CASE STUDY

Leading College pilots LIBRARY MANAGEMENT MODULE at its library in Bangalore

A college library that requires to modernize its Library Management System to streamline operations while preventing errors and theft. Implementation of a next-gen RFID based solution helps improve efficiency and eases laborious tasks.

Company:
St. John's College, Bangalore, India

Facility: Library

Challenge:

- The college library contains thousands of books and meets the needs of hundreds of students. Efficient library management requires that only those books leave the premises that have been registered and allocated to a particular student, that they are returned within due date, and that they are then allocated to the student who is next in line to receive them.
- The library also requires up-to-date record-keeping of books to facilitate students reading within the premises as well as maintaining a ready inventory.

Proposed Solution:

- Library books are tagged with Essen RFID's Genera™ sticker tag. Each student is issued an ID card that contains the Personna™ tag. The Library Management System contains a record of each book and its location within the library, as well as the records of bonafide students and the books allocated to them. This is constantly updated in real-time.
- On request for a book, a library staff member removes the book from its shelf, while the HandyScanna™ hand-held RFID device that he his carrying records the removal and its allocation to a particular student. The back-end database is immediately updated.
- Xtenna™ reader/antennas mounted at the entrance/exit read the tags on the books when they leave the premises. The student's record is updated. If the Xtenna™ indicates a book being taken away from the premises that has not been recorded as outgoing in the system, then an automatic alert is flashed/sounded both to the librarian and at the security gate.
- On due date the system automatically sends out an SMS to the student that the book is due for return. When books are returned, they are again recorded by the hand-held RFID device and the student's record is updated. An SMS is sent to the student next in line to receive that particular book, stating that this book is now available for him.
- Students can also return books through the Bibliotenna™, an intelligent conveyorized RFID drop-box that reads tags on the books when they are dropped into it and automatically updates records. The drop-box is spring-loaded so that books do not drop down by more than two inches and stay undamaged in the process. The Bibliotenna™ also has a touch-screen display for searching books in the library.

Realised Benefits:

- Instant tracking and record-keeping
- Preventing misplacement, theft and borrowing disputes
- Automated efficiency in operations and queuing

TECHNOLOGY

Solution:
EPC Gen2 compliant asset and personnel tracking system

Tag Type:
Genera™ UHF Passive,
Personna™ UHF Passive

Reader/Antenna:
Xtenna™ Long Range,
HandyScanna™ (Hand-held)
Bibliotenna™

Read Range:
17 metres (50 feet),
2.5 metres (8 feet)

Method:
Multiple Tracking via Integrated Reader/Antenna modules,
Single Tracking via Hand-held Reader/Antenna modules
Number of modules: 4

Integration Platform:
RFID Middleware: Xtenna™ Studio
Application: Essen RFID's Library Management System
Database: SQL Server 2005 Exp. ed.

Tag Manufacturer/Supplier:
Essen RFID

Reader/Antenna Manufacturer:
Essen RFID

Systems Integrator:
Essen RFID

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