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Embedding RFID in Electronics Makes Sense

At our last RFID Journal LIVE! conference and exhibition, held in April 2012 in Orlando, Fla., Intel Corp. unveiled a platform by which a radio frequency identification chip embedded in an electronic device's motherboard is wired directly to the microprocessor (see [A New Tool for Electronics](#)

Companies). This would enable electronics manufacturers to lock devices in the supply chain, in order to reduce the incidence of theft, enable IT departments to set up new computers without opening boxes, and allow retailers to customize products without opening them.

Reading a story the other day in *The New York Times* made me think that RFID might also help to prevent counterfeiting. The article, titled "Microsoft Battles the Botnets," described how Microsoft found brand-new computers with counterfeit copies of its Windows operating system installed. When booted up, these computers were infected with viruses.



The article reported, "To increase their profit margins, some computer manufacturers and retailers may use counterfeit copies of popular software products to build machines more cheaply. Plugging the holes is nearly impossible, especially in less regulated markets like China, and that creates opportunities for cybercriminals."

It might not be possible to stop counterfeiting, but by writing software keys to RFID chips, it should be feasible to prevent hardware from booting up with bogus operating systems or preinstalled software. And it could enable legitimate hardware manufacturers and software publishers to market their products based on the fact that their devices are authentic and safe.

Shahrokh Shahidzadeh, Intel's senior principal technologist

who spearheaded the development of the embedded RFID platform, will discuss how the technology can be used to enhance electronics devices at RFID in High Tech, an event that *RFID Journal* will host on Oct. 11-12, in Silicon Valley. Chris Diorio, the chief technology officer of Impinj—which has developed an RFID tag that can be embedded in electronics—will outline the many ways in which device makers can leverage radio frequency identification.

It is now possible to embed RFID on printed circuit boards (PCBs) to track work-in-process and finished goods inventory in electronics manufacturing plants, and to monitor goods in the supply chain and within retail stores. There is a lot of value to be seized, if electronics makers are willing to embrace RFID.

It probably won't be possible, at least in the near-term, to use an embedded RFID chip to track servers within a data center, because a chip on a PCB would lack sufficient read range to be read within such an environment. But an inexpensive tag can now be placed on any data-center asset to allow it to be tracked from the time of purchase until it is disposed of.

What's more, inventory counts can be performed quickly and accurately with RFID. During the event, Maryanne Flynn, Cisco Systems' director of operations, will explain how her company has benefited from employing the technology to track IT assets around the globe. And Diana Hage, RFID Global Solution's CEO, will explain how the infrastructure can be put in place.

It's exciting to see the capabilities that RFID can deliver in the high-tech sector. I hope you'll join us at the conference to learn more.

Mark Roberti is the founder and editor of RFID Journal. If you would like to comment on this article, click on the link below. To read more of Mark's opinions, visit the RFID Journal Blog, the Editor's Note archive or RFID Connect.



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