



The DATA CAPTURE Report

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Special SCAN: The DATA CAPTURE Report Reprint

Impinj CEO Says “United We Stand”

At a time when competitive edge seems so important in the hi-tech market, particularly in the RFID sector, one of the industry’s leading CEOs—**Impinj’s** Dr. William Colleran—is advocating a sharing of efforts and ideas to drive adoption. Colleran, often described as an “RFID visionary,” recently shared his thoughts with us about where the RFID industry is headed. Perhaps, more importantly, he outlined what he believes is the roadmap to success.

When asked what is currently at the top of his agenda, he quickly responded: “the movement to create an LLRP (low-level reader protocol).” On July 25, a group of RFID technology organizations announced their support for the open-source development of **EPCglobal**-compliant LLRP software libraries, which enable EPCglobal UHF Gen 2 communications via the LLRP universal reader-to-network interface.

The initial group comprising **IBM**, Impinj, **Intermec**, **OATSystems**, **Pramari**, **Reva Systems**, and the **University of Arkansas** is calling for contributions from other organizations or individuals to accelerate adoption and create a rich set of tools in C, Java and other popular

programming languages. These tools will enable customers to deploy RFID solutions easily and quickly and reduce long-term deployment costs while providing system flexibility to help unlock the business process impact of RFID technology. The group expects that LLRP development will benefit all end-use RFID application segments including transportation, manufacturing and logistics, supply chain management, point-of-sale, security, and asset management.



Dr. William Colleran, president and CEO, Impinj.

So, why did this impressive list of organizations agree to work together? “An LLRP is a missing element in RFID integration,” answered Colleran. “We have to make it easy for users to adopt. If we all unite and work together to remove adoption barriers, the pie gets much bigger. We should

be worrying about how to make the pie bigger, not who gets what piece.

“Software developers can really make adoption much simpler,” Colleran continued. “If we can create a common LLRP that will work for 70% of adopting companies, the decision to integrate RFID becomes much easier. This is our goal—to provide a high-performance, flexible, and extensible interface

for operating network-connected RFID readers.”

Members of the group working on the LLRP have created a special toolkit, a “one-stop shop” that includes a software library for LLRP programmers. The library is modeled after other successful open-source software developments such as the Berkeley sockets application programming interface (API). The LLRP standard addresses the reader-to-network interface layer, providing a globally available mechanism to fully leverage the Gen 2/ISO 18000-6C standard that addresses the tag-to-reader air interface layer.

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Dr. William Colleran,
president/CEO, Impinj.**

In a joint press release by the group, Mike O’Shea, global director of auto-ID sensing technology at **Kimberly-Clark**, commented, “The support by leading RFID technology providers for LLRP is great news for end users implementing scalable RFID deployments. LLRP facilitates scalable and repeatable RFID supply chain processes and allows end users to take full advantage of advanced RFID reader capabilities while standardizing the common plumbing used to communicate with RFID readers.” A member of EPCglobal’s Reader Operations group, Kimberly-Clark has been active in the development and ratification of LLRP.

Signs of change

In the last issue of *SCAN/DCR*, several major players, such as **Sirit** CEO Norbert Dawalabi and **Alien Technology** VP of Marketing, Business Development and Industry Relations Ronny Haraldsvik, told us that they are definitely seeing signs of a turning point for the RFID industry. Both men said users are beginning to embrace the technology and look at RFID in a different way. They were also cautious about avoiding another round of hype and said not to expect an overnight explosion in the market.

When asked if he agreed, Colleran told *SCAN/DCR*, “I definitely am seeing positive signs for RFID industry growth. For the past three to four years, there’s been a lot of sizzle but not a lot of steak, with respect to RFID. We’ve gone from ‘RFID is the greatest thing in the world,’ to ‘adoption is going too slow; it’s never going to happen.’ We’ve seen the peak and the low.

“Impinj is now receiving more requests for pilots than we can support,” Colleran continued. “We’re not seeing the huge orders yet, but there is a new ‘seriousness’ to the

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inquiries. They're not just for simple testing. Users are looking toward serious deployments."

Are tag prices the key to growth?

For years, the elusive 5-cent tag has been touted as the key to RFID growth. And recently, there have been a number of companies coming out with very low-cost inlays...companies such as **Avery Dennison**. Could this be the reason for new signs of momentum in RFID sales? Colleran doesn't think so.

"Low-cost tags probably won't be the key to growth in the RFID sector," he told us. "It will be the ability to easily integrate the technology and to obtain clear—and hopefully quick—ROIs. Today, if a company decides to use RFID, it has to call too many different vendors and integrators. The possibilities include a vendor for the tags, one for the readers, one for software, a consultant... They have to have the ecosystem to support the application, and they're waiting for a time that will offer an easier entry. When everything is in place, including things like the LLRP, then the market will grow at a quicker pace."

While on the topic of the low-priced inlays, we asked Colleran if he thinks vendors can hang on financially until users begin to purchase tags by the billion. "Low-priced tags are sustainable, in my opinion," he answered. "Volumes will eventually appear. But, users won't see the typical price drops often expected when a technology achieves widespread use. The industry is dropping prices on the front-end of the cycle. There's been slow and steady growth on the tag side of the business."

HF vs. UHF

As the debate over HF versus UHF continues at

the item level, particularly in the pharmaceutical industry, some players are now saying there is much ado about nothing. Like some of his peers, Colleran believes the whole issue will sort itself out in the market.

"Buyers will decide what is best for their needs," said Colleran. "We offer UHF technology and are confident in its ability to meet the needs of the market in both the pallet and carton and the item levels. Sooner or later, one technology will prevail. I wouldn't be surprised to see an answer in six months to a year."

Continuing, the Impinj leader said each application has its own set of criteria or needs when it comes to RFID. "In the retail sector, they're mainly concerned with low-cost tags," he explained. "Pharmaceutical companies are focused on issues such as diversion and anti-counterfeiting. They require more robust systems. Pharma apps also require high-speed write rates. UHF is great for this. But in the end, everybody wants an easy-to-deploy and accurate infrastructure."

Back to the beginning

When asked for a closing statement, Colleran told us he just wanted to reiterate what he said going into the interview. "It is critical that all technology providers work together," he asserted. "As I said, it's about growing the industry—not about divvying up the pie. People are surprised when they see the names in the group working on the LLRP. Working together for common good can be done, and we invite the rest of the industry to join our efforts."

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