

Wireless World: Stop, diamond thief!

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An aspiring diamond thief takes a job at a jewelry company's warehouse, surreptitiously planning to scam his employer out of some of its lucrative inventory over the coming months. It's apparently a common confidence trickster scenario found in the diamond trade -- but one that new technology is increasingly starting to unravel.

Technology developers such as Nasdaq-listed Click Commerce and Klein Brothers, a privately held company, among others, are working with diamond and jewelry firms to embed radio frequency identification technology in product containers.

"There is commonly a shrinkage of inventory in diamond warehouses," said Pete Racine, a vice president of Chicago-based Click Commerce, a leading firm in the emerging field of managing inventory data from RFID. "We're working with a client to determine why. It could be theft."

There could be other reasons too -- including product loss. The RFID project is in the works now at a warehouse facility for a national jewelry store chain. Workers entering the facility are also scanned with a magnetic resonance imaging style technology. That project is still relatively secret, however. But another firm, Klein Brothers, based in New York City, last year installed and implemented an RFID envelope tracking system at what it described as a "large" diamond manufacturing plant. The company tagged 20,000 envelopes, which contained diamonds, and tracked them via the RFID chip tags from initial purchase, through manufacturing, until their final sale.

The wireless technology helps the company's managers and owners determine the exact location of each diamond-laden envelope throughout the manufacturing and sales process -- across many different offices, sites and plants around the world.

The cost per tag is something like \$1.20 -- but the investment is apparently well worth it. The average diamond for sale through this manufacturer is worth \$5,000. So the theft of one diamond could be quite costly. Another possible problem: shipping the wrong size diamond with an order. That leaves thousands of dollars in revenue, unrealized, sitting in a safe somewhere.

Yet another boost provided by RFID to the diamond trade is by reducing the amount of time needed for an inventory count. By storing all the diamonds in envelopes with RFID labels, the inventory count time is reduced dramatically. What once used to take days and 20 employees to handle can be done in a few minutes with just one worker. This is called automatic information and data collection.

"RFID is dramatically cutting labor costs," Racine, of Click Commerce, told Wireless World.

Last year the industry image of RFID was that it was just a tool for compliance, something that major distributors were implementing just because Wal-Mart or another large customer asked them to do so. Now, new, previously unimagined benefits are emerging from the wireless technology. "We're tired of hearing about Wal-Mart and German super stores too," said Melissa Berg-Baker, a spokeswoman for Click Commerce, noting that those outfits have received most of the publicity over RFID during the last year or so. "There's much more to RFID than just compliance. It's leveraging RFID across the supply chain to deliver benefits within the four walls of the warehouse or distribution center and across all tiers and stakeholders in the supply chain. Getting there

requires more than a compliance-oriented view of RFID solutions."

At its headquarters in Chicago, Click Commerce recently debuted what it calls its RFID Competency Center to showcase RFID solutions for managing the manufacturing and distribution supply chain. The demonstration -- using technology developed by Click and by another firm, Vue Technology -- tracks the movement of inventory through a multi-tier supply chain, from manufacturing to delivery at the retail store and placement on the shelf there.

Other leading firms are also demonstrating new uses for RFID. Cisco Systems, RedPrairie and Intermec last month announced that they were demonstrating a "forklift of the future" that utilizes RFID technology for a wireless warehouse initiative. Another project, being promoted by the technology developer Ekahau, is seeing RFID used in underground mines to track the location of miners, so-called real-time location services that work over standard WiFi networks, so "there is no need for businesses to purchase proprietary systems that would require the build out of a separate network just for wireless safety applications," a spokesperson for Ekahau told Wireless World.

That being said, Wal-Mart hasn't given up on its vision for RFID just yet. The company anticipates that 1,000 stores will by next January be able to handle RFID-tagged merchandise -- with 600 suppliers compliant for the project.

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