Using RFID technology at University of Sussex

Catherine Evans
Acquisitions Supervisor (Library)
University of Sussex
c.a.evans@sussex.ac.uk

Annette Moore
Technical Service Librarian (Library)
University of Sussex
a.moore@sussex.ac.uk

Introduction

Implementation of radio frequency identification (RFID) technology at the University of Sussex library for self-service issue and return has already brought significant benefits to our users, allowing issue and return of books throughout our extended opening times. In addition, the automated book sorter has enabled library staff to get books back on the shelves faster and has released staff time to provide more face-to-face help through the roving service. With the self-service, self-return and book sorter units in place, attention has now turned to investigating how RFID technology can be extended to other areas of the library to achieve similar staff efficiencies and improvement to services. With the arrival of Bibliotheca's smartstock™ 500 for bulk receipt and despatch of library items, we started investigating whether the use of this product would help streamline our workflow for the acquisition of new stock in the technical services section of the library.

Research

Our initial investigations began following a visit by our Library Systems Support Manager to the University of Central Lancashire, winner of the BIC/CILIP Innovation Award 2011,[1] where they had implemented receipting of new stock into their 3M™ Intelligent Return and Sorter system. Similar efficiencies have been achieved by Stockport Council to improve the back-office operations of library services using the smartstock™ 500 from Bibliotheca.[2]

In October 2012, we also visited Haringey Central Library to see the smartstock™ 500 in action, as they were also using the same library management system (LMS) as we were (Capita). Haringey library acts as a central depot for new orders that are in transit to several other public libraries in the area and process them without removing them from the supplier's box. Boxes were noticeably smaller than our own deliveries and fitted easily into the smartstock™ 500 unit. The unit itself takes up a considerable amount of space and requires a dedicated work area, preferably with a reinforced table as it is a heavy piece of equipment. A dedicated PC is set up with smartstock™ manager software installed, which integrates with the LMS to process transactions on orders. The process is activated from the smartstock™ manager and the progress of receipting can be viewed on the screen. The supplier notes on each box indicate the number of items the box contains, making it quick and easy to confirm that all items have been processed. A report that can be saved or printed as required is generated on screen. Staff at Haringey were generally very positive about the system as it is very easy to use and has reduced the pressure on the department, allowing them to process more items with fewer staff. They experienced only occasional problems, and use of RFID technology has greatly increased the efficiency of their back-office operations.

Preparation for implementation of smartstock™ 500

With such positive outcomes of the implementation of RFID technology for receipting new stock at other libraries, we decided to go ahead and put forward a proposal for purchasing a smartstock™ 500 unit for our acquisitions team. The key objectives were streamlining the receipting process in acquisitions and also freeing up staff time to take on additional project work within Technical Services. Additionally, a change in the structure of the academic year at the University of Sussex for 2012–13 meant that the start of the autumn term, in mid-September, was two weeks earlier than previously, thus reducing the amount of time from the end of the financial year rollover to the start of the academic year. Last year, over 2500 orders were put through to our main supplier in August and September, resulting in daily dispatches of over 200 items. This put considerable pressure on the acquisitions team, some of whom were on annual leave over the summer, and additional staff from another section were brought in to help out with receipting.

Switching to electronic data interchange (EDI) invoices

EDI invoices are an essential requirement for using the smartstock™ 500 RFID unit for acquisitions receipting. Following discussions with our main supplier, Coutts, and our LMS provider, Capita, we had switched over to EDI invoices in May 2012 for all orders placed with Coutts, with the exception of 'I-Found' orders for out-of-print material. The transition to EDI invoices went smoothly. Reducing the amount of manual inputting speeded up the receipting process and the reconciliation of invoices on our LMS. We also liaised with Coutts to add our sequence and size codes to the EDI quotes message, as prior to this staff had manually added the item level detail after receipting.

Delivery and set up

In preparation for the arrival of the bulky smartstock™ 500 unit , the Buildings Supervisor arranged for a large heavy-duty table to be ordered to accommodate it as well as a dedicated PC. As staff stand up to use the equipment, this table is higher than the normal office desk. Bibliotheca worked closely with Capita to integrate the smartstock™ 500 unit with the LMS, and work was completed in April 2013. Following a full risk assessment and staff training we started using the equipment in May

The smartstock™ 500 unit in position

Using the smartstock™ 500 for receipting

We have been using the RFID tunnel for receipting for several months now. Due to the size and weight of our deliveries from Coutts, we are not receipting the books in their original packaging but have been unpacking them onto a trolley first. Feedback from staff has been mainly positive. The smartstock™ 500 system can process the

receipt and payment of up to 50 books in less than a minute. The item count on the PC lists all the books that have been receipted. A report is generated on screen listing any barcodes that could not be receipted, along with any error messages. Reasons for items not being receipted include a barcode not being allocated, a tag being incorrectly processed or occasionally the tags being positioned too close together. These instances have not occurred frequently.

We have continued to check books against the invoice but only scan one copy of every title on the LMS. This is mainly to check any action messages in our internal note field ; this can include, for example, processing reservations, passing to cataloguing or withdrawing older editions. We also examine the item level detail to ensure that the sequence and class mark have been correctly allocated.

Checking in process using RFID

Time saved

Acquisitions staff all acknowledged that the process has become more streamlined. Moving to EDI invoices meant that staff no longer had to amend price changes and add the discount or VAT charges manually. The new process is particularly effective when receipting multiple copies of an edition as only one copy needs to be checked on the LMS.

Statistics from recent sample weeks have demonstrated that on average a box containing 35 items (and six different titles) can be receipted and processed in twenty minutes, averaging

0.57 minutes per book. This compares favourably with an average time of 1.3 minutes per item with manual receipting. Where a delivery contains a high number of individual titles or multi-volume sets, the processing time per item increases, as more intervention is required. Processing times are calculated from unpacking a box to placing items on a trolley ready for shelving.

It is still too soon to confirm exactly how much time will be saved from acquiring the smartstock™ 500 unit; however, we are most likely to appreciate the benefit during our busiest months of August to October, with daily deliveries of over 200 items.

Benefits achieved

Implementing RFID technology for receipting incoming orders has resulted in significant staff efficiencies, as well as reducing the time taken for new books to be available on the shelves. With less time now spent on manually receipting items, the acquisitions team have been involved in a wider range of projects, including development of in-house digitisation of course readings and a range of stock management projects, which they have enjoyed.

Implementing EDI invoices over the summer of 2012 completed the electronic supply chain lifecycle from selection to availablilty on the open shelves. The integration of RFID technology at the final stages of this cycle earlier this year for bulk receipting and payment can best be described as adding 'the icing on top of the cake'. This new streamlined acquisition workflow is helping us to meet our service level target that all books ordered for the library will be available on the open shelves within one working day of receipt, as well as freeing up staff time to be involved in more project work in Technical Services and to develop new skills.

References

1   University of Central Lancashire, 2011. *UCLan wins RFID Innovation of the year award 2011.* [Video online] Available at: http://youtu.be/QOqzw2Gw-Uc [Accessed November 2011]

2   Bibliotheca, 2012. *Case Study: Local authority library services improve back-office operations with the smartstock™ 500* [online] Available at: http://www.bibliotheca.com/1/index.php/our-products/staffsolutions/smartstock500 [Accessed October 2012]