Millennium and RFID: Item Status API

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The Background Story

- HKDI & IVE-LWL Learning Resources Center (Library Service) was relocated from former IVE-LWL Library at Kowloon Tong (behind HKBU) in Summer 2010

- HKDI Library service started on September 6th, 2010.

- After months of operation, we found HKDI Library became the busiest Library among all VTC Libraries with a remarkable margin.
The Background Story

Circulation Checkout Figures for March 2012
The Background Story

RFID Project Timeline

• RFID Project initiated in May 2011
• The budget was confirmed and we started tendering in October 2011
• The tender completed in late January 2012
• Project completed on March 31, 2012
• Officially switched over to RFID on April 2, 2012
Benefits of RFID

- Able to process multiple items at a time
- Able to check and verify multiple items set
- Combined barcode scanner and sensitizer/desensitizer into one device
RFID vs Millennium

- Millennium wasn’t designed to process multiple items simultaneously.
- Required frequent communication between the Millennium and RFID pad.
RFID User Experience # 1

• Mainly based on SIP2 Technology.

• Works but with disadvantages:
  – SIP2 cannot handle advanced circulation functions
  – Costly. Each SIP2 workstation is expensive plus additional SIP2 license charged by III.
RFID User Experience # 2

Checkout

Checkin

RFID

Sensitize

Desensitize
RFID User Experience # 2

• Using intermediate program to pass barcode(s) to Millennium

• Working but with disadvantages:
  – Since Millennium will not talk back to the RFID Pad, operators will easily found mismatch on sensitization/desensitization processes and actual circulation transaction
  – Circulation process interrupted when problems encountered.
RFID User Experience # 2

3 items sensitized before Millennium process them
3 items sensitized but only 1 item was checked in.
3 items desensitized but only 1 item was checked out
1 item was desensitized but nothing processed in Millennium
HKDI Model : Item Status API

Checkout
Checkin

RFID

Sensitize
Desensitize
HKDI Model : Item Status API
HKDI Model: Item Status API
HKDI Model: Item Status API

The following item could not be checked in:

Title: 冷知識: 超簡單: 開Google Scholar
Author: No Author
Call number: AG 196 .J3 i310 2008
Barcode: 31111010826519

Please remove the item from the RFID pad.

OK
HKDI Model: Item Status API
HKDI Model: Item Status API
HKDI Model: Item Status API

Circulation Desk

RFID Pad Server Settings

Local IP Address: 192.168.10.150
Server IP Address: 192.168.10.150
Port Number: 21645
HTTP Context: RfidPadService
Timeout: 20
Interval: 1

Edit RFID Server

Local IP address: 192.168.10.150
RFID server IP address: 192.168.10.150
Server port: 21645
HTTP context: RfidPadService
Timeout: 20
Interval: 1

OK
Cancel
HKDI Model: Item Status API

- Works better with Millennium
  - Millennium could instruct RFID Pad to hold off rest of the barcodes, when problem appeared and waiting to be cleared
  - Millennium could feedback to RFID Pad to sensitize/desensitize items that had successfully checked in/out.
  - RFID Pad will feedback to Millennium whether items had been successfully sensitized/desensitized.

- Don’t need to pay for expensive SIP2 stations and licenses
- Don’t need to switch workstations for advanced Circulation functions
HKDI Model: Item Status API

• We didn’t find major problem yet.

• Items had been sensitized/desensitized accurately.

• Disadvantages:
  
  – Item Status API is not free.

  – Only works on Circulation transactions.

  – The RFID Pad needs to be compatible with Item Status API
Thank You