

RFID Is Poised for Widespread Adoption

A massive amount of work is being done behind the scenes to resolve many issues impeding RFID adoption today.

By Mark Roberti

Dec. 4, 2006--I've just returned from Montreal and Toronto, where I spoke to members of two chapters of the International Society of Pharmaceutical Engineers (ISPE). During my presentation, I spelled out some of the things that need to happen before radio frequency identification will be widely used to track drugs in the global supply chain. These included:

- E-pedigree standards must be established
- The pharmaceutical industry must agree on which frequency to use or that both HF and UHF will be used
- Prices of tags and interrogators must fall further
- System performance needs to be more consistent
- Standards for sharing data must be established
- And pharmaceutical companies must
 - ◆ Agree on standards for sharing data
 - ◆ Learn how to filter massive amounts of data and turn it into useful information
 - ◆ Integrate data with back-end systems
 - ◆ Change business processes to gain value from RFID systems

One gentleman raised his hand and said, "It seems like we are standing in front of a mountain," meaning that getting to the point where companies can use RFID across their supply chains to achieve business benefits is akin to someone trying to scale Mount Everest. I replied, "There is a lot of work that needs to be done, but if you are thinking this will take five or 10 years, you are mistaken."

I pointed out that 10 years ago, many people and companies didn't have access to the Internet. Today, businesspeople can hop onto the 'Net from almost anywhere. In 10 years, I predicted, RFID will be equally ubiquitous.

What many people can't see is the massive amount of work being done behind the scenes to resolve many of the issues that are impeding adoption today. EPCglobal's working groups are developing standards for using RFID to create e-pedigrees, for creating a standard for high-frequency tags, for standardizing formats for sharing EPC data and for standardizing the network protocols companies will use to share data over the EPCglobal Network.

RFID hardware and software vendors—and even service providers—are investing millions of dollars to improve their products. WJ Communication has shrunken the major circuit-board components of a UHF reader down to a chipset, which will make readers less expensive. Symbol has created a mobile UHF reader that makes it easy to deploy a reader almost anywhere. Other companies are creating new types of readers,

such as wearable devices, and new and better-performing or lower-cost tags.

Many end-user companies, not just in the pharmaceutical industry, are doing the hard work necessary to achieve high read rates. Indeed, most early adopters feel that physics and system performance are no longer a barrier to adoption. The leading early adopters are investing significant sums of money to figure out how to filter and use RFID data, and how to improve business processes using such information.

A good number of the early adopters are in the retail/consumer packaged goods and pharmaceutical industries. But companies across all industries are now exploring RFID's potential. A quick scan of the articles RFID Journal has published in the past week reveals stories about the auto, fresh-produce, taxi, defense, beef, toy, transportation and health-care industries using RFID in one way or another.

Despite all this groundwork, it's no surprise that companies are not making huge investments in RFID tags and readers today. The simple fact is that getting RFID right in your first facility is hard. You need to prove the business case, overcome the physics issues and achieve high read rates, figure out how to filter data and pass it to back-end systems, change your business processes and train your employees. Once you've done all that, replicating it across other facilities is easy.

At some point, companies are going to have all their ducks in a row. By that time, standards will likely be in place, or very close to being in place, and the technology will likely perform better and cost less. All of these things could come together very quickly. And anyone sitting on the sidelines today, thinking RFID adoption is many years away, is going to be in for a rude awakening.

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