redefine library
processes
with
RFID
technology

RapidRadio» Solutions Pvt. Ltd.

www.rapidradio.co.in

RFID IN LIBRARY

- Radio Frequency Identification (RFID) is a technology that facilitates non line of sight identification of items. Basic elements of a comprehensive RFID system for library kind of environment are Tags, Readers & Library management system

- Implementing RFID system in libraries will aid tasks such as circulation, re-shelving & theft detection, and it has several other important advantages.

- It can either replace or supplement existing library bar code system. When the costs of labour is taken into consideration for tasks such as checkout, check-in, inventory holds, lists, mis-shelved items, etc., RFID can prove to be very efficient when compared to traditional bar codes.

- In short RFID streamlines workflow in the area of self service, books return, shelf management and inventory

ADVANTAGES OF RFID TECHNOLOGY

Libraries

Stock management
- Operations such as managing materials on the shelves, finding items that are missing and identifying mis shelved items are streamlined and taking stocks regularly will be feasible

Improved patron services
- Spending minimal time on circulation operations allows library staff to assist patrons
- Routine patron services are not disturbed even when libraries are facing staff shortages & budget cuts

Flexibility and modularity
- Ability to add newer products and features as finances and customer needs dictate
- Expenses of adopting the technology can be managed over a time period
- Allows for phased funding and more effective use of Institutional budgets

Security
- Library item identification & security bit is combined into a single tag, there by eliminating the need to attach an additional security strip, hence minimizing labeling time & its associated cost.
- Security bit is automatically deactivated & reactivated as materials are checked out and in; hence no separate security procedures are required

Library Staff

Less time needed for circulation operations
- Implementing RFID will considerably reduce the amount of time required to issue, receive, transport, sort & shelve library materials
- Automated check in will reduce staff time required for material handling

Efficient Inventory management
- Inventory management can be done using a handheld reader without closing the library and is at least 20 times faster compared to existing barcode based system

Reducing Repetitive Stress Injuries (RSI)
- RFID based system reduces repetitive scanning of individual items at the circulation desk during check in, check out and hence avoids RSI such as carpal tunnel syndrome
- Taking inventory in a rfid based system doesn't require physical deshelving & shelving of library materials

Patrons
- Patrons will spend less time waiting in check-out lines by using Self Check in - Check out systems
- Patrons find what they are looking for quickly & easily
- Reminders for due dates allows patrons to submit borrowed materials in time
- Use of book drops & return chutes for returning library material, allows for flexible timings
- RFID enabled patron cards allows for easy patron identification

Benefits of RFID over Barcode based system
- Non line of sight reading of multiple items at a time provides for efficient circulation of library materials.
- Locating specific items on shelves is possible using RFID based handheld readers.
- RFID based systems can be easily integrated with automated material handling (AMH) units to read moving items.
- On chip data storage & reprogrammable memory allows rfid tags to record information such as location of books in the library, statistics, etc.
- Auto Detection of unauthorized items going out of the library premises is possible using rfid based system.
- RFID based system can be used in harsh environment.

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IMPLEMENTATION CYCLE

Phase Wise Planning For Deployment Of Complete Solution

Sr. No.	Tasks	Schedule*					
	Weeks	2	4	6	8	10	12
1	Procurement of Hardware	■	■				
2	Tagging Books	■	■	■	■	■	■
3	Integrating Middleware	■	■				
4	Performing Test Cases				■	■	
5	Training Staff					■	■
6	Process Improvement					■	■

*The above schedule has been planned for tagging approx. 1 Lac books

Procurement of Hardware

Sourcing of RFID hardware i.e. Readers, Tags & Antenna needs to be done before starting anything else. Once the hardware specification and respective products are finalized, specific read regions can be decided and implementation can be done.

Tagging Books

Each & every book needs to be tagged. The process needs 2-3 people continuously affixing tags to specific area on the books as decided earlier from the findings during the pilot test.

Integrating Middleware

Integrating RapidRadio's middleware with the present LMS and testing the results for improvements and errors.

Performing Test Cases

Predefined set of test cases will be performed in scenario based format to examine unit level and system level performance for accuracy and greater throughput.

Training Staff

This part of the implementation will include training staff on various aspects of RFID Technology and the new system in place. There will be a demo & training session that will include all the processes in the system.

Process Improvement

The errors and improvements found out from the test cases will be revisited to optimize system performance.

WHY RAPIDRADIO

- Over 10+ yrs.of experience in providing RFID hardware solutions to more than 100+ libraries and seamless integration with multiple library management systems including KOHA, SOUL 2.0, Liberty 3.0, VTLS Virtua, Alice, SLIM21, Autolib etc. using global standards like NCIP V2.0 & SIP 2.0.
- Systematic approach to after sales support & affordable AMC with positive attitude, keeping end customer objectives always at top most priority.
- Single point of contact to execute tasks right from data entry of books to implementing full fledged Library automation project including RFID and surrounding technologies like CCTV, Attendance management etc in consortium with leading technology providers.
- A unique partnership program where we work with partners to increase their business and through them, whom we consider our customers, we achieve our business objective.

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PRODUCT OVERVIEW

Gate Detection System (RRHFGA2/GA3):
RRHFGA2 is ISO-15693 compliant walk through gate detection system capable of detecting unauthorized tagged items passing through it. It has inbuilt audio visual alert facility for theft detection and a minimum read range of 36 inches.

Staff Circulation Station (RRHFLB03):
RRHFLB03 is a plug n play multi protocol antenna-reader system specially designed for library circulation desk application. With a read range up to 25 cm it can be used for entry of new books or borrowers and issue/return of books at circulation desk.

Self Check in / Check out Kiosk (RRHFLB02):
RRHFLB02 is a stand alone multi protocol Self Check-in / Check-out kiosk primarily for self issue and return of books in Library. With its inbuilt screen and printer, patrons can view & print transaction related information such as number of books issued, outstanding fine (if any) etc. Customized information can also be printed on the transaction slip.

Book Return Station (RRHFBD01):
RRHFBD01 is a Touch Screen based multi protocol book drop primarily used for returning of library books. It helps in better circulation and gives time flexibility to patrons for returning of library materials issued by them.

HF Handheld Reader (RRHFHH3):
RRHFHH3 is a basic handheld reader primarily designed for performing activities such as shelf order checking, shelf-reading, searching, inventory scanning in library kind of environment.

RFID Tags (RRHFT01):
RRHFT01 are rewritable passive HF Tags working on 13.56 MHz frequency. Available in various types and form factors these are used for tagging library materials to uniquely identify particular tagged items using the RFID based automated library management system.

Smart Cards (RRHFSM01):
RRHFSM01 are standard 1K Mifare technology based contact less smart card used for various applications such as Identity cards, employee cards, access control and canteen cards.

RapidRadio Middleware Application:
- RapidRadio Middleware is a customized application to interface data from various RFID hardware products to the existing library management system.
- Key functions of the application are entry of untagged books, EAS bit setting for theft detection, check in check out, stock verification, identification of mis-shelved books and report generation.
- Includes features like email reminder, print slip, intelligent host protocol and user friendly GUI.

Client List :
"BCL, NEHU Shillong, IIM Shillong, IIM Ranchi, UAS Bangalore, RGU Itanagar, JNCASR Bangalore, CMI Chennai, DDE Jammu, Gujarat State Libraries, Sikkim University Gangtok, FLAME Pune, RCC Trivandrum, NLIU Bhopal and many more.."

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Tele/Fax: +91 79 27665256.
Email: reachus@rapidradio.co.in

www.rapidradio.co.in

RAPID RADIO LIBRARY LICENCE

RapidRadio

INVOICE

ORIGINAL COPY

CONSIGNOR	CONSIGNEE
RAPIDRADIO SOLUTIONS PRIVATE LIMITED	MAR GREGORIOS COLLEGE OF ARTS AND SCIENCE
B - 404, Satyamev Complex - I,	Block No. 8, College Road,
Opp. New Gujarat High Court,	Mogappair West,
Sarkhej - Gandhinagar Highway,	Chennai, Tamilnadu - 600 037.
Ahmedabad, Gujarat - 380 060.	Tel. No. : 044 - 26533140
T : +91 79 2766 5256	

Invoice No	Invoice Date	Place of Supply	Reverse Charge
2021277	01-Jan-2021	Tamil Nadu (33)	No
GSTIN	**PAN No**	**GSTIN**	**PAN No**
24AADCR2801E1ZZ	AADCR2801E	-	-
PO No	**PO date**	**Payment Terms**	**Delivery**
-	29-Oct-2020	As per PO	Gati KWE

Sr. No.	HSN	Model No	Description of Goods	Qty (nos)	Rate (p.u)	Amount
1	4821	RRISR01	Institution Labels	15,000	₹ 1.50	₹ 22,500.00
				Sub Total		₹ 22,500.00
				Special Discount		-₹ 1,301.74
				Sub Total (After Discount)		₹ 21,198.26
				IGST	18%	₹ 3,815.69
				Grand Total		₹ 25,013.95

Amount in Words *Rupees Twenty Five Thousand Thirteen And Paise Ninety Five Only*

Bank Name	Branch	Account No	IFSC
State Bank of India	Drive In Road, Ahmedabad	30699820898	SBIN0004192

1. Please issue an A/C Payee DD / Cheque in favour of "RapidRadio Solutions Pvt. Ltd." payable at Ahmedabad.
2. The above materials have been supplied as per your order reference.
3. Warranty on the product sold covered under the invoice are as per purchase order.
4. If cover under warranty terms and conditions; we issue return materials authorization (RMA) for acceptance.
5. In case of any discrepancies, the same is to be reported in writing within 7 days from the date of invoice.
6. Interest @ 18% p.a will be charged if the payment is not made within the stipulated time.
7. Subject to Ahmedabad INDIA Jurisdiction Only.

Declaration

We declare that this invoice shows the actual price of the goods described and that all particulars are true and correct.

For RapidRadio Solutions Pvt. Ltd.

Authorized Signatory

Form No. A-128

The Catholic Syrian Bank Ltd.   CSB

IFSC : | C | S | B | K | 0 | 0 | 0 | 0 | | | |

Branch Name :

Application for Fund Transfer through RTGS/NEFT Facility

Time: | H | H | M | M |

Request Date | D | D | M | M | Y | Y | Y | Y | 01-07-2021

Charges   Total

Facility Requested   RTGS ✓ · NEFT ☐

Amount to be remitted   ₹ | 19,930/- | | | ₹ | | | | | | |

Total Amount in Words   Nineteen thousand nine hundred and thirty only

Beneficiary (Receiver) Details:

Name   RAPID RADIO SOLUTIONS PVT LTD

A/c Number | 3 | 0 | 6 | 9 | 9 | 8 | 2 | 0 | 8 | 9 | 8 | | | | | | |

Confirm Ac N/o | 3 | 0 | 6 | 9 | 9 | 8 | 2 | 0 | 8 | 9 | 8 | | | | | | |

A/c Type # : | | |

Sender to Receiver
Information (if any)

Beneficiary Bank Name :   STATE BANK OF INDIA

Branch Name ·   Drive in Road, Ahmedabad

IFS Code of Beneficiary
Bank branch (11 digits) | S | B | I | N | 0 | 0 | 0 | 4 | 1 | 9 | 2 |

Remitter (Sender) Details:

Name   SECRETARY MAR GREGORIOS COLLEGE

A/c Number | 0 | 3 | 0 | 5 | 0 | 2 | 6 | 7 | 6 | 5 | 1 | 0 | 1 | 9 | 0 | 0 | 0 | 1 |
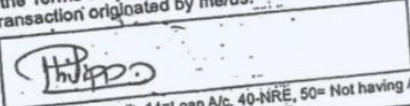
A/c Type#   ☐ ☐ Cheque No. 100424 · PAN | | | | | | | | | | |

Mobile No | 8 | 9 | 3 | 9 | 7 | 4 | 4 | 8 | 1 | 9 |

Proof of Identity
(for non-customers)

I have read and understood the Terms & Conditions mentioned overleaf and the Procedural Guidelines of RBI and
shall be bound by it for the transaction originated by me/us.

Applicant's Signature :   Philip

#A/c Type : 10=SB 11=CD, 13-OD, 13=Cash Credit, 14=Loan A/c, 40-NRE, 50= Not having A/c, 51=Indo Nepa Remittance, 52=Card Payments

For Office Use : UTR No | C | S | B | K | | | | | | | | | | | |

Message Authorised By :

Message Entered By :

The Catholic Syrian Bank Ltd.
Branch Name :

Name of sender	
Amount Rs.	
Name of Receiver	
Bank & Branch	
A/c No.	
IFS Code	

Authorised Signatory

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b c
ओ.बी.सी

Application for National Electronic Fund Transfer / Real-Time Gross Settlement Systems (NEFT/RTGS)

To   Date 2 4 1 1 2 0 2 0

The Branch Manager   PAN. No _____

Mogappaie west Branch   *To be Provided by OBC Bank Customer

Dear Sir,

Please remit through NEFT/RTGS a sum of ✓ 307540/ (Rupees in words) *Three lakh seven thousand five hundred forty only*   Only

as per details given below: * In case of cash, please fill in the pay-in-slip
                                                             * To be filled by the Applicant in CAPITAL LETTERS

☐ Cash   ☑ Cheque   ☐ Debit my/our account

DETAILS OF APPLICANT (REMITTER)

Account Number: 1 0 1 2 1 3 1 0 0 1 7 2 2

Cheque Number: 0 6 8 4 6 5   Cheque Date 2 4 1 1 2 0 2 0

Remitter's Name: MAR GREGORIOS COLLEGE

Address: BLOCK NO - 8 COLLEGE ROAD

MOGAPPAIR WEST CH - 37

Mobile/ Other Number: 8 9 3 9 7 4 4 8 1 9

DETAILS OF BENEFICIARY

Beneficiary's Name: RAPID RADIO SOLUTIONS PVT LTD

Account Number: 3 0 6 9 9 8 2 0 8 9 8

Reconfirm Account Number: 3 0 6 9 9 8 2 0 8 9 8

Bank Name: STATE BANK OF INDIA

IFSC Code (11 - digit): SBIN 0 0 0 4 1 9 2

Branch Address: DRIVE ROAD AHMEDABAD

Sender to Receiver information (if any) : _____

Terms and Conditions

- This transfer is valid for a single transaction
- The fund transfer will be governed by the Terms and Conditions given on our website www.obcindia.co.in
- Due care is taken while filling up the beneficiary account number & IFSC code.
- Transfer of an amount up to `49,999 in cash permissible using this facility.
- Photo ID proof to be given by non customer for cash payment.
- Please do not disclose your Account details/Internet Banking, User ID and Passwords/ATM debit Card/Credit Card/Mobile Banking/Personal Information

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ओरियन्टल बैंक ऑफ कॉमर्स
ORIENTAL BANK OF COMMERCE

नं.8 / 8, भारती सलाइ, मोगाप्पेयर, पश्चिम, चेन्नई—600037
No.8/8, Bharathi Salai, Mogappair West, Chennai - 600 037
IFSC CODE : ORBC0101012

VALID FOR THREE MONTHS FROM THE DATE

2 4 1 1 2 0 2 0
D D M M Y Y Y Y

PAY   RTGS   या धारक को OR BEARER

रुपये RUPEES *Three lakhs seven thousand five hundred and forty only*

अदा करें ₹ 3,07,540/-

For MAR GREGORIOS COLLEGE

खाता सं A/c No.   10121131001722

Authorised Signatory/ies
Please sign above
Secretary
MAR GREGORIOS COLLEGE
CHENNAI - 600 037

UFPL
MCA/A   सभी शाखाओं पर देय   PAYABLE AT ALL BRANCHES

⑈068465⑈ 600022009⑈   29