

Portuguese Book Megastore Deploys Item-Level RFID System

At its new store, Byblos is applying EPC Gen 2 tags to 250,000 books, games and videos to help customers locate and learn about their products, and to provide inventory and security applications.

By Claire Swedberg

Jan. 17, 2008—Portuguese book retailer Byblos has deployed an item-level RFID system in its new Lisbon store, Byblos Amoreiras, to track 250,000 books, games and videos. Byblos opened the 50,000-square-foot store for the Christmas shopping season with what Byblos COO Rui Gaspar calls the best technology available to enhance customer experience. The store, the largest in Portugal, claims to sell every book printed in Portugal.

The system includes 40 RFID-enabled kiosks where customers can learn about books and print out their sales-floor location. It also incorporates RFID security gates that sound an alarm if a tagged product is taken out of the store without being purchased, as well as 14 RFID point-of-sale (POS) reading stations. This system—which the company and its technology suppliers describe as the world's largest item-level RFID retail deployment—will enable the tracking of more than 50,000 books in the back room and about 200,000 books and other items on the sales floor. "The Byblos vision is to create the best possible experience to the visiting customer," Gaspar says, "giving complete, fast and accurate information [about] where his or her books are."

System developer and systems integrator Creativesystems provided the system using Vue Technology's TrueVUE RFID Platform. The software suite incorporates TrueVUE Site Manager, which captures all read events and manages the interrogators, and TrueVUE Essentials, which enables the store and its customers to employ RFID data for a variety of uses, such as locating books and tracking inventory.

When books or other items arrive at Byblos, employees use five Creativesystems check-in stations equipped with bar-code scanners and Avery Dennison RFID printer-encoders. They first scan the International Standard Book Number (ISBN), printed in bar-code form on a book's back cover. The ISBN is linked to the item's title, author and description in the store's ERP system. The item is then assigned an Electronic Product Code (EPC) number, using TrueVUE EPC commissioning software, and the employee prints and encodes an Avery Dennison RFID label containing an Alien Technology Squiggle EPC Gen 2 passive UHF inlay. Measuring 1 inch by 3 inches, the label was custom-made to be small enough to fit properly on the items.

If a book or other item is moved to the back storage room, about 15 by 5 meters in size, it passes through an Alien RFID portal, which captures the unique EPC encoded to the item's tag and sends that number, along with its own ID and the date and time, to the store's ERP system. Integration to the ERP system is provided by Tecnidata Grupo.

If an item is transferred to a shelf, the RFID number connected to that shelf (all shelf locations are identified by means of labels containing Alien Squiggle RFID inlays) is linked with the item's EPC number during

twice-daily inventory checks performed by store employees with [Nordic ID](#) handheld RFID interrogators. The devices transmit data via a wireless connection to the company's ERP system.

When a customer selects a book or other item, he can take it to a kiosk equipped with an [Advanced ID ST500](#) RFID interrogator. The kiosk's reader captures its number and a computer screen displays details about the book or item's cost, title and author, as well as other titles that might be of interest. At the point of sale, says Creative Systems' director, João Vilaça, the customer places a stack of items on the counter, and an Advanced ID interrogator captures their item tag ID numbers, displaying them on a screen for the customer as well as the store clerk, who then rings up the sale.

Patrons who have completed a purchase and are leaving the store pass through an Alien RFID portal that captures the RFID numbers of any items they are carrying and compares them with those of the items sold. If any ID numbers are not recorded as having been sold at the POS station, the portal reader triggers an audible alarm.

Thus far, the system is working well, Vilaça says. Some modifications needed to be made specific to the security gates, Vilaça notes, since many customers at Byblos also frequent [Throttleman](#), a nearby clothing retailer that employs RFID tags for a similar system, also provided by Creativesystems. If an item from Throttleman is carried through the Byblos gate, Vilaça says, the system will not recognize the EPC number and will not sound an alarm.

According to Gaspar, Byblos intends to open four more book megastores in 2008, in Portugal and Spain, then five more in 2009, all equipped with the same RFID functionality.

RELATED_ARTICLES Retailers in other parts of the world are installing or expanding item-level RFID deployments as well. Last year, for instance, [New Balance](#) tested an EPC Gen 2 RFID system in its Lawrence, Mass., store (see [New Balance Stepping Up Its Use of RFID](#)). Like Byblos' RFID system, New Balance's deployment uses Vue Technology's platform and Avery Dennison tags. The shoe manufacturer recently announced it has expanded its use of RFID by tagging all shoes sold in that store, and by deploying a self-service application whereby customers can utilize a [Motorola](#) MC70 handheld PDA to check on inventory.

In the next four months, says Gordon Adams, Vue Technology's senior sales VP, the firm expects to announce new initiatives by several more retailers, including one major company in North America that Adams says is launching a large-scale, in-store RFID implementation.

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