

# Pilots and Partnerships Move RFID Forward

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**Cephalon, one of the first pharmaceutical companies to go public about its RFID plans, partners with hardware and software providers to test item-level tagging.**

**C**ephalon, Inc. (Frazer, PA, [www.cephalon.com](http://www.cephalon.com)), an international manufacturer of drugs for neurological disorders, cancer, and pain, believes radio frequency identification (RFID) technology can address several concerns facing the pharmaceutical industry such as electronic pedigree mandates and the prevention of counterfeiting and diversion.

To prove its thesis, Cephalon is embarking on a series of RFID pilot tests. "We are looking for the best solution," explains Randy Bradway, vice-president of commercial operations at Cephalon. The first test, scheduled to be up and running before the end of 2005, involves RFID tagging at two manufacturing facilities and item-level tracking at Cephalon's outsourced distribution facility (Cardinal Health Specialty Pharmaceutical Services, Dublin, OH, [www.cardinal.com](http://www.cardinal.com)). Short-term goals involve using item-level RFID for warehouse receiving, order picking, shipping, and reconciling. Item-level tagging also will make it possible for Cephalon to meet RFID mandates set by various customers such as Wal-Mart Stores (Bentonville, AR, [www.walmart.com](http://www.walmart.com)) and the Department of Defense (Washington, DC, [www.defenselink.mil](http://www.defenselink.mil)).

"The tests will allow us to determine what changes we need to make in our distribution and financial processes to take advantage of the product visibility that item-level tracking can provide," says Bradway.

Subsequent pilot tests will involve an expanding number of wholesalers with the goals of testing the technology and business processes and identifying any software modifications that are needed. The company also plans to examine the effect RFID tracking can have on returns as well

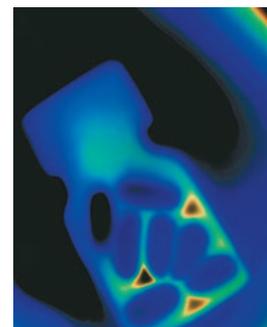
as chargebacks for products sold at a discount. "The pilot for chargebacks is probably two to five years away," predicts Bradway.

Ultimately, Cephalon expects RFID technology to provide end-to-end visibility as product moves from the point of manufacture through the supply chain. This total visibility improves inventory management and helps ensure patients receive the correct medications.

To help it achieve its RFID goals, Cephalon is partnering with hardware and software providers. The hardware partner, which has been working with Cephalon for about 18 months, will provide RFID tags, readers, and antennas (Class 1 RFID tags, Sensormatic Agile 2 readers, and antennas, ADT Security Services Inc., a unit of Tyco Fire & Security, Boca Raton, FL, [www.adt.com](http://www.adt.com)). It also will provide comprehensive testing services, including RFID label preparation, evaluation, and placement. These services include conveyor, portal, and dock door tests, as well as site surveys. In fact, some site survey work and laboratory testing have been completed already. The partners also have studied the Cephalon supply chain to identify points where RFID-generated data could provide benefits.

Upfront testing in a compliance laboratory helps ensure the RFID solution will be successful when deployed in the Cephalon environment. "We are using our years of tagging expertise to make sure that every aspect of the physical RFID solution works at top performance and provides Cephalon with product and supply chain data that will help them reach their goals," says Randy Dunn, ADT's director of RFID.

The software partner is providing a complete suite of tools (OAT Foundation Suite 4.5, OAT-Systems, Inc., Waltham, MA, [www.oatsystems.com](http://www.oatsystems.com)). An enterprise data management platform integrates trading partner data and develops a clean, enterprise-level view of product movement to track items and generate track-and-trace reports. Other tools include enterprise-level analytics and reporting for measuring product velocity, inventory, and shipment receipt verification. High-performance data management integrates with



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data-collection hardware to control the entire system of RFID hardware devices, and captures and filters data from the readers.

"Cephalon selected OAT Foundation Suite for this pilot project because it provides a single platform for managing RFID data across our enterprise and tracking goods movement," reports Bradway. "OAT Foundation Suite will enable Cephalon to use RFID to drive supply chain efficiencies while putting in place a platform to support future e-pedigree initiatives driven by regulatory agencies."

The need for e-pedigree technology will grow as a result of Food and Drug Administration recommendations and state mandates. Florida and Indiana already have requirements in place that will take effect in July 2006, and California has set a January 2007 deadline. "Pharmaceutical supply chain participants need to act quickly to develop a comprehensive strategy to support current and anticipated pedigree mandates," write Marc-A. Meunier and Lance Travis, analysts with AMR Research

(Boston, MA, [www.amrresearch.com](http://www.amrresearch.com)) in a recent *AMR Alert*.

Although the states do not mandate specific technology, "the mass serialization and handling of the considerable amount of resulting transaction data all but require Electronic Product Code and RFID to achieve automation," report Meunier and Travis.

Another pharmaceutical manufacturer working on e-pedigree initiatives is Purdue Pharma L.P. (Stamford, CT [www.pharma.com](http://www.pharma.com)), in partnership with wholesaler H.D. Smith (Springfield, IL [www.hdsmith.com](http://www.hdsmith.com)). Their e-pedigree project will track the movement of one of Purdue's analgesic products from the manufacturing facility to an H.D. Smith distribution center. As a result, Purdue Pharma and H.D. Smith will know exactly where the drug has traveled. Using self-authenticating pedigrees, Purdue and H. D. Smith can certify the pedigree, verify a positive match between drug and pedigree, and confirm authenticity.

Other organizations working on e-pedi-

gree solutions include a number of consulting firms (e.g., Accenture, Chicago, IL; Capgemini Group, Paris, France; and IBM Business Consulting Services, Fairfax, VA) and software providers (e.g., SupplyScape, Woburn, MA).

### Patent solution

In light of the sudden surge of interest in RFID, it may seem like a brand new technology. It actually dates back to World War II, however, and much development work has occurred in the interim. As a result, there are many patents related to RFID technology for the supply chain and many patent holders. This makes for a complex intellectual property landscape, or what sometimes is referred to as a "patent thicket." Lawsuits and countersuits brought by major RFID patent holders also have made potential technology suppliers and users nervous about adopting the technology.

To eliminate this potential roadblock to RFID development, a group of technology suppliers plan to form an intellectual

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property licensing consortium. Modeled after the successful patent licensing consortia formed around essential technologies in the MPEG-2 and DVD industries, the RFID consortium is intended to simplify access to RFID patents while providing fair compensation to patent holders.

"We want to foster competition," explains Stan Drobac, the spokesperson for the group and vice-president of RFID strategy and planning at Avery Dennison Corp. (Pasadena, CA, [www.averydennison.com](http://www.averydennison.com)). "The goal is to make the licensing process as simple as possible for both licensor and licensee," he adds.

The consortium plans to create a pool of patents essential to the commercially viable operation and manufacture of RFID chips, tags or labels, and readers. Under the proposed licensing arrangement, these essential patents would be made available to interested companies on fair and nondiscriminatory terms through a single license.

"We want to emphasize that this is a win-win program," says Drobac. "It will

simplify licensing for patent holders and licensees and result in greater revenue sooner for patent holders," he explains. It also is expected to reduce the expense and time involved in negotiations and litigation related to granting and obtaining licenses. As a result, it should significantly lower the royalty burden on the technology vendors and users like pharmaceutical companies.

Since the licensing plan facilitates rapid adoption of the technology, it encourages more companies to develop products, fosters competition, and lowers costs.

Plans call for establishing the consortium as a limited liability corporation, which would then issue a formal call for patents and hire an expert or team of experts to identify critical patents. Once patents are part of the pool, license fees will be set, and the team of experts will determine the relative value of each patent so revenue can be allocated accordingly among patent holders. The group expects to be ready to grant licenses in 2006.

Drobac isn't sure how broad involvement will be, but says the RFID consortium could resemble the MPEG effort, which involves 700 patents, 24 patent holders, and 800 licensees.

He also notes that the consortium can be successful even if some patent holders choose not to participate. "If [for example,] 10 licensors join and three don't, potential licensees will only have to obtain licenses from four entities instead of 14," he explains.

The consortium will support the standards and specifications announced by EPCglobal (Lawrenceville, NJ, [www.epcglobalinc.org](http://www.epcglobalinc.org)), a not-for-profit organization charged with developing standards for the Electronic Product Code and the EPCglobal Network and for promoting their adoption worldwide.

Approximately 20 companies have been involved with the organizational effort. At press time, eight firms had gone public with their intention to be part of the consortium. **PT**

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