

Group Finalizes Drug Security Network

Capgemini, SupplyScape and several major pharmaceutical companies say they have completed designing the architecture of an RFID-enabled drug pedigree system.

By Bennett Voyles

May 9, 2005—Several leading pharmaceutical companies have wrapped up a collaborative project to design the architecture of an RFID-supported drug pedigree system, according to executives at [Capgemini](#), the technology consulting firm that facilitated the project.

Announced last July, the Drug Security Network is really an optimistic title for a collaborative group that worked together to plan a drug security network. Several months prior to that announcement, the U.S. Food and Drug Administration had endorsed the use of radio frequency identification technology to fight the drug counterfeiting and to create a pedigree—a secure record documenting that the drug was manufactured and distributed under safe and secure conditions (see [FDA Clears Way for RFID Tagging](#)). In addition, a number of state governments will soon require RFID-enabled drug security.

In telephone conferences and in meetings held at Capgemini's Cambridge facilities, some large pharmaceutical players teamed up to design a regulatory-compliant pedigree system that could function in today's complex, multiple-partner pharmaceutical supply chain. The program was jointly sponsored by Capgemini and [SupplyScape](#), a Cambridge-based software firm that specializes in creating secure electronic pedigrees for drugs. Three major pharmaceutical companies took part in the exercise—two drug manufacturers and a drug distributor—along with Capgemini and SupplyScape. Mal Postings, global lead for RFID at Capgemini, describes the group as representing a kind of "ecosystem" because it drew from different parts of the pharmaceutical supply chain.

Working both by e-mail and in person at three- or four-day meetings held each month of the project at a Capgemini facility, the group forged a collective approach to developing such important components as a consistent serialization system for the tags and the way that firms in each link of the supply chain, from manufacturer to pharmacist, will authenticate delivery, according to Postings.

Work proceeded in phases, Postings says. In the first month, the group considered what information needed to be put on the RFID chip. Although there is some discussion in the industry about putting more information than a standard serial number on a chip, Postings said that in the end they decided to stick with the conventional "license plate" approach because it met most current regulatory and industry requirements.

In the second month, the team considered all the necessary business processes that take drugs from manufacturer to the pharmacist. After that the participants worked to design a service architecture that would accomplish the goal of creating a highly secure, RFID-enabled supply chain. "We went through as you'd imagine quite a few iterations, between manufacturers, wholesalers—oh, it was unbelievable," Postings recalls.

Then, in the third month, SupplyScape tailored its pedigree to meet the requirements each player had outlined

in the service architecture plan. Last week, in the final week of the project, Postings said, the companies returned to Capgemini's lab to test the software.

At this point, most of the formal work of the Drug Security Network is complete. Postings says the participating companies are likely to start trial projects. At Capgemini, consultants are trying to work out further implementation details with a number of technology vendors.

"We have an idea now of what the future state may be, and now we're starting to bring in [other companies] because SupplyScape is only one part of the jigsaw," Postings says.

Findings and recommendations are also being shared with standards-setting groups such as [EPCglobal](#). Postings says that his firm has also commissioned scholars at nearby Massachusetts of Technology to write a paper that examines the value of taking a collaborative approach to designing RFID architecture.

Capgemini is also considering replicating this collaborative process with players in the aircraft manufacturing supply chain, where manufacturers face similar challenges in preventing the use of counterfeit parts. Postings says that they hope to gather three players in the business, at different levels of the supply chain. Three companies, he says, is a good number—with only two participants, the companies tend to be too competitive, and with four or more, managing the project would become too unwieldy.

For his part, Postings has few doubts about the value of collaboration in preparing something as complex as an RFID system across an entire supply chain. "A lot of RFID is supply chain related. The fact that supply chains are becoming more integrated now, it just makes sense to have a collaborative way of working—if you can pull it off," he says.

That cautionary note may be warranted, and not just because of the logistical difficulty of getting three firms to make such a commitment. While Capgemini hopes to replicate the project's success in other industries, one key factor in this project's success seems to have been the fact that many states, beginning with Florida, will soon require RFID-enabled drug security. The fact that participating companies had no choice about whether to roll out RFID may have heightened executive interest in the project. "It was just one of those lucky things," Postings acknowledges.

"It certainly didn't hurt," agrees Robin Koh, [MIT Auto-ID Lab's](#) former applications-research director, who attended some of the group's meetings and is and now the chief strategy officer of SupplyScape.

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