

# Peer-to-Peer: RFID's Killer App?

A Finnish company has developed peer-to-peer technology that enables companies to share real-time product information, regardless of the RFID tag used.

March 17, 2003 - One of the big shortcomings of RFID has been the lack of software available for sharing data. A small Finnish company has taken a novel approach to solving that problem. Stockway has developed a peer-to-peer network that enables companies to share real-time data about products, regardless of the kind of RFID tag used on them.

The company's World Wide Article Information (WWAI) protocol allows companies to store information about a product on a number of computers. Stockway has also developed the Trackway asset-tracking application, which provides security and authentication features that let companies decide who gets to see information related to a particular item.

"We don't track information as such, we track where information can be found," says Lion Benjamins, Stockway's marketing director. "We are very excited that we have really achieve what many companies have been searching for and that is real time product traceability."

Unlike illegal peer-to-peer music swapping systems like Napster, Stockway's system doesn't create a centralized directory where people can go to find out where files are stored. Instead, Stockway makes the product the center of the system. When a tag is scanned with an WWAI-enabled reader, it lets users know which private network within the system is being used and where distributed information about the product is stored.

"For every product, you have information that's supposed to be updated and accessed throughout its lifecycle," says Kary Främling, a project manager at Finland's TAI research institute, who has seen the technology in action. "Usually the information is located on one specific computer. The Stockway protocol lets that information be distributed on the computers of the companies that have participated in the manufacturing, assembling or transporting of the product."

So let's say a manufacturer places a tag on a pallet, case or item. The tag is scanned using a reader that has a driver from Stockway. This "registers" the product in the WWAI network. The manufacturer can now control whether information related to this product will be public or private. If it's private, the manufacturer can determine which companies may see information in the manufacturer's database that relates to the product. Digital certificates are used to authenticate users.

The manufacturer can also determine which partners can add information about the product to the system. So if a third-party logistics provider is carrying the product to a retailer's distribution center, the logistics provider might add information about the current location of the truck, the truck's ID number, driver's name and so on. This can either be done automatically or manually by scanning the tag, calling up the product in the Trackway application and attaching a file (like one might do in an e-mail application). That information would be stored on the trucking company's database, but be accessible to those who the logistics provider and manufacturer want to see it.

When that product is shipped to a retail distribution center, it is scanned in at the receiving dock. If the retailer is using the Trackway software, a message is automatically sent back to the manufacturer to alert it that the product has arrived and been scanned. The Trackway software also passes information in XML format to the retailers warehouse management system so that the product can be recorded as being received into inventory.

There are several benefits to the system. By allowing data to be distributed among partners, Trackway avoids the problem of overloading networks and centralized databases. And if one server goes down, you can get access to the rest of the information. The software can be installed quickly with minimal integration, and it doesn't require huge investments in new hardware.

Another advantage is the system can use any kind of RFID tag or even bar codes. It doesn't solve the problem of needing standardized tags because business partners sharing information need to be able to scan the same tag. But partners could use the software to begin sharing data today with existing tags and readers, while waiting for their industry to agree on a standard tag.

Stockway plans to do a global rollout because the benefits of the system expand with the number of users. The system will have to compete with the Auto-ID Center's EPC Network, which also aims to use the Internet to enable companies to share data, though in a more centralized way.

The company plans to license the software. The cost is based on the number of servers and RFID readers. Stockway has begun training systems integrators and plans to work with RFID equipment manufacturers, who could make their products WWAI-enabled and become software resellers.

"We are using Finland as a test market because we need live customer experience," says Benjamins. "But we are not considering local launches and gradual rollouts. We see this as being a global opportunity."

[RFID Journal Home](#)

Copyright ©2005 RFID Journal, Inc. All Rights Reserved