



The DATA CAPTURE Report

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Special SCAN: The DATA CAPTURE Report Reprint

Impinj Continues To Break New Ground In RFID Innovation

Impinj CEO Dr. William Colleran explains why he is bullish on RFID's future.

Since its founding in May 2002, **Impinj, Inc.** has garnered \$50 million in investment capital. After speaking with company CEO Dr. William (Bill) Colleran, it's not difficult to understand why investors would place their trust—and money—in the Impinj management team. This is a company that is clearly on the move.

At a recent **EPCglobal US** conference, Impinj's Monza™ silicon chip for tags and labels and the Speedway™ RFID Dense-Mode Reader 1.1 received EPCglobal hardware certification marks. The Monza chip is the first to be certified by EPCglobal, while the Speedway reader joins a small list of certified products.

In a conversation with Colleran, he told *SCAN/DCR* that Impinj will exceed shipments of 50 million units for its Monza UHFG2 RFID chip in the second half of 2005. Impinj sells silicon wafers that yield tens of thousands of chips. [Editor's note: Impinj provides the chip design, but does not manufacture the actual



Dr. William (Bill) Colleran, CEO, Impinj, Inc.

silicon. The silicon is subcontracted.] Recently, **Alien Technology** signed a supply agreement with Impinj to purchase the company's Monza chips. Alien joins Impinj customers including **Avery Dennison, Hana RFID, IER, KSW Microtec AG, Precisia, RF IDentics, RSI ID Technologies,** and **UPM Rafsec.** Colleran said Impinj's Monza chips are 100% factory tested and are easy to use in the high-speed manufacture of inlays.

"In addition to our chip technology, we also offer our patented antenna design to customers who need it," said Colleran. "For customers who purchase our chips, the use of the antenna design is free. And, of course, we also offer our Speedway reader technology. Our goal is to provide RFID systems that perform properly; chips, antennae, tags, readers, software...everything must work together as it should. Our engineering team makes sure our customers receive the value they expect. We have dubbed our entire RFID system GrandPrix™."

Out comes the crystal ball

Without diminishing the importance of the RFID mandates announced in the past 18 months, we have all seen many of the initial deadlines come and go without fanfare. RFID is not going to be rolled out overnight. [Or at least we don't think so.] That didn't stop us from asking Colleran to become a soothsayer and to predict how fast rollouts will occur.

"We are seeing a lot of pull for our Monza chips," said Colleran. "Impinj is on the front end of the process; creating Gen 2 silicon is the first step. From

the time an order is placed for our silicon chips, it often takes four to six months before actual labels are produced. I believe we will see broad availability of RFID systems in the first half of 2006. In the second half of 2006, I think the real ramp-up will begin.

Continuing, Colleran said, "To some degree, I believe software development is lagging behind hardware. We really need the enterprise data software to make these systems work. That said, I believe by 2007, we'll be ready to roll with respect to RFID adoption."

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**Bill Colleran, CEO,
Impinj, Inc.**

A step-by-step process

Colleran believes RFID development and adoption is a step-by-step process. "First, you have the silicon, the inlays, and the readers—the hardware," he explained. "Then comes the software to tie the data captured by RFID hardware to existing enterprise systems. The next step is to identify business processes where RFID can improve efficiencies and create legitimate ROIs."

Although he envisions 2007 as the time when the RFID industry will be "ready to roll" in the CPG (consumer packaged goods) supply chain Colleran told us the ramp-up of RFID in that application may only be chapter one of RFID's story. "I don't think we've even envisioned the real killer app for RFID," he told *SCAN/DCR*. "Some of the biggest uses for RFID may surface later as we learn more about how the technology solves problems in various environments."

No "Rapid Start"

It was widely rumored that EPCglobal used a chip developed by Impinj to prove its Gen 2/UHFG2 specification was indeed "royalty-free." It was also rumored that—although the Impinj offering met UHFG2—the chip would not provide the functionality expected from a Gen 2 product without the use of **Intermec's** RFID IP. Since Impinj did not show up on the list of Intermec's Rapid Start licensees, we related the rumors to Colleran and asked for his comments.

"First, I want to say I agree with **EPCglobal** that the Gen 2 spec is royalty-free," Colleran stated, "and I do not believe Intermec's patents are necessary to meet the terms of the standard. Sometimes, there are two types of patents—those

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needed to comply with a standard and those that are implementation or performance IPs.

“That said, I completely disagree that our chips do not offer the functionality expected from a Gen 2 product. Our patent lawyers and engineers have reviewed Intermec’s IPs, and we believe we do not violate their patents. We also believe we don’t need their patents to provide the functionality customers have been told to expect. That is why we didn’t sign up for Rapid Start. We have also held off from signing on with the RFID IP Consortium. There are simply not enough details available to make a prudent decision.”

The next big question in our minds was how Impinj is able to get around the Intermec patents. Colleran was delighted to explain, “Impinj has experience in cellular and satellite communications. In fact, **Qualcomm’s** [a leader in CDMA and satellite technology] founder invested in Impinj. We are used to developing encrypted chips and semiconductors. This same skill set enables us to offer 30-foot read ranges and the ability to minimize interfering signals.

We are using that type of knowledge to bring RFID to market...and we don’t believe we need other companies’ IPs to do so.”

Hitting the big-time

Closing, Colleran told us, “When you see **IBM** running a commercial for RFID on national television, you know the technology has hit the big-time. This shows RFID is coming and that was the main message I took away from the EPCglobal conference. Gen 2 is here today, and we’ll be seeing new products rolling out steadily. These are very exciting times for any company involved in RFID.”

Comment: We expect to be hearing much more from this company soon. Colleran is sharp when it comes to technology and has a keen understanding of the market. In addition, Impinj is beginning to line up an impressive array of customers. This is a company to watch.

For more information: **Impinj, Inc.**, Seattle, WA, PH (206) 834-1110, Email: jill.west@impinj.com, Web site: www.impinj.com. **SCAN**

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