information is stored in various sources. The most responsible job is to locate the authentic information for better dissemination.

In recent trends, communication technology has a great role in providing information to the society. Now the complete scenario has been changed. So time comes for the working librarians to improve their skills to meet the information sought. It is noticed that many of the LIS professionals have extended their interest to gain extensive knowledge about developing technologies. Some also improve their skills to manage the advanced technologies.

The rapid developments in Information Communication Technologies (ICT) put a platform for solid foundation to make a revolution in Library and Information Science field. It also changes the information handling capacity of the institute libraries throughout the world. According to Katz and Macklin (2007) technology is the portal through which we interact with information, but people's ability to handle information to solve problems and think critically about information tells us more about their future success than their knowledge of specific hardware or software.

The working librarians must acquire the knowledge or skill in this digital environment which are useful such as desktop publishing, use of different software packages, word processing, transfer the appropriate skill to the users, graphics, bulletin board, management of www information, familiarity with local automated systems, IT troubleshooting, and familiarity with different operating systems and improve their skills to manage these technologies. Computers, connectivity, and electronic information have redefined the image of library profession and the services provided through library and information centers. The academic librarian of this decade has to possess a portfolio of technology related skills in order to complement and support the navigational skills. Such skills help library staff to manage the information more widely and, in turn, transfer these skills to the users as appropriate.

Implementing information communication technology (ICT) in the library depends largely on librarians' attitudes toward it. The application of ICT has caused significant changes in libraries: automated cataloguing, circulation, information retrieval, electronic document delivery, and CD-ROM databases, for example. According to Ostrow (1998), the advent of the Internet, digitization, and the ability to access library and research materials from remote locations created dramatic changes by the end of the twentieth century.

Ramzan (2004) observes that expert systems, wireless networks, virtual collections, interactive Web interfaces, virtual reference services, and personal Web portals have brought changes since the start of the new millennium. There have been fast and significant changes in librarianship, where digital and electronic libraries complement, and in some cases replace, traditional libraries. During the last several years, the society has experienced important changes; particularly in information and communication technology (ICT) which has brought a revolution in every sphere of life. Using ICT, libraries have not only observed remarkable changes in their house keeping operations and other services, but also identified a new and active role for librarians. Automation or computerization is an important application of ICT in libraries. It facilitates speedy library operations, services, and access to and delivery of information.

The analysis of the results showed that most of the professionals are not directly linked with ICT based services. In most of the Universities it was observed that ICT based services are being provided by a small group of trained library professionals or computer professionals and majority of the qualified library professionals don't get an opportunity to be familiar with ICT services or they are mostly unaware of the facilities in their own institution.

The analysis of ICT skills reveals that library professionals are moderately skilled in various technologies and applications, but the awareness level was low in the case of emerging web tools and services. It was observed that the younger professionals showed more interest in emerging technologies and ICT based services. Most of the library professionals have a positive attitude towards the application of ICT based services in libraries. But infrastructure facilities in University Libraries in India are not enough to provide the library staff valuable experience in the emerging technologies and support professional development which in turn will help in providing enhanced technology based services to the users. The main problems in ICT utilization was the lack of training in ICT applications as pointed out by majority of library professionals.

Training and knowledge are the positive attitude toward ICT. In this era, when new technologies are introduced almost daily, it is essential for librarians to keep up with ICT developments. The fear of some in the developing world toward ICT is widening the digital divide.

It comes to notice that many of the library professionals are more eager to access internet for personal use. They also use various social sites for amusement. This attitude of the professionals cannot put impact for the development of the profession. This type of thinking may be realized and there should be cooperation for the professional development.

Although the young generation has a good touch in ICT, they should apply their knowledge to help the users. The professionals should eagerly come forward with a helping hand for better dissemination of information in this modern electronic base information system. I will advise only one thing to the next generation of library professionals to dedicate in the profession for improvement.

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Radio Frequency Identification (RFID)

Biraj Valia

INTRODUCTION

Librarianship has been a profession that required librarian to be physically fit to carry books locate misplaced books and finally accountable for the thefts and missing books during stock verification. Automating library functions with the advent of Information Technology has become a boon to manpower starved libraries and to ever increasing demands of readers. It has become necessary for the survival of libraries and librarianship with the advent of internet, to learn IT skills and implement latest IT innovations. In this direction Bar code technology came to the help of librarians and now with RFID technology libraries can become more efficient in their service and librarians are coming out of traditional role of custodianship to 'Knowledge Brokers'

WHAT IS RFID?

Radio-frequency identification (RFID) is the wireless use of electromagnetic fields to transfer data, for the purposes of automatically identifying and tracking tags attached to objects. The tags contain electronically stored information.

One needs to be aware of other technologies offered for security and automation for libraries like:

RF (Radio Frequency): This technology is limited to only providing security to library assets like books, CDs etc. This technology can detect that some items have passed through the security gates, but it cannot identify which item has left and also how many items have passed through the gates. This technology also cannot provide any automation facilities like self check-in/check-out, Dropbox, stock verification, searching for missing items etc.

EM (Electro-Magnetic): This technology also provides only limited security to library assets like RF. This technology uses Tattle-Tape™ instead of tracking tags. This technology will not be able to identify the items and provide automation facilities. There are companies that provide Hybrid technology; this technology is combination of EM and RFID. This can be discussed separately.

THE RIGHT TIME TO IMPLEMENT RFID IN LIBRARY

Library being dynamic in nature, the collection keeps growing with time. The right time to Implement RFID system in a library is as early as possible.

The basic requirement for implementation of RFID in libraries is pasting of RFID Tags on each item and programming them with unique accession number.

More the collection, more initial cost of tagging. Secondly, the time and manpower needed for programming and pasting of the tags on each book will take longer time when the collection is big. Sooner the implementation, these cost and time would be negligible. So it's always better to start implementation at the earliest.

If the library collection is too big at this point of time and budget does not allow the investment, you can start with warm collection and gradually phase wise you can tag the other cold collection.

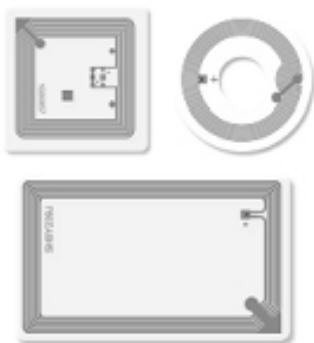Do you need to buy all the components of RFID together?

No., You approach it with a building block method. You can start with basic RFID functions and gradually expand to more facilities. This way your investment is spread over time, your library staff and users get easily accustomed to new technology.

FEATURE OF RFID

In a basic RFID system, tags are attached to all items that are required to be traced.

A RFID passive tag typically comprises a microchip and an antenna. The whole device (including the chip) is packaged as a paper-thin adhesive label which may come in a variety of shapes and sizes appropriate to the labeling of books, videos, DVDs and CDs etc. The tag chip contains memory, which stores the product's variable information so that it can be read and tracked by RFID readers anywhere.

This RFID tag can be applied to library resources in various ways to improve both stock management and security.

Security features

The Application Family Identifier (AFI) is a hardware feature on a RFID Tag (ISO 18000-3). This feature is embedded silicon chip of the RFID tag. AFI is a special purpose register in a particular portion of the RFID tag memory AFI provides prevention of interference between tags from different industry applications. The security antenna at the exit of the library monitors its environment within its range for any tags with that AFI Code as programmed.

Electronic Article Surveillance security is more prominent in RF tags rather than RFID tags. There is single bit that is programmable on or off. Depending on the state of this bit, it responds when it exits the security gates.

THE RIGHT RFID FREQUENCY FOR APPLICATION(HF or UHF?)

HF operates at 13.56 MHz Frequency whereas UHF operates in frequency band of 860 to 960 MHz. The main advantage of HF over UHF is that 13.56 MHz frequency is available and reserved for industrial, scientific and medical applications in most of the countries. The UHF, which operates between 860 to 960 MHz, UHF technology could not have been used universally a few years ago, because it was only recently approved by radio regulators in different regions of the world. There are still significant differences in performance capabilities based on regional and national radio regulations. It is very close to the frequency used by mobile phones.

The HF RFID Tag readers support SIP2 (3M™ Standard Interchange Protocol version 2) and NCIP (NISO Circulation Interchange Protocol) Protocols to communicate with Library Management System software. UHF does not have any such standard protocols to communicate with Library Management System software.

UHF has extensive reading range, this is actually a disadvantage in library application, because this will cause cross talking between library items close to the readers. Secondly the security gates will cause false alarm unless a no-go zone is created around the security gate.

PROGRAMMING THE TAGS

This is a very crucial aspect that is often neglected by the librarian, as it does not affect the functioning of the library immediately.

 What is data Model? In simple words it means how the data is stored on the RFID Tag. This is very important factor to give the flexibility to a librarian.

Early and current RFID implementers are at considerable risk because of the lack of interoperability of proprietary vendor systems. Care should be taken to see that the system is generic in providing interoperability that allows libraries to procure the tags, hardware, and software from independent providers. Data model helps resolve the interoperability issue to a good extent, it offers a initial step by defining fields that are either mandatory or optional and either locked or unlocked for library applications. This model is a key precursor to a world in which a library can procure tags from different vendors, merge collections containing tags from different vendors, and, for the purposes of interlibrary loan, read the tags on items belonging to other libraries.

The following are the main international standards used:
- Danish
- Finnish
- French
- ISO 28560-2

One needs to make sure the vendor follows the standard data model and does not use proprietary data model and also about the following points:
- Vendor-specific encrypting and encoding of the data;
- Proprietary security functions, but are a detriment to interoperability and
- Software or firmware that are system dependent and can only is used with specific tags.

RFID COMPONENTS REQUIRED FOR LIBRARY

The two basic components that are required for implementation of RFID are RFID Tags and Staff Station. All other equipments are optional.

HF RFID Tags:

This is the main component, High Frequency RFID tags which gets pasted on each document of the library. This tags need to be programmed with the accession number of the document as well as other library details needs to be stored on this Tag to have a unique identification for each document.

Ideal Specifications for HF RFID Tags:

ICs	NXP ICODE SLI-X
Operating Frequency	13.56 MHz
Standard Compliance	ISO 15693 / ISO 18000-3 Compliant
Storage Temperature	-20^oC to $+60^oC$
Memory Size	1024 Bits
Write Endurance	100000 Cycles
Data Retention	50 Years

- ICODE is the industry standard for high-frequency (HF) smart label solutions with billions of ICs in the field and thousands of successful installations. This proven technology supports the ISO 15693 / ISO 18000-3 compliant infrastructure.

- ISO/IEC 15693 systems operate at the 13.56 MHz frequency, and offer maximum read distance of 1–1.5 meters
- ISO/IEC 18000-3[1] is an international standard for passive RFID item level identification and describes the parameters for air interface communications at 13,56 MHz.

Apart from above standard specifications, one should make sure that the adhesive used is silicon based and the tag is with paper overlay and not transparent, so that the circuit is not visible.

Size: The most common sizes available are 50mm x 50mm and 49mm x 81mm. larger size would give better reading results.

RFID STAFF STATION

This unit basically does three functions:
- Program the RFID Tags
- While issuing the documents, it will read the accession number of the item and also de-activate the security of that item.
- While returning documents it will read the accession number of the item and also activate the security of that item.

The Library staff station functionally replaces the barcode scanner. The unit enables staff to check in or check out items and program the RFID tags. It can be connected to existing Personal Computer at the circulation desk.

There are some vendors, which use middleware software to provide communication between the staff station and Library Management Software. Mentioned above, middleware software will create a dependency for the library functions and should be avoided. Basically, the staff station should read the accession number of the document and insert the same in the item field of the Library Management software. The advantages for such simple interface are many.
- Basic circulation desk function of a library will not be dependent on any middleware server.
- The issue / return screens used by the Library Management Software will be retained and no new software needs to be installed or learnt or used by the library staff.
- Since no proprietary modules are used it would not create problems when one needs to change the PCs and / or Library Management Software.

There are two kind of Staff Station mainly available; the standard staff station consists of an RFID-reader placed on a desk/table (table top model).One can also opt for under the table Reader. This reader can be installed under a desk or table and is minimally influenced by external factors such as metal objects in the reading area. Additionally, due to the shielding a defined reading area is created. This enables you to place items on your desk, which are only detected when intended.

Ideal recommended features for Staff Stations:
- Processes multiple items at the same time
- Easy to install through USB-connection
- Immediately (de-) activates security
- Standard relays for connection to external devices
- Includes software to check-in or check-out library items
- Includes software to convert (program) items to RFID
- Full integration of staff station in your Library Management System
- Out of view installation under the staff's desk
- Controlled reading area due to shielding
- Minimized external influences due to shielding

SECURITY GATES

Role of security gates have increasingly benefited and become integral part of Library management.

- Librarians are constantly asked to give statistics on the usage of the library by the parent companies. Counting feature of the security gates has replaced the mandatory 'Gate Register' reluctantly entered by the visitor on much prodding.

- Stealing books have not been considered serious offence as the value of the document is not considered for its thought content or antiquity.

Librarian is solely held responsible for the whole collection and there are instances of librarians forfeited their lifetime savings as replacement cost of books found missing while handing over the charge.

Once the basic RFID is implemented by Tagging all the documents of the library with RFID tags and programming them with Staff station, the next equipment you will need will be Security Gates. The main function of the security gate is to trigger an alarm and identify the document when any library it is taken out through these gates without checking out on Library Management Software. But this function is not limited to only triggering an alarm, its function can be extended to the following too:

- It identifies which item has been taken out through the security gates. It will tell you either the accession number of the item or the Title of the item taken out, without checkout. This identification can be monitored on any designated computer in the library.
- It can be connected to Magnetic door lock, so that the moment the item is taken out through the security gate without checkout; it will also lock the door.
- It can also be connected to the Camera, so it will also take the photo of the person taking out the item without authorization.
- It should be wheelchair complaint; means the width should be minimum 100cms between the two gates. Gates that allow width of 1.35 meters are also available. You can also have multiple gates installed forming multiple aisles.
- It can also allow you to keep the count of the people entering and leaving the gate. Here one should make sure that this count is visible on any designated computer in Library, or large Television screen so it's easy to monitor.
- It is important that there is no hump between the gates to hide the cablings. It should be properly laid beneath the flooring so that people can walk through the gates without accidents.
- Ideally the gates should be transparent so that it can easily blend with any decor of the library and does not obstruct the view of the people passing through the gates.
- You also get option of having gates with docking system. This means the gates can be dismounted easily from the floor to enable large furniture or other items through the library door.
- The security gates should support EAS as well as AFI security simultaneously.

HAND HELD READER

Periodic stock verification is mandatory in many libraries. Data capturing and uploading are the main function of the reader.
Following are the advantages in using the Hand held Reader.

- Used for stock verification
- With less time at least 20 times faster than barcode reader
- Reads with out moving books, on the shelf itself there by saving lot of manual effort.
- Up to 64000 accession nos. can be captured on the readers memory Thus captured data can be transferred to many formats like .xls csv, text for further analysis.
- Tracking of misplaced books: class no programmed in the tag will help in locating the mis-placed book easily.

SELF CHECK IN/CHECK OUT STATION
This facility is user friendly and reduces queuing time and staff requirement.
Books and member id are placed at the deck of the station for transaction without staff intervention. This activate/ de-activates the tag as per requirement. Multiple documents can be transacted simultaneously and a receipt confirming the details of transaction is printed and database updating happens in real time.

DROP BOX
Drop box is used for returning the books. When the books are returned it updates library database in real time and tags are activated. This can be kept open 24/7.

BENEFITS OF RFID IN LIBRARIES
  RFID based Library Management system (LMS)

- Would allow fast transaction flow for the library and saves time
- Accuracy of the document transacted can be found while transacting thro reading the title.
- Locating of the misplaced document made easy
- Maintenance of Gate register is automatic for library statistics Security gates with camera connected will be a boon in resolving conflicts and monitors behavior of the readers and staff.
- Security Gates connected to magnetic door lock for documents taken out without issuing out will be a great help in preventing thefts
- Stock verification time is reduced greatly
- Provides opportunity to update and correct data
- Benefits and saves the readers time and at their convenience.
- Saves the staff time and improves efficiency
- This will prove immediate and long term benefits to library in traceability and security

CONCLUSION

RFID is an important library automation/management technology having added advantages over the bar code technology. The libraries who can effort the minimum required financial requirement must go for this technology.

Submitted by Rashmin Pandya , AVP-Business Development,Beegees Computers Pvt .Ltd,Mumbai, E-mial: rashmin@beegeesindia.com

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ABOUT A LIBRARY

CENTRAL LIBRARY, NATIONAL INSTITUTE OF TECHNOLOGY, RAIPUR

Ms. Neelam Soni
Assistant Librarian, Central Library
NIT, Raipur (C.G)
E-mail:nili_21sept@yahoo.com

About the Institute

NIT Raipur is a one of the national important institute of India, situated in Raipur, Chhattisgarh, funded by the Govt. of India. Founded in 1956, by the first President of India, Dr. Rajendra Prasad laid the foundation stone of college building on 14 September 1956, its construction was completed in 1962 and the college was inaugurated on 14 March 1963 by the first prime minister of India, Pt. Jawaharlal Nehru. Until 1956 there were only three technical institutes in the country devoted to the Mining & Metallurgical Engineering. From 1st Dec. 2005, the institute (Govt. Engineering College Raipur, C.G.) has become the National Institute of Technology. The Stars of the Industry Group and Dainik Bhaskar has selected NIT Raipur to honour with "National Education Leadership Awards 2013 for the outstanding contribution of the Institute in the field of Technical Education from North Region and Dr. Sudarshan Tiwari, Director, NIT Raipur was also awarded with "National Education Leadership Awards" for his outstanding contribution to education. At present the institute offers graduate level courses in twelve discipline, and six postgraduate courses and also offer the facilities for PhD with R&D activities.

About Central Library

The Central library of NIT, Raipur is situated 2nd floor of main building. It has a good collection

of reading materials consisting of textbook, reference books ,print periodicals and back volume journals. Presently it consists of more than one lakh books, subscribed about 106 print journals and magazines .The Central Library has a good collections of e-resources also consists of e-books, e-journals ,online journal archive etc. The library automation program by using LibSys7 software is in final stage .The number of users are about 5000, which includes faculty members, staff, B.Tech/M.tech./MCA students and research scholars.

Working Hours
The working hour of Central library is 9.00 AM to 8.00 PM on form Monday to Friday. On Saturday the reading room and Digital library section remain open from 9.00 AM to 1.00 PM. It is closed on Sundays and holydays.

Sections of Central Library

Following well demarcated sections are there in the
Central Library
- Acquisition Section
- Technical Processing Section
- Circulation Section
- Reading Room Section (For Text &
  Reference Books)
- Periodical Section
- Newspaper Section
- Reprography Section
- Digital Library Section

Collections

The Central Library has more than one lakh of print collections Besides it has subscription to
a good numbers of print journals /magazines and newspapers . The e-resource collection of
Central library is very good having more than one lakh of e-book collections of almost all re-
nowned publishers, subscribes to 15 numbers of databases and 04 online journals archive
collections of Elsevier and Springer.

Services
The following services are being provided by the Central Library to its users.
- Book Lending Services
- Book Bank facility for SC/SC/OBC students
- Reading Room Service
- Reference Services
- Reprographic services
- Digital library services (both online and offline e-resources)
- E-Documents delivery services
- OPAC/Web OPAC
- User education/training programs

Staff
The Central library has 15 staff, which consists of one Dy. Librarian, three Asst. Librarians,
nine non-professional staff and two library trainees. The Asst. Librarians are in charge of var-
ious sections and the Central Library is headed by Dy. Librarian Dr S.K. Satpathy.

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PUBLISHERS' CORNER

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Beegees Computers Pvt Ltd is a leading provider in Library Automation products. We actively work with libraries to maintain their presence in changing society. By providing hardware and software solutions we ensure libraries to be more efficient and effective. This helps libraries to create a more friendly and exciting environment for its users.
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FORTH COMING EVENTS

1. KIIT University,Bhubaneswar, Odisha is going to organise an International Conference on the theme "**Marching Beyond the Libraries: The Role of Social Media and Networking**" during 25th-26th November, 2016.

Contact Details;
Dr. Bijayalaxmi Rautaray
Organizing Secretary & Chief Librarian
KIIT University
Bhubaneswar-751024(Odisha)
E-mail: bijaylaxmi@kiit.ac.in

2. Pt. Sundarlal Sharma Library and School of Studies in Library and Information Science, Pt Ravishankar Shukla University, Amanaka G.E.Road, Raipur, Chhattisgarh, India,PIN – 492010 will organize 27th IASLIC National Seminar on "**Social Networking and Impact on Libraries"** during 22-24 December 2016 at **Pt. Sundarlal Sharma Library**, Pt Ravishankar Shukla University,Raipur.

Special Interest Group Discussion
SIG01 : Social Sciences Information :**Customer Satisfaction Management in Library and Information Services**
SIG02 : Computer Application in LIS: **Mobile Technology in Libraries**

Organizing Secretary
Dr Suparna Sen Gupta, Librarian,
Pt. Sundarlal Sharma Library, Pt Ravishankar Shukla University, Amanaka G.E.Road, Raipur, Chhattisgarh (India) – 492010
e-mail: library_prsu@rediffmail.com, **Mobile** : 9425228456
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For Detail Information Contact
Prof Pijushkanti Panigrahi, General Secretary,Indian Association of Special Libraries and Information Centres (IASLIC), P-291, CIT Scheme No 6M , Kankurgachi, Kolkata – 700 054, iaslic.sem@gmail.com

LIS NEWS

Dr. Sada Bihari Sahu, Assistant General Manager, Small Industries Development Bank of India(SIDBI), Head Office, Lucknow have been awarded "AIMS International Outstanding Management Librarian Award 2015" by AIMS International, USAin 13th AIMS International Conference on Management and Award Ceremony at IBA, Bangalore on 19th December 2015.

Also he has been awarded with First Prize in Reserve Bank of India (RBI)'s All India Essay Competition among all Banks and Financial Institutions for the year 2015-16 on the topic " Financial Inclusion and Drive of Prime Minister Jan-Dhan Yojan"..He has received the award from RBI Governor Dr R.Rajan.

EDITORS NOTE ON COPYRIGHT ISSUES

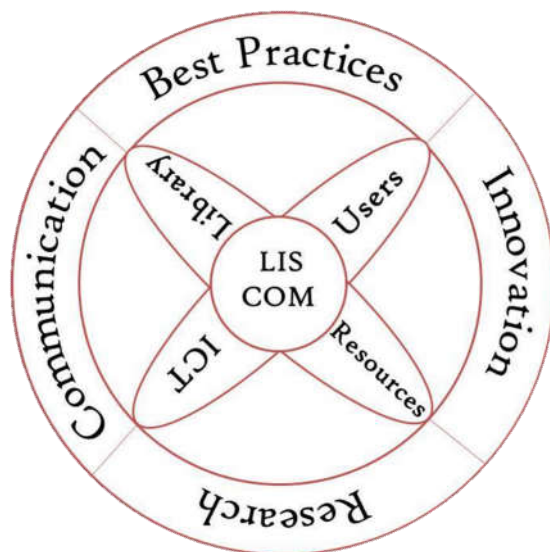## CALL FOR WRITE-UP FOR NEXT ISSUE OF LIS COMMUNICATIONS

The Editorial board invites write up from LIS professionals for the next issue of "LIS communications" on the followings

- Feature Article
- Short Communication
- About your Library & its activities
- LIS News
- Achievement of Professionals
- Any other matter related to LIS and for the benefit of LIS professionals
- Comments on e-newsletter

All write-up will be reviewed by the Editorial Board and the decision of board is final. Please send write-up through e-mail with complete address, e-mail, mobile no, passport size photo to drsksatpathy@gmail.com or Satpathy_dr@yahoo.co.in latest by 15th July 2016.

Dr S.K.Satpathy, Editor

LOGO OF LIS COMMUNICATIONS

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(https://groups.yahoo.com/neo/groups/lisforum_orissa/info)

This forum is a common platform for LIS professionals, teachers, researchers, students to share ideas, knowledge, messages, information etc. with each other for the development of LIS profession and professionals. It will help to address issues on Library and Information Science, to solve day today problems of libraries, resource sharing among libraries and generation of new ideas on LIS.
The name lisforum_orissa does not restrict itself   to the state of Odisha, rather it indicates the place of origin only.