Weyerhaeuser Offers High-Volume Source Tagging, But Demand Still Low

The company is supplying pretagged cardboard boxes to several of its customers, and plans to license its process for manufacturing RFID-tagged cardboard to International Paper and other firms.

By Mary Catherine O'Connor

April 11, 2008—In March, paper and packaging giant Weyerhaeuser sold its Containerboard Packaging and Recycling business (including paperboard mills, packaging locations and recycling facilities) to International Paper for $6 billion in cash. But that doesn't mean the company is pulling back its interest in RFID technology—just the opposite, says Jeanne McCann, Weyerhaeuser's senior project manager for RFID and printed electronics.

Weyerhaeuser has developed an RFID application process for manufacturing RFID-tagged cardboard, which it plans to license to International Paper and other firms. The company is also still pushing the development of printable RFID tags—an effort it initially invested in with the purchase of Organic ID in 2006 (see Weyerhaeuser Acquires Tag Innovator Organic ID).

In 2005, Weyerhaeuser began developing a high-speed RFID label application process with the help of WS Packaging, a label converter and provider of high-speed label applicators, and VerdaSee, a printing and packaging engineering consultancy. Presently, a small number of Weyerhaeuser customers receive pretagged cardboard boxes that they utilize to track and trace product, either to comply with retailer mandates or to improve their own supply chain visibility. Using pretagged corrugate boxes saves these companies labor and infrastructure costs associated with applying RFID labels themselves, either by hand or through the addition of an RFID label printer-encoder-applicator on a packaging line.

Among the Weyerhaeuser customers purchasing source-tagged cases, McCann says, is the Hawaii Department of Agriculture, which is using the cases in a trace-and-trace pilot program that it hopes will develop into a permanent product traceability system. Such a permanent system would allow the agency to react quickly to produce recalls (see Hawaii Plans Trace-Back Program for Fresh Food).

When Weyerhaeuser first began investigating the development of RFID-enabled product, it examined the approaches other companies were looking into, such as embedding RFID inlays inside corrugate, or embedding the chip and printing an antenna on the corrugate to form an inlay. But with each proposed solution, the company encountered obstacles. "If you embed the tag, it's hard for the end user to know where on the finished case it is located," McCann explains. "Plus, you still have to then add a paper [bar-coded] label later. And placing tags inside a case is a problem for transporting some food products, due to safety issues. We've done enough testing to know that embedding tags is not the best solution for our customers."

According to McCann, Weyerhaeuser has created a process enabling it to apply RFID labels to a container's exterior, and to verify the inlay's functionality without slowing the corrugate manufacturing line—something that is not even a common practice for applying regular bar-coded (non-RFID) labels to boxes, says

VerdaSee's president, Rueben Vasquez. This would be a remarkable achievement for any packaging manufacturer, he adds, but hasn't received much attention to date.

The reasons, Weyerhaeuser believes, that its source-tagging offering isn't making a bigger splash among end users are twofold, and related: volume and price First, most end users have not yet ramped up their commitment to tagging cases to such a volume that would justify using the source-tagging option. That lack of demand for large volumes of tags leads to the second hurdle: tag costs. Weyerhauser's customers' current need for tagged corrugate does not maximize its label applicator's capacity, so customers pay more for the tagging service than they would if demand for that service were to increase.

"We're running between 600 and 1,000 feet [of corrugate] per minute," McCann says, "depending on [the] size of [the] box and the tag placement on the box." The number varies depending on box size, but the application process accommodates box widths ranging from 8 inches to 48 inches. "Most of our potential RFID customers are only meeting bare RFID-tagging minimums [per mandates] right now," she says. "They aren't tagging enough volume for this to make sense."

"Tags still aren't as cost-effective as we'd like," McCann says, though she contends that large companies anticipating a speedy ramp-up of their RFID initiatives would be smart to go with source-tagged boxes. "It can lower costs for a customer because it means they don't have to put RFID label printer-encoders and applicators throughout their operations. Look at a large consumer packaged goods manufacturer. They can't afford to have printer-encoder-applicators on every single packaging line."

RELATED_ARTICLES As for creating RFID tags that can be printed, using non-silicon chips and metallic-ink antennas, McCann says Weyerhaeuser hopes to have a fully functional 13.56 MHz passive inlay available by the end of the year.

McCann will be speaking about source tagging at next week's RFID Journal LIVE! conference in Las Vegas, during the RFID in Packaging and Labeling preconference seminar being held on Wed., April 16.