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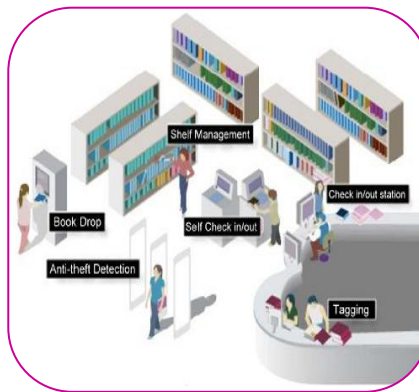
APPLICATION OF RFID TECHNOLOGY IN LIBRARIES

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ABSTRACT—

- Library consist intellectual capital it might be sublarly journals, books, reports theses etc. for security purpose, the goal of the security system should be to provide a safe and secure facility for Library employees, Library resources and equipment and library patrons. At the same time due to application of security system, that promise to increase efficiency, productivity, and enhance user satisfaction.



Considering the importance of library security the present paper concentrates on applications of RFID technology in Libraries, its components, benefits and role of librarian are described.

KEYWORDS-RFID, Library Security, Radio waves, security System, tag, theft detection.

INTRODUCTION-

RFID means Radio frequency identification i.e. the technology the uses radio waves to automatically identify individual items. The objective of an RFID system is to carry data in suitable, transponders, generally known as tags and to retrieve data, by machine readable means, at a suitable time and place and to satisfy particular application needs.

RFID technology is in use since the 1970s. RFID tags Can be active, semi passive and passive. It is a small device that can store information. Passive tags small don't have internal batteries. RFID reader is a device that can receive and transmit a radio signal. It is built to encode data stored in the tag's microprocessor. Because of the higher cost, active and semi-passive RFID tags are used for Valuable asset tracking. The Passive RFID tags are used in RFID Library management systems.

RFID LIBRARY MANAGEMENT SYSTEM

Using RFID in Libraries saves library staff's time by automatizing their tasks. An establishment that uses RFID Library management saves a book reader, precious time that he would have been spent, waiting for his turn in a queue for borrowing or returning a book. Taking care of books and making them available to the book readers are important tasks. Most of the library staff's time is spent in recording information of incoming and outgoing books.

Borrowing and returning of books can be fully automatized with the help of self check-in/out systems. This system involves installation of special Software. A person using this system to borrow books, is presented with options on a computer screen. The person has to identify himself with a code, which is

preferably a personal identification number, or any form of unique identity code. Books selected by the person are identified by the system's built-in RFID reader. And, the surveillance bit in the books tag is deactivated by system's built-in RFID Reader. And, the surveillance bit in the books tag is deactivated by the system. When a book is returned, the check-in/out system activates the surveillance bit.

APPLICATIONS IN RFID LIBRARY MANAGEMENT SYSTEM

1) Book Drops - The book drops can be located anywhere, within or outside the library. Possible remote locations outside the library include MRT / train stations, shopping centers, schools, etc. This offers unprecedented flexibility and convenience of returning library items at anytime of the day, even when the library is closed.

2) RFID transponder or tagging:- It is the most important. Link in any RFID system It has the ability to store information relating to the specific item to which RFID system to which they are attached, rewrite again without any requirement for contact or line of sight. Data within a tag may provide identification for an items, proof of ownership, original storage location, loan status and history. RFID tags have been specifically designed to be affixed in to library media, including books, CDs, DVDs and tapes.

3) Counter station is a staff assisted station on services such as loan, return, tagging, sorting and etc. It is loaded with arming/ disarming module, tagging module and sorting module. Arming/Disarming module allows EAS (Electronic Article Surveillance) bit inside the tag of the library material to be set /reset so as to trigger/not trigger the alarm of the EAS gate.

4) The Patron self check-out station. It is basically a computer with a touch screen and a built-in RFID reader, plus special software for personal identification books and other media handling and circulation. After identifying the patron with a library ID card, a barcode card, or his personal ID Number (PIN), the patron is asked to choose the next action (check-out of one or several books) After choosing check out, the patron puts the book (s) in front of the screen on the RFID reader and the display will show the book title and ID Number (other optional information can be shown if desired) which have been checked out.

5) Shelf Management. This solution makes locating and identifying Hems on the shelves an easy task for librarians It comprises basically of a portable scanner and a base Station. The solution is designed to cover three main requirements.

- Search for individual book requested
- Inventory check of the whole library stock.
- Search for books which are miss-helved.

6) Anti-theft Detection - RFID EAS Gates is the anti-theft part of the library RFID Management System using the same RFID tags embedded in the library items. Each lane is able to track items of about 1 meter and would trigger the alarm system when an un-borrowed item passed through them. The alarm will sound and lights on the gate will flash as patron passes though with the un-borrowed library material.

Important points based on RFID Library Management system

1. RFID tags replace both the EM security strips and Barcode.
2. Simplify patron self check-out / check in.
3. Ability to handle maternal without exception for video and audio tapes.
4. Radio Frequency anti-theft detection is innovative and safe.
5. High-speed inventory and identify items which are out of proper order.
6. Long-term development guarantee when using open Standards.

CONCLUSION-

RFID technology is not only emerging but also more effective, convenient and cost-efficient technology in library security. This technology has slowly begun to replace the traditional bar-code on library items. The RFID tag can contain identifying information such as a books title or material type, without having to be pointed to a separate. The information is read by an RFID Reader, which replaces the standard barcode

reader commonly found at a library's circulation desk. The RFID tag found on library materials. It may replace or be added to the barcode, offering a different means of inventory management by the staff and self service by the Borrower. It can also act as a security device, taking the place of the traditional electromagnetic security strip. And not only the books, but also the membership cards could be fitted with an RFID tag. The cost of the technology is main constraint.

REFERENCE

- 1) Acre, L.B. The Galeria Group Position Paper. RFID and libraries: Retrieved March 17, 2010.
- 2) Boss, Richard W. RFID Technology for Libraries, 2009
- 3) Lib Best: Library Management system: <http://www.rfid.library.com>