EMERGING TRENDS IN TECHNOLOGY IN SUPPORTING PUBLIC LIBRARY : A CASE STUDY OF GOA STATE CENTRAL LIBRARY

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Abstract :

This article provides an overview of current worldwide technology trends and the implications of these for libraries of today and tomorrow. Emerging technologies – such as RFID, Union catalogue, Lending services, Paper clippings, Photograph, Inter library Loan, Kids Audio-Visual section, Reference services, Referral services, Reprography services, e-books, e-readers, mobile computing, virtual worlds – are discussed. Emerging technology has provided faster access to information and it is also challenging the libraries to think and remodel their services by adopting technological changes, This paper focuses on various aspects of technological trends which is used in Krishnadas Shama Goa State Central Library in Goa. Technology has changed the face of libraries, as how we deliver services to patrons. Emerging technologies reshaped the library services.

Keyword : ***Technology; Public Library, RFID, E- Books, E-Readers, Mobile technology.***

1. Introduction :

The development in the ICT have resulted in globalization of information resources with new forms facilitating compact storage and speedy transmission from anywhere to anytime. The use of technology has influenced whole library setup with regards to its collection, management of resources, services and activities. Reshaping libraries with emerging global technology speakes about the contribution of technology in revamping whole library system. The librarians in the modern era are at crossroads either they have to fully modernized and serve the users well with the latest IT enables services or will perish a slow death by itself.

The modern library and information centers need to be transformed into knowledge hub and to achieve this library professional has to work with innovative minds. The LIS professional of the modern era are not only the library managers but should also be library scientist in disseminating knowledge with the help of IT enable technologies. Process, storage and retrieval of library content in the electronic era is an effort to mobilize over involvement and upliftment of library services and to bring professionalism in the system. Technologies, especially computer and telecommunication technology have highly revolutionized the field of library and information services. Its facilities on collection, storage, organization, processing analysis, presentation, communication and dissemination of information. New technologies, provide information more quickly and in greater volume than before.

2. Objectives :

- To ascertain the different trends in technology adopted in Public libraries.
- To know latest mass media technology supporting Public libraries.
- To identify and support library readers through ICT.

- To study the latest trends in technology used at Goa State Central Library.

3. Need for Library Automation :

By introducing automation considerable saving in efforts, Time and resources in manual processing can be achieved by library professionals. The reasons are:

- To improve control over collection of all types of documents.
- To have an entries control over the entire operation.
- To improve the existing services as well as introduce new services to patrons.
- To avoid duplication of work.
- To use services of the existing staff effectively.

Automated materials by their categories

- Reduction of staff manual processes, error and repetitive motions.
- Enhance consumer experience through fast and individual self-check-outs.
- Reduction of staff and patron time spent on findings items.
- Integrated security functionality.

4. Library Automation & Networking

Goa State Central Library is one of the public library supported with latesttechnologies.The Library is provided with 2GB internet space via Goa Broad Band Network and is connected to all taluka libraries of Goa. “LSPremia” of LIBSYS is used as library management software along

with different Taluka libraries functioning in Goa. The advantage of this seamless integration of libraries at different location is coupled with extended functional features and scope for customization to meet the best requirements. The real time back-up of services is provided through our proprietary solution called "LS Mirroring". The other facilities which include are as follows.

- The multitasking feature and customizable look and feel for users.
- Multi-lingual support to library staff and patrons
- Federated search and advanced search options in automation
- Use of google technology to Integratewith Google books, Book finder, etc.
- Advance and Interactive features like online reviews, ratings, renewals, reservation etc. to deliver patron satisfaction.
- Option to manage centralized procurement with location wise acquisition process and streamlined operations of Branch libraries.

5. Advantages of Library Automation

- Library Professionals need not spend more time to do the routine library work.
- Eliminates human errors while performing routine library works in library.
- Improved control over library collection.
- Increased computer awareness among patrons.
- Cataloguing is faster and easy process, instant access to non records.
- Excellent control over acquisition and circulation.

6. Disadvantages of Library Automation

- High maintains cost
- Interrupted network and power supply
- Pro-activeness among library professionals

7. RFID

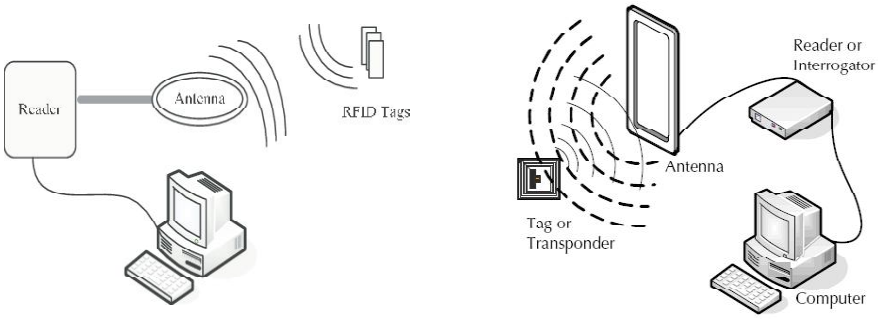
RFID is an acronym for Radio Frequency Identification. RFID is a technology that uses tiny computer chips to identify, access, store, reprogrammed and communicate items at a distance by using radio waves To identify and track an object it exchanges data between terminal and an electronic tag attached to that object. Some tags can be read from a distance and beyond the line of sight of the reader.

1. RFID Tag : RFID tag is also called transponder. RFID tag consist of all information regarding documents. Different types of RFID Tag. Active tags, Passive tags, Semi active tags, Semi passive tags, Read Only tags, Write –Once tags, Full read write tag.

2. RFID reader : RFID reader is also called as transceiver. RFID reader sends the waves between one centimetre and 30 meters or more. RFID reader decodes the data that is stored in tags.

3. RFID Antenna : The Antennas produces radio signals to active the tag and read the reader, which controls the system's data acquisition and communication.

4. Technical process of RFID system :



- RFID readers transfers energy to the transponder /RFID tag (affixed in the book/CDs/DVDs/ or smart cards of the members) by emitting electromagnetic waves through air.
- Transponder /RFID tag uses radio frequency energy to charge up.
- Transponder /RFID tag receives command /data signals and responds accordingly.
- RFID reader receives response from transponder /RFID tag and process accordingly i.e. send to the host computer or external devices through control lines.
- Host computer respond accordingly and display information on the screen or trigger an alarm if the book is not issued properly.

8. Advantages of RFID

- RFID helps in rapid charging /discharging which reduces the time required to perform circulation operations.
- RFID helps in the security of library materials by alerting the library staff in case the item is not checked out.

- RFID readers helps in quick and easy stock verification.
- Touch screen based self-check –in /out station enables users to self – check-in /out library material.
- RFID tags last longer than the barcodes. Most RFID readers claim a minimum of 1,00,00 transactions before a tag may need to be replaced.
- RFID technology automates data collection and vastly reduces human effort and error.

- RFID supports tag reading with no line-of-sight or item-by-item scans required.
- RFID readers can read multiple RFID tags simultaneously, offering increases in efficiency.

9. Disadvantages of RFID

- RFID technology is very costly. Cost includes initial implementation cost plus the annual maintenance cost.
- RFID tags are clearly visible to the patron, and hence there is chance of removal of tags.
- There can be reader collision as signals from two RFID readers can interfere with each other where coverage overlaps.
- User privacy is since the tags contain static information it can be easily read by unauthorized tag readers.
- Materials like metal & liquid can impact signal.
- Sometimes not as accurate or reliable as barcode scanners.
- Implementation can be difficult & time consuming.

9.1 RFID Membership : Membership is having both category adults and children. The patrons can avail lending facility by enrolling as a member by depositing Rs. 200.00 for one book and one magazines, Rs. 450.00 for two books and two magazines and Rs. 750.00 for three books and three magazines and the members are allowed to keep the book for one month. A fine of Rs.1/- per day is charged for delay in returning the book. The books are issued through RFID issue smart card.

9.2 Website : A website serves as the best tool for accessing information resources over the World Wide Web. A dedicated library website of library provides the users fastest links to its collection & technologies. Goa State Central Library has its own website. http://centrallibrary.goa.gov.in OPAC is available at http://scl.goa.gov.in/opacwhere one can find the new arrivals, Demand for book; any queries regarding book one can find easily with the help of our website.

10. Use of Social Media :

Social media has t he potential to facilitate much closer relationships between libraries and their patrons. Social media is, a computer based collection of tools, is a platform where people can build social relations among people who share their interests, activities, personal matters, etc. They share their information in different forms, namely text, photos, audio, video, etc. Social media are a collective term for the online tools and services for sharing networking sites, photo and video among communities.

1. **WhatsApp:** It is instant messaging App for smartphones which have android operating system. One can find any book either messaging or any other details regarding documents. We can communicate with patrons to use this application on smartphone.

2. **Email:** This medium of mail is one of the best communication method with least cost and speedy. A vendor sometime mail the bank details.

Communication with Email has attain importance in Information and communication technology.

3. **Scanning:** The facilities of the scanning is able for researchers and library users at nominal cost in all working days. This is done for the damage to fragile and rare books.

4. **Microfilming:** Microfilming of 5 blacks pages is done to facilitated the researchers in finding the document in digitally dedicated room is allotted to microfilm browsing.

5. **Data Imaging Centre (DIC):** Data Imaging Centre is developed to preserve all the Rare books in the library in digital format a book scanner having the facilities to scan 18 inch document for preservation for National prosperity.

11. Conclusion :

There is growing influence of emerging trends in technology in libraries, especially as a network access becomes more affordable and more reliable. Technology have seen mainstream acceptance in teaching, learning and research. The development in technology services is available in the present made wonderful change in library operation. Libraries have always been about sharing knowledge, culture and skills and these new digital services are just one way of engaging with users and providing them with services to help them to enhance the academic pursuit.

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