

# RFID READER

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## VICS/CSCMP Item-Level RFID Forum

The University of Arkansas hosted the Voluntary Interindustry Commerce Solutions/Council of Supply Chain Management Professionals (VICS/CSCMP) Item-Level RFID Forum January 30-31, 2008. The event was co-sponsored by Dillard's, Inc. and Procter & Gamble. The first day featured lab tours and demonstrations at the University's RFID Research Center. Justin Patton and David Cromhout led three tours throughout the day. Each tour began with a look at the life of a tagged item moving through the supply chain from the manufacturer's shipping dock, through a distribution center pallet rack storage and conveyor system, to the back room and sales floor of a store, the Point-Of-Sale (POS), and finally to an RFID-enabled trash compactor at the end of the product's life.



The second day found conference members seated in the auditorium of The Donald W. Reynolds Center for Enterprise Development on the University of Arkansas campus. Dr. Bill Hardgrave kicked off the morning by speaking on the lab's continued efforts to investigate and optimize industry implementation and adoption of RFID technologies. Dr. Hardgrave spoke of the various retail-specific use case scenarios and results obtained during lab testing over the course of several months. Bill Holder, Dillard's Vice President and CIO ([www.dillards.com](http://www.dillards.com)), spoke on "Dillard's RFID Roadmap." He allowed attendees an inside look at Dillard's aggressive RFID goals and planned pilot implementations, as well as... (Continued on page 2 of this newsletter)



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## *VICS/CSCMP Item-Level Forum, Continued*

(Continued from page 1)...Dillard's plan to achieve automated inventory management per department through the reading of source-tagged inventory.

Also speaking was Zander Livingston, RFID Project Manager for American Apparel Inc., on the subject of his recently completed American Apparel RFID pilot program. American Apparel ([www.americanapparel.net](http://www.americanapparel.net)) recently tagged every sales item in one of their leading New York stores and has been monitoring RFID vs. Enterprise data over the past 3 months in an effort to characterize a scalable rollout to more than 150 stores across the country. American Apparel has a closed loop supply chain with manufacturing located in downtown L.A. and are a prime target to realize their goals of consumer driven demand and end-to-end supply chain improvements through RFID source tagging of their merchandise.



Simon Langford, the Director of EPC Strategies at Wal-Mart ([www.Walmart.com](http://www.Walmart.com)) was next to speak regarding the giant retailer's EPC initiative. Wal-Mart's EPC deployment is poised to be complemented by the recently announced Sam's Club tagging program. Sam's Club have recently mandated consecutive pallet, case, and selling-unit item level tagging beginning in January, with pallet level tagging progressing to item-level in the next three years. Sam's Club's are charging compliance fees of \$2.00 for each untagged pallet currently entering their Texas distribution center, this being the first distribution center of approximately twenty involved in the Sam's Club initiative.

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### *Cycle Counting*

The RFID Lab has recently been demonstrating three different cycle counting methods: Handheld readers, smart shelves, and zonal monitoring systems. We will discuss the first two in this issue of the RFID Reader. Loosely defined, cycle counting is the process of keeping a check on the total amount of inventory on hand at any given time and is used in daily store operations such as purchase orders, replenishment lists, and pricing/mark down decisions. RFID Handheld cycle counting methods, in essence, are an evolution of barcode cycle counting performed by associates using mobile devices which have been adapted or redesigned to include an antenna capable of reading RFID tags. Many end users see Handheld RFID cycle counting as a less efficient way to implement what is essentially a technology designed to introduce automation. Handheld RFID readers are still subject to the potential execution errors committed by associates, and therefore reduce automation of the inventory collection system. Obviously, the increases in both speed and accuracy of RFID Handhelds still make this technology attractive to deploy. For instance, a clothing fixture containing...(Continues on page 3)



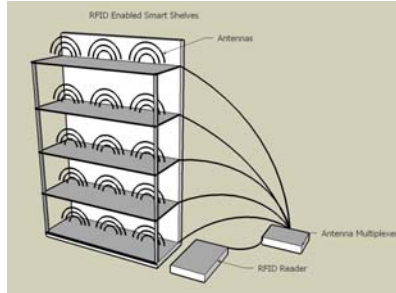
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## Cycle Counting, Continued



(Continued from page 2)...one hundred RFID tagged garments is capable of being accurately inventoried in approximately seven seconds, a time simply unachievable through conventional barcode methods. Additionally, an RFID Handheld reader will not double scan a tag, as an associate holding a barcode scanner may be prone to doing, thereby incorrectly reflecting on-hand inventory totals.

The second method of cycle counting, Smart Shelves, do precisely what their name implies; they have embedded antennae capable of reading tagged items stored directly on the shelving fixtures. Many Smart Shelf applications employ multiplexers which essentially allow multiple antennae (many more than the customary four in most current readers) to be connected to a single reader. The concept behind Smart Shelves is to increase the number of touch points communicating with tags while simultaneously positioning these touch points in close proximal range to the inventory. The reader is capable of cycling through each Smart Shelf antenna on a continuous basis, thereby providing perpetual inventory cycle counts within the time, often seconds, taken to loop through all the shelf antennae. While the cost of placing Smart Shelves

throughout and entire department store might currently not seem viable, certain sections within certain departments, and certain product types, have operational issues ideally suited to Smart Shelf cycle counting. Jewelry, for example, is a high-dollar, small-sized item prone to theft. Smart Shelves have the capability of automatically verifying what merchandise is currently on or off the shelf, or misplaced and hence incorrectly priced. While early Smart Shelf form factors were solid, rigid shelving units with prefabricated internal antennae, future models will sport more mobile, flexible capabilities better suited to more rapid deployment and versatility.

## Student Profile

### Yen Nguyen



Yen Nguyen is a senior at the Sam M. Walton College of Business with a graduation date of May 10, 2008. She is pursuing a major in Marketing, with a Transportation and Logistics minor. Yen plans to continue her studies with a graduate degree in Transportation Logistics. Yen joined the RFID Research Center as a Research Assistant in fall of 2007. She has been actively

involved in many extracurricular activities at the University of Arkansas, participating in: Women In Logistics, the Professional Development Center, the University of Arkansas Student Ambassador Program, Emerging Leaders, Vietnamese Student Association Advisor, and numerous intramural sports.

After graduation, Yen hopes to obtain a fulfilling job in the Transportation and Logistics industry. For more information on Yen or to see her resume, please email Justin Patton at [jpatton@walton.uark.edu](mailto:jpatton@walton.uark.edu).

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