

The Radio Frequency Revolution: Tips and Trends for Implementing RFID Systems in Libraries

University of Connecticut's Implementation

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[http://www.pandc.org/peter/presentations/
ala-2004-rfid/](http://www.pandc.org/peter/presentations/ala-2004-rfid/)

June 28, 2004

Version 1.0.1



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UConn's RFID Profile

- Driver: Consolidation of four service points (Exit Control, Main Circulation, Circulation Charge Desk, Reserves)
- Replaced mediated exit control (visual verification of circulation status of items)
- Collection database mostly complete and most items barcoded
- Recent adoption of teaming principles and recognition of need to change staffing patterns

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Reasons for Implementing

- *Facilitate Self-service*: unmediated exit, self check-out, self check-in
- *Reduce Workplace Injuries*: streamlining workflow and reduction of repetitive motion
- *Streamline Inventory Management*: shelf reading and inventory, automated sorting to shelving location

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Technology Profile

- Checkpoint RFID System
 - 96-bit Write Once/Read Many (WORM) targets operating at 13.56MHz
 - 2 self-check systems; 2 exit control points (single-aisle and dual-aisle)
 - 12 RFID staff reader interfaces
 - 6 RFID programming and/or linking units
- Endeavor Voyager ILS with SIP2 interface

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Implementation Status

- Covers main campus library only
- 75% percent of collection tagged (approx. 900,000 targets)
- Focus to date on high-circulation main stacks, Art & Design library, reference, bound journals

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Timeline

- *June 2000*: Team recommends implementation of RFID system
- *Jan/Feb 2001*: RFP for RFID system
- *June 2001*: Collection tagging begins
- *September 2002*: Checkpoint RFID system live
- *Ongoing*: Collection tagging

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Implementation: Impact on Library Operations

Installing an RFID system will have an impact on most of the operating centers of a library. What follows is an overview of tasks by center:

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Stacks Maintenance

Collection Conversion

- 6-7 teams apply tags using programming units; circulation aids in bulk conversion when possible
- Tags programmed with item's original barcode
- Work from the most used or valuable to least

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Collection Conversion

- Conversion teams used mix of students and temporary staff
 - Student staff can be very productive and inexpensive but unreliable
 - Temporary staff provide consistency across the conversion project
- Programming units make noise -- moved mobile units to closed study carrels
- Programming is a two-stage process: write the accession number (barcode) to the item, then read it back
- Wear on programming units -- required replacement by vendor

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Circulation Services

- Items tagged by teams of students as they are returned from patrons
- Install self check-out machines (incl. help screen design/testing)

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Technical Services

- Revise workflow for application of tags
- Revise procedures to book jobber for shelf-ready items

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Library Systems

- Installation of private Ethernet network
- Integration of RFID system with integrated library system (SIP protocol)

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Physical Facilities

- Renovation of entry and exit locations
- Installation of CCTVs (includes VCRs and monitors) tied to gate alarms

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Administrative

- Arrange for a loan of programming units during the conversion phase
- Decide what to store on the RFID chip ("barcode", shelving location, circ status, patron id [*in order of decreasing recommendation*]); UConn uses "barcode" only

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Production: Impact on Library Operations

Once implemented, the work continues...

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Stacks Maintenance

- Prepare and execute inventory control and shelf reading operations

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Circulation Services

- Develop on-the-fly procedures for each of these possible combinations: item barcode (yes/no); item record in ILS (yes/no); already chipped (yes/no)
- Procedures and staffing for tagging on-the-fly items

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Technical Services

- Program tags used in-house or sent to book jobber for shelf-ready materials

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Library Systems

- Secure integrated library system:
"Library databases are often maintained by library staff who 'grew into' the job and may not have the training or expertise commonly associated with highly secure systems." -- Karen Schneider

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Administrative

- Promote and explain use of RFID technology for library processes
- Follow emergence of publisher-imbedded RFID tags

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System Expansion

- Self Check-in with optional sorting bins
- Portable wand system
 - Inventory control / Shelf reading
 - In-house use count

Sources for Further Information

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Sites and Documents

- ALA Library Fact Sheet Number 25 — RFID: A Brief Bibliography
<http://www.ala.org/ala/alalibrary/libraryfactsheet/alalibraryfactsheet25.htm>
- Boss, Richard W. "RFID Technology for Libraries"
<http://www.ala.org/ala/pla/plapubs/technotes/rfidtechnology.htm>
- ALA Office of Intellectual Freedom: <http://www.ala.org/ala/oif/ifissues/rfid.htm>
- Ward, Diane Marie. "Helping you Buy: RFID." *Computers in Libraries* 24:3 (March 2004), 19-24.

News and Commentary

- RFID_LIB mailing list
 - See http://libraryrfid.typepad.com/libraryrfid/2004/04/new_email_list.html for more information.
- RFID in Libraries blog
 - Homepage: <http://libraryrfid.typepad.com/libraryrfid/>
 - RSS: <http://libraryrfid.typepad.com/libraryrfid/index.rdf>
- Computerworld RFID Technology tracker feed
 - Homepage: <http://www.computerworld.com/news/special/pages/0,10911,2305,00.html>
 - RSS: <http://www.computerworld.com/news/xml/coverage/0,5451,2305,00.xml>