

Hamburg Library Moves to RFID

The city's central library and 17 branches will start deploying a system to manage the circulation of 2 million items per year. Patrons will check materials in and out themselves.

By Rhea Wessel

Sept. 20, 2006—Starting in October, public libraries in Hamburg, Germany, will begin implementing an RFID-based system for checking materials in and out. The system will be provided by the Danish division of U.K. company [FKI Logistex](#).

FKI Logistex won the contract and a 10-year support agreement in a public tender from the city's public library system, [Hamburger Öffentliche Bücherhallen \(HÖB\)](#). The firm's Library Mate self-serve check-in and checkout kiosks will be deployed in Hamburg's central library and 17 city branches, where about 2 million items are circulated each year. The rollout will start with the branches, then move to the central library in April 2007. FKI Logistex expects to finish it next summer. The system will become operational some time after it is fully deployed.

Patrons and staff at Hamburg's libraries will benefit from faster check-in and checkout times, more accurate holding information and a better theft-control system, FKI states. The new RFID application will completely replace the libraries' current tracking system, which is based on bar codes.

FKI Logistex's system will use passive 13.56 MHz RFID tags to identify and sort such library materials as books, magazines and DVDs. At the main branch, patrons will have a choice of seven self-serve stations where they can check out materials they want to borrow, as well as four stations where they can check in materials they have finished using. The 17 library branches will each be equipped with one self-serve kiosk for both check-in and checkouts, but no sorting function.

At the branches' self-serve kiosks, all of which are handicap-enabled, patrons will place materials on a hip-high desk about 80 square centimeters in size. An RFID interrogator (reader) mounted underneath the desk will read the unique identification number stored on each passive 13.56 MHz tag. When items are returned, the computer system will confirm that they belong to the Hamburg library, and that all returns are complete. A confirmation message will then pop up on the touch screen in front of the customer, and a receipt will be printed.

When the interrogator reads a returned item's RFID transponder, this will automatically activate an antitheft protection system. Thus, if someone tries to leave the library with item not checked out, its tag will send an alert to the exit gate. As part of the project, FKI Logistics is providing security gates for library exits.

At the main branch, where the kiosks are attached to the sorter, patrons will slide items forward and the sorter will pull them in via the belt, under which is mounted an RFID interrogator. The sorter works with cross-belts that allow a capacity of 4,500 items per hour.

"It swallows the items and transports them further to the sorting system," says Peter Elmvang, marketing

manager for FKI Logistex Europe.

Items will be sorted according to the requirements requested, and will wind up neatly stacked on trolleys or in crates, greatly reducing the repetitive motions usually required by staff, such as bending to pick up stacks of books. The sorting machine can be as big as 22 meters long, 2 meters wide and 3 meters high.

At present, FKI Logistex plans to deploy a total of 41 Library Mate kiosks each containing one reader per station and up to 2 million transponders. Tagsys has been identified as the most likely vendor for tags and readers.

The massive task of applying RFID tags to books, DVDs and CDs is set to begin in October. The inside back cover of each book will be tagged with a square adhesive tag label. DVDs and CDs will be tagged with a round transponder inside a circular label, allowing them to retain the balance needed to spin properly, and keeping the transponder from interfering with DVD or CD play. Since discs within a set are tagged individually, the system can confirm that a complete set has been returned. If discs are missing, a message to the patron will pop up on the touch screen.

To check out items, patrons will put their membership cards in a slot, where their cards' bar-code number will be scanned. They then set their items on a desk, using guideline markings indicating where the materials should be placed for optimal reading by the RFID interrogator underneath.

FKI Logistex's application is up and running in libraries in Denmark and the United States. The Hamburg installation will be the first FKI Logistex system to include so many branches.

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