



Association for Automatic  
Identification and Mobility

# *The Competitive Edge*

AIM NA • 125 Warrendale-Bayne Road, Ste 100, Warrendale, PA 15086 • [www.aim-na.org](http://www.aim-na.org) • +1 724 934 5688

August 2007

*The Competitive Edge* is AIM North America's monthly, quick-read e-newsletter. Our purpose, as the title suggests, is to help you maintain your competitive edge and grow your business by putting you in touch with key information. Inside you'll find highlights on current reseller, integrator, distributor, or manufacturer issues and market trends (a feature titled *Headline AIM*), along with member-specific news and information. As good as *The Competitive Edge* is, we're open to new ways of making it even better, so your comments and suggestions are welcomed.

## Table of Contents

- Headline AIM—RFID: The Future in Book Technology
- Channel Bytes—Podcast Marketing
- New Members
- RFP Postings
- Industry Events
- Members in the News
- White Papers and Case Studies
- Get Your Products Front and Center
- Not a Member?

\*\*\*\*\*

### ***Headline AIM—RFID: The Future in Book Technology***

*By Dennis Dehainaut, BindTech, Inc.*

There's something satisfying about a book, in a world where technology is revered and most things require the flip of a switch to operate. It's comforting to crack open the spine, thumb through the pages, and feel the weight of the words written inside. But technology is ever-present and even the good ol' fashioned book may be getting a hip new upgrade in the area of security.

Consumers have seen white, plastic, rectangular security tags on everything from CDs and DVDs to electronic devices, and even on more expensive hard cover books. The problem is that those tags are secured to the product with a light adhesive, making them easy to remove. In addition, the tags are meant only as a security device, limiting their usefulness. But a new type of tagging is on the horizon. RFID (Radio Frequency Identification) tags are capable of remotely storing and retrieving data, moving beyond basic security and into the realm of inventory control.

### **How Does RFID Work?**

In simplistic terms, RFID technology allows manufacturers and retailers to track products by 'tagging' them with a small electronic device that contains information. That information

identifies the product and enables manufacturers and retailers to track its movements through the supply chain, from the manufacturing line all the way to the final sale.

For a more technical explanation, Eric Van Osten, managing editor of *RFID Product News*, describes RFID technology in the following manner:

*An RFID system consists of three major parts: tags, readers, and software. Tags are placed on the items you want to track. They contain silicon chips (only millimeters wide) that store a unique identifying number... The chip is attached to an antenna and the entire thing is embedded in a piece of plastic or paper label to create a tag that is placed on the product. The readers, which have their own antennas, are placed at portals throughout the supply chain where the items to be tracked will pass. A reader sends a radio signal out, which is picked up by the antennas in the tags. Each tag responds to the signal by sending back another radio wave that includes the tag's unique identifying number. Readers can read up to hundreds of tags per second.... After a reader has obtained the number from a tag, the software takes that data and organizes it in the company's network, producing real-time, accurate tracking capabilities in a fraction of the time it would normally take.*

Major retailers in the U.S. and abroad have been using RFID technology for a few years now, mainly on pallets, but rarely tagging at the item level. There are three levels of tagging, with most products being tagged at Level 1.

- *Level 1:* Tagging at the skid level. Packaged skids are labeled with one RFID tag, allowing shipment tracking from the manufacturer to the delivery site. Wal-mart began requesting this from its top-level suppliers approximately two years ago.
- *Level 2:* Tagging at the carton level. This is rolling out slowly, mostly at the manufacturing source. Extra effort is required at the manufacturing source to tag each carton, but time savings are seen at the delivery site when labor costs for shipment verification and inventorying are tracked.
- *Level 3:* Tagging at the source or item level. Tagging the individual product will be the last tagging level to see widespread implementation because it is the most costly and most difficult. In the majority of cases, source or item level tagging has to be done during the manufacturing of the product itself or when the product is bring packaged.

### **Why Libraries and Booksellers Love RFID**

Most binderies aren't concerned about RFID tagging quite yet. For RFID technology to be widely applicable at the bindery level, Level 3 tagging needs to be more commonly requested by the end distributor of the product at the manufacturing level, rather than being implemented after-market, which is most commonly the case. However, there are signs in the book industry that show a rising awareness in the benefits of RFID tagging for both library and retail applications, namely in time savings, security, and inventory.

**Time Savings:** Today, some libraries use RFID tags to automate check in and check out, thereby providing a simple computerized method of tracking which books are in circulation. This process, however, requires library employees and volunteers to hand-tag every book that comes through the door before it can be placed on a shelf. Adding RFID technology as an in-line process during book manufacturing reduces the labor costs associated with hand-tagging, continues to allow automated check in and check out for libraries, as well as providing the ability to locate books that are misplaced on the shelves.

At the retail level, time savings can be seen in the high-speed inventorying capabilities. In both applications, the long tag life associated with embedded RFID tags means no more time spent finding and replacing the tags that have fallen off (or been purposely removed) from books. RFID tags last longer than barcodes because nothing comes in contact with them.

**Security:** AM (acoustic magnetic) and RF (radio frequency) tags are used commonly at the retail book store level for theft prevention. These tags are hand-applied in the back room of stores, normally placed on the inside flap of the dust jacket or on the flysheet of a book. The adhesive is low tack, so the dust jacket or flyleaf is not torn when the tag is removed. However, this makes it very easy to remove the tag accidentally... or deliberately. Bookstore employees routinely find the security tags stuck under the shelves where books have been pilfered. In fact, most book thefts are not committed by amateurs wanting to read the latest Harry Potter book without paying for it. The majority of book thefts are by professionals, who then sell the books at online auction sites. This is no small problem – total retail shrinkage was estimated at \$60 billion in 2004, according to the PMMI packaging intelligence brief. Embedded RFID technology puts a stop to tag removal.

**Inventory:** RFID tags combine theft prevention with inventory control. Boekhandels Group Nederlands Selexyz (BGN) is Holland's largest bookseller. Ziff Davis, CIO Insights, reported in its November 2006 article, "RFID: The Book on Item Level Tagging", that the company recently completed a pilot program that tagged all inventory at its 1,000 square meter store in Almere. BGN's Jan Vink reported that taking inventory of new books used to take hours, as each box had to be opened. With RFID tagging at the item level, the inventory process was cut from four minutes per box to just seconds. Vink said that the greatest benefits have been improved customer service and increased sales. Sales at the Almere store increased by 12 percent through accurate inventory control.

How does accurate inventory increase sales? A study by AMR Research published in July 2006 on UsingRFID.com reported that retail products are out of stock 7 to 20 percent of the time. And the Grocery Manufacturers Association reports that approximately 75 percent of the time, the 'out of stock' item is in the back room inventory. What is the cost associated with out of stocks? According to IDTechEx, the annual cost to retailers globally is \$120 billion. With item level tagging, a signal can be sent from the check out counter at the front of the store to the stock room in the back, notifying store personnel to replace the product on the shelf when the last stocked item is sold.

### **The Evolution of In-line RFID Tagging for Books**

The only way item level tagging can provide its full benefits to the retailer and/or library is by incorporating it into the in-line manufacturing of the product or the product package itself. All efforts at doing the tagging as an after-market process has led to high labor cost, inconsistent tagging, and tags that fall off the product (or are deliberately removed). Until recently, there wasn't a process that allowed in-line tagging for hardcover products.

In early 2004, BindTech was asked to produce 1,500,000 case-made DVD packages to hold two disks of the movie 'Saving Private Ryan', the blockbuster hit starring Tom Hanks. The package was a printed litho cover wrapped around chipboard with a printed liner that was visible through the two clear mating DVD holders. A problem arose when it was decided that an AM security tag had to be placed under the clear tray so it could not be removed. As the liner was printed with copy and graphics, it became apparent that there was no place to put the tag that would not interfere with the design (or cover Tom Hank's face). The job was finished with the

tag covering the image of several soldiers holding a flag, but BindTech wasn't satisfied that this was the best solution.

As a result of that experience, BindTech spent months working with its manufacturing group, equipment manufacturer, and chipboard manufacturers to conceive a process that embeds a RFID, AM, or RF tag in the chipboard of a hardcover product, fully concealing it in-line during the manufacturing process. This solution allows item level tagging for any type or size of hardcover product at little additional cost, other than the cost of the tag itself. BindTech, Inc. has received its U.S. patent (US 7,183,918 B1) for the Smart Guard™ manufacturing process. Smart Guard eliminates the after-market labor cost of hand applying tags at the library and retail store level, eliminates the inconsistent tagging of books, and prevents the accidental or deliberate removal of the tag, as it's now fully concealed in the cover of the book.

In terms of in-line manufacturing books with item level tagging, the board can be debossed at the mill or in-house, and there are numerous manufacturers (like Markem Corp.) whose equipment can encode and apply more than one hundred RFID tags per minute to the covers as they come off of a case maker. The investment to book manufacturers wanting to have the capability of RFID item level tagging for books is relatively minor.

### **Challenges in Implementing RFID**

Although the benefits are clear, challenges still remain in implementing RFID at the item level. First, tagging books at the item level (Level 3) is probably several years ahead of the curve, as most industries are still trying to comply with Level 1 skid tagging. Second, the technology has grown in a number of directions, leaving some tags that only can be read by certain types of systems. This creates confusion in the market as to which tag and which system is the best. Thankfully, some consolidation has begun in the industry. EPC Global announced that the International Standards Organization (ISO) has accepted its Generation 2 RFID standards. Now more than a dozen readers, tags, and integration circuits have been certified as Gen 2 compliant by EPC global. Even more importantly, on April 17, 2007, the ratification of EPCIS was announced. EPCIS (Electronic Product Code Information Services) provides a standard set of interfaces for EPC data. This will go a long ways in creating standards-based RFID technologies.

A third concern lies at the publishing level. Publishers may see the benefit to the retailer or library, but adding RFID tags is simply an added cost to them. As the technology becomes more common place and more retailers see the benefits associated with RFID tagging, they will be the ones to put pressure on the publishers, perhaps to the point of sharing costs.

### **The Future of Books**

Item level tagging has begun in the drug and apparel industries, with companies like Pfizer, Glaxo, Smith Kline, and Levi Strauss presently shipping some item-level tagged products. IdTechEx Ltd. estimated item level tagging amounted to 200 million tags in 2006, with the majority being used for apparel, books, and drugs. They estimate item level tagging will be an \$11 billion dollar market in 2007.

RFID is now what the Internet was in the 1990s - expensive and with few users - but stick around for a little while. This is the future of books.

---

*Dennis Dehainaut is the vice president of sales at BindTech Inc. He has been in the book manufacturing/graphic arts business for over 30 years, with the last 12 years spent at BindTech, Inc. For further information, Dennis can be reached at [ddehainaut@bindtechinc.com](mailto:ddehainaut@bindtechinc.com) or by calling (615) 834-0404.*

This article was reprinted from the Spring 2007 issue of *The Binding Edge Magazine*, the official magazine of the Binding Industries Association. For more information, visit [www.thebindingedge.com](http://www.thebindingedge.com).

\*\*\*\*\*

**Channel Bytes**—This new column features marketing and communications tips that can be easily implemented in your business.

### **Podcast Marketing**

*By Michelle Kabele, Zebra Technologies*

Almost as soon as the original Apple iPod was introduced, people in the marketing profession began to realize the medium's potential to carry brand and product messaging. Today, podcasting is popular method for communicating corporate information that enables businesses to deliver valuable content to listeners. Because the sound of the human voice carries emotion, the medium can deliver content more effectively than text. In fact, some marketing experts believe that podcasting is more powerful than other marketing media such as direct mail advertising. By developing and incorporating a podcast into their marketing programs, companies can, for example, educate listeners about new and upcoming technologies in their industry, inform customers about soon to be released products, and promote new services. Use the following guidelines for developing your podcast.

#### **Plan Your Attack**

Before you even begin to record a podcast, you need to decide what you want to say, what your target market is, and what your call to action will be. At the end of your podcast you may want to point listeners to a specific web URL that will drive sales and measure how many people heard your podcast. You should also develop a script that tells the person doing the voice over exactly what to say. And due to people's generally short attention span, you should avoid creating a podcast that is longer than 20 to 30 minutes.

#### **Get the Right Tools**

To create your podcast you will need a PC and a microphone. Many computers already have microphones built in. But you might want to purchase an echo canceling variety to ensure the highest audio quality of your production. Headphones also are a good idea if you want to hear your recordings played back without hearing extra noise from your surroundings.

You'll also need software for recording voice such as one of the basic or preloaded programs that came with your PC's operating system. Or you can purchase a more sophisticated solution that enables you to edit the audio file such as ePodcast Creator or the simple to use and Windows and Mac compatible program Audacity. Audacity is available for free download at [audacity.sourceforge.net](http://audacity.sourceforge.net).

#### **Start Recording**

Go the file menu of your program and select New. Test your microphone's input level and then just click on the record button and begin. If you're using Audacity, the software saves the recording automatically as an .aup file. However, some programs cannot open this format so you should export your podcast as an .mp3 file after recording.

#### **Upload Your File**

After you're finished with production, you're ready to upload the .mp3 file to your website or publish it to a blogging service such as Podcasting.com or Apple's iTunes Podcast Directory. If

you want to publish on a regular basis, you'll need to create an RSS feed. You can do this with an easy to use program such as FeedForAll.

### Publicize Your Podcast

To ensure you get a large audience, you should e-mail contacts in your company's database that your program is available. Include some basic details that will attract their attention. And be sure to include a URL where they can download the podcast. You can also maximize your audience by ensuring your podcast is listed with web search engines such as Google and Yahoo and by using RSS search engines, including Google Blog Search, Bloglines, Feedster, and Technorati.

---

*Michelle Kabele leads the teams responsible for managing Zebra Technologies' innovative and highly successful channel marketing and product marketing strategies. She currently serves on the AIM NA board of directors and membership committee, and has an MBA from the J.L. Kellogg Graduate School of Management (Evanston, Ill.) and an undergraduate degree from Northwestern University (Evanston, Ill.). For further information, Michelle can be reached at [Mkabele@zebra.com](mailto:Mkabele@zebra.com).*

The tools and products listed in this article are for reference purposes only and should be not taken as an endorsement.

\*\*\*\*\*

### New Members

#### Specialized Business Products

Join Date: 7/30/2007

Specialized Business Products, Inc. sales and distributes labels, printers, and systems for the automatic identification markets in Puerto Rico and the Caribbean region., . . .

<http://www.aim-na.org/script/aimmembers.asp?mid=55795>



\*\*\*\*\*

### Recent AIM RFP Postings

- The State of North Carolina Department of Transportation is now accepting information from companies knowledgeable in the field of Vehicle Registration process to obtain information regarding state of the art technologies to provide visual proof of current registration-year validation (including RFID).
- Does any of your products work for /on TVs to keep track of them?
- I am working with a pharmaceutical wholesaler trying to implement the capability for item level tracking through the application of RFID technology.
- The Mexican Government is looking to implement a RFID program, to battle against auto theft crimes.
- The following is an attempt to explain the essence of an RFID system that I would like to find and implement in a relatively unique customer acquisition tracking program.
- Seeking estimated quote to retro fit a recycling collection truck and waste collection truck with software and 1,000 RFIDs to attach to existing recycling and trash bins.

- We have a need to identify what the cost (general ballpark figure for a DHS grant proposal) involved in having a RFID for four of our response vehicles.


For complete details and how to respond to these and other inquiries, members can [login](#)

\*\*\*\*\*

## Industry Events



AIM members receive reduced rates at all listed events with the “AIM Member Discount” logo. [Learn more](#)

Aug 21 – 23	<b>AutoTech 2007</b> <a href="http://autotech.aiag.org">http://autotech.aiag.org</a>		Novi, MI
Sept 11 - 13	<b>UID and eBusiness Forum</b> <a href="http://www.uidforum.com/">http://www.uidforum.com/</a>		Atlanta, GA
Sept 19 – 20	<b>Military Logistics Summit 2007</b> <a href="http://www.militarylogisticssummit.com/cgi-bin/templates/genevent.html?topic=329&amp;event=13105">http://www.militarylogisticssummit.com/cgi-bin/templates/genevent.html?topic=329&amp;event=13105</a>		Aldephi, MD
Sept 19 – 21	<b>RFID World</b> <a href="http://www.rfid-world.com">www.rfid-world.com</a>		Boston, MA
Sept 20 – 22	<b>VARTECH</b> <a href="http://www.bluestarvartech.com">www.bluestarvartech.com</a>		Nashville, TN
Oct 10 – 13	<b>FS/TEC Nation’s Restaurant News</b> <a href="http://www.fstec.com/home.cfm">http://www.fstec.com/home.cfm</a>		Atlanta, GA
Oct 15 – 17	<b>PACK EXPO</b> <a href="http://pelv2007.packexpo.com/index.html">http://pelv2007.packexpo.com/index.html</a>		Las Vegas, NV
Nov 12 – 13	<b>IMPACT NOW</b>		Orlando, FL
Nov 26 – 28	<b>RFID Journal Live Canada</b> <a href="http://www.rfidjournalevents.com/livecanada/">http://www.rfidjournalevents.com/livecanada/</a>		Toronto

Submit your events to [AIM NA <info@aim-na.org>](mailto:info@aim-na.org). Include your contact information, event name, dates, location, and website.

\*\*\*\*\*

## Members in the News

**SPAR Group Uses RFID to Track Promotional Displays—[Learn more](http://www.rfidjournal.com/article/articleview/3506/1/1/)**  
<http://www.rfidjournal.com/article/articleview/3506/1/1/>

**Wherenet Customer Endorsements Lead to More Industry Awards—[Learn more](http://www.wherenet.com/pr_07_23_2007.shtml)**  
[http://www.wherenet.com/pr\\_07\\_23\\_2007.shtml](http://www.wherenet.com/pr_07_23_2007.shtml)

**LXE, Inc. Wins Stevie Award® at 2007 Annual American Business Awards—[Learn more](http://www.ems-t.com/PressRelease/PressRelease.aspx?id=682)**  
<http://www.ems-t.com/PressRelease/PressRelease.aspx?id=682>

**Intermec Unleashes Improved Warehouse Productivity with New SR61ex Handheld Cordless Scanner [Learn more](http://www.intermec.com/about_us/newsroom/index.aspx)**  
[http://www.intermec.com/about\\_us/newsroom/index.aspx](http://www.intermec.com/about_us/newsroom/index.aspx)

Have a news item you'd like to share? Submit your news release to [AIM NA < info@aim-na.org >](mailto:info@aim-na.org) and we'll feature it on the AIM NA website as well as in a future issue of *The Competitive Edge*.

\*\*\*\*\*

### **White Papers and Case Studies**

AIM NA members are experts in their field and are pleased to share their collection of white papers, case studies, reports, and/or position statements pertaining to barcode, POS, RFID, mobile computing, UID, direct marking, and other automatic identification and mobility technologies.

A2B Tracking, Inc. submitted the following two UID-related papers for your review:

- Unique Identification: How to Achieve Compliance
- UID Case Study: Barrett Firearms Manufacturing, Inc.

For complete details and to download these materials, visit the [AIM NA Document Library](#).

To submit your position statements, case studies, reports, and white papers, visit <http://www.aim-na.org/doclibrary.htm>.

\*\*\*\*\*

### **Get Your Products Front and Center in the Eyes of Your Customers**

AIM North America's electronic marketing platform will help you gain visibility among your customers. Both website and electronic newsletter advertising customized to fit your marketing budget are included, utilizing the following communication vehicles:

- *The Competitive Edge* newsletter
- AIM NA home page
- AIM Buyers Guide (for AIM NA members only)

Special member pricing is available. For more information, visit <http://www.aim-na.org/Advertising.php?> or contact [AIM North America < info@aim-na.org >](mailto:info@aim-na.org) today!

\*\*\*\*\*

**Not a member? For the cost of a mere cup of coffee per day**, your company can access information and cutting-edge solutions to grow your business. Resellers, integrators,

distributors, and manufacturers are provided marketing tools, resources to generate leads, and educational opportunities with the goal of increasing sales and maximizing profits. Improve your competitive edge with membership in AIM North America. [Learn more.](#)  
<http://www.aim-na.org/Nabenefits.asp>

\*\*\*\*\*

**THE FINE PRINT**

This e-newsletter is brought to you by the  
AIM North America  
125 Warrendale-Bayne Road, Suite 100, Warrendale, PA 15086 USA  
Phone: +1 724 934 5688 • <http://www.aim-na.org>  
If you **do not** want to receive *The Competitive Edge* by e-mail,  
please e-mail [AIM NA](mailto:info@aim-na.org) <e-mail [info@aim-na.org](mailto:info@aim-na.org)>.