THE Hawk Report

A quarterly resource for retailers

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Evolution Robotics Retail™

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Under the Hood

Future of EvoRetail

We are pleased to share some exciting news regarding changes underway within Datalogic. We are integrating four businesses, Datalogic Scanning, Datalogic Mobile, Enterprise Business Solutions and Evolution Robotics Retail, to form one division, Datalogic ADC (Automatic Data Capture). Evolution Robotics Retail will merge with the Enterprise Business Solutions group to form the Datalogic ADC Solutions Business Unit. Our planned "go-live" date for the new division is January 1, 2012.

DATALOGIC
AUTOMATIC DATA CAPTURE

Our goal is to have one integrated platform for Operations,

IN THE NEWS

See LaneHawk at:
NRF 101st Annual Convention and EXPO
Javits Center
January 16-18
New York, New York
Booth 1661

Watch your inbox for an invitation to our Annual NRF Party!

TEAM MEMBER PROFILE

Sales & Marketing, Finance, and IT processes to support all of our businesses. We are confident this change will produce important benefits which will make us a better business partner. For instance, the integration will:

- Allow us to offer a broader product portfolio ranging from hand held and fixed retail scanners to mobile computers and integrated business solutions all from one source
- Allow us to improve our overall efficiency through the adoption of best practices
- Enable us to create better value for business by improving our focus on products and solutions aimed at specific vertical market requirements
- Make us easier to do business with by streamlining key processes and providing you with one point of contact.

While we have made a lot progress there is still much to do. Rest assured we will keep you informed as we make key decisions and further our progress.

Starting January 1, 2012, Evolution Robotics Retail will change it's name to Datalogic ADC Solutions. We look forward to seeing you at NRF with our new hat on!

Future Trends

Automated Scanning

Like envelopes through a postal processing center, your items are whisked away on a conveyor belt. The belt moves faster than you can unload. By the time you've finished unloading and walked the few feet to the bagging area, everything has already been scanned and your total is waiting for you. As you complete your payment, the items are being bagged and placed in your cart. You leave the store with a nagging sense that you've forgotten something. Surely that couldn't have been so fast and easy?

This is the future and it's closer than you might think. For years, the concept of scanning tunnels has been a dream on the horizon, always a few years off. The solutions have never been effective, or at least not cost effective. Let's face it, you can't install an MRI in every lane and you can't put RFID chips on everything. But elements of the solution already exist, and they're ripe to be combined into something that will revolutionize the front end of modern grocery stores.

As an item zips down the belt, the customer won't know that it's being scanned on all sides to locate its barcode; that sensors are geometrically modeling the item to assign barcode reads to unique physical items; that the item's packaging is being inspected and validated using vision recognition. When there are two barcodes or damaged barcodes, the customer won't know that a piece of software is building fuzzy lists of possibilities and using data from the POS, vision recognition, and geometry to automatically identify the right product. The customer will just hear a beep.

Justin Beghtol

Justin Beghtol is a Senior Software Developer at Evolution Robotics Retail. He leads the development of our core products, including LaneHawk and LaneHawk Enterprise Manager, and serves as architect and build manager as well. As Evoretail's in-house author, he's penned several Hawk Report articles and User Guides. Justin came to Evoretail by way of Nokia Mobile Phones, where he spent a decade managing software development for wireless phones. He holds a B.S. in Computer Science from the University of California at San Diego. Justin enjoys reading, snowboarding, computer games, and writing fiction. He's currently working to finish the sequel to his first book, *Duranaki Chronicles*.

For the retailer, the automated scanning system will dramatically reduce sweethearting and other front-end shrink while increasing throughput. The combination of multiple detection technologies will protect them from UPC fraud. Associates will have fewer repetitive stress injuries.

But a store's front-end is not about technology alone, it's also about the shopping experience. Automated scanning could create a faster self-checkout solution with a fraction of the exceptions, or be paired with labor and multiple bagging areas to get customers out in a fraction of the time. Or perhaps it will just allow the cashier more time to ask the customer about their day. How do you envision your front-end of the future? Don't think too long, the horizon is closer than it looks.

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Product Update

LaneHawk InCart

LaneHawk InCart is a member of the LaneHawk family, which has gone through a significant update. LaneHawk InCart has the same basic goal as LaneHawk Bob - making sure that items that go through the checkout lane get paid for. LaneHawk InCart identifies items in the shopping cart from an overhead camera. LaneHawk InCart then compares the identified items to the TLOG and notifies the cashier if an item is left in the shopping cart unpaid for. Because LaneHawk InCart is an automated solution, it can recognize items in real-time and alert the cashier before the transaction has completed, making sure that you get paid for the items.

LaneHawk InCart is also capable of identifying UPC fraud. Sometimes thieves will enter a store and alter the barcodes on expensive products. They will place a barcode for a cheaper product onto the package of an expensive product. When they take the item to the register, they will pay the lower price and then, usually, sell the product for a profit. Because LaneHawk InCart is constantly monitoring the front-end from a ceiling camera, LaneHawk InCart can identify the expensive items that are not in the transaction and alert the cashier and store security.

A new exciting feature of LaneHawk InCart is the ability to monitor cashier sweethearting. Cashiers and their accomplices may collude to steal thousands of dollars worth of merchandise by pretending to scan, but not actually scanning, the items in the order. The accomplices can then leave the store without having paid for the items. Unfortunately, this form of theft is very hard to detect, and once loss prevention is

aware of a particular cashier, it may take a long time to catch the employee in the act. LaneHawk InCart can automatically correlate the items that it recognizes on the checkout belt to the items in the transaction and identify patterns of cashier misbehavior.

LaneHawk InCart uses the same patented ViPR technology as LaneHawk Bob. In fact, LaneHawk InCart can run standalone or LaneHawk InCart and LaneHawk Bob can run cooperatively on the same server, using the same item database and they can work to provide a robust and more secure front end.

LaneHawk InCart works in real-time for the cart and works on an ongoing basis for the sweetheart monitoring. LaneHawk InCart provides timely reports tracking cashier usage in order to target suspicious activities and reinforce best practices.

LaneHawk InCart is currently being piloted at select customers and is available for broader pilots in March 2012. Please contact us if you are interested or have any questions or if you feel this solution will work for you.

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Retail Benchmarking

Case Study

BOB (bottom-of-the-basket) Loss in the Grocery Industry and how the LaneHawk BOB Solution from Evolution Robotics Retail is combating this problem

Grocery is a very competitive business and every item counts. One significant problem is the loss of items left in the Bottom-of-the-Basket, BOB for short. Recent data from a Supermarket and Security Loss Prevention Survey, produced by the Food Marketing Institute, indicates that employee front end theft accounts for 50% of total in-store shrink.

BOB shrink is particularly hard on a store's margins since a single BOB item can often run $10 or more - for example, a 12-pak of paper towels, a large pack of diapers, or a large box of laundry detergent. Just a single loss per lane per day can cause millions of dollars of annual profit loss for a large chain.

Numerous attempts have been made over the years to combat this problem, from cashier training, to lane redesign and mirrors, to video and infrared sensors. The common problem with these other efforts however, is that they can't integrate with the POS (point of sale) and they can't recognize what the

BOB item is and check the transaction to validate that the items has been rung up. That means that they can't ring up items before they're lost, they can't deter collusion, and they can't stop cashiers from ignoring that an item is on the bottom of the cart. Enter, LaneHawk. LaneHawk can recognize and ring up items without seeing the barcode.

No Frills Supermarket based in Omaha, Nebraska, realized they had an ongoing problem with bottom of the basket loss (watch video) and realized they were at the point where it had to be addressed through technology. With the emergence of the LaneHawk BOB solution by Evolution Robotics Retail, there is now a system that can identify an item and send that information to the POS in real time. LaneHawk BOB is a visual scanner that recognizes items without having to read the bar code. The technology behind LaneHawk is the patented ViPR™ (visual pattern recognition) which can be found in more than three million machines worldwide.

How does LaneHawk work? A smart camera is flush mounted in the checkout lane, continuously watching for items. When an item is detected and recognized, its UPC information is sent directly through an Ethernet connection to the POS. The cashier verifies the items that were found under the basket and continues to close the transaction. The item can remain under the basket. And, with LaneHawk BOB, you're assured to get paid for it.

The LaneHawk application is independent of the POS system and communicates with the POS through a message stream. During the implementation process, the Director of IT at No Frills was impressed with the accuracy of the system, how unobtrusive it is to the customer shopping experience, and the ease of installation (watch video).

As with any new technology investment one of the critical questions is, "how long will it take to recoup my investment.". The CEO of No Frills knows on a weekly basis where his margins should come in. When the initial numbers were returned during the first few weeks of LaneHawk being deployed, he was amazed at the fast ROI (watch video).

Currently installed in more than 15,000 grocery lanes across the United States, the LaneHawk BOB loss prevention solution is providing such important business benefits as reduced shrink, tighter business controls, improved checkout lane productivity and most importantly - a rapid ROI.

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