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Virus Allegations Rock RFID World

Melanie Rieback, a third-year PhD student at Amsterdam's Vrije Universiteit presented a paper at the [IEEE conference](#) on pervasive computing in Pisa, Italy, that outlined the threat to enterprise software platforms. Rieback caused a ruckus, sending shockwaves through the radio frequency identification technology community, after laying out how she believes virus-infected bytes of information on a RFID chip embedded in a tag could corrupt an enterprise's database.



My colleague Gregg Keizer at TechWeb wrote about the [event](#).

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Keizer Wrote: "Once a hacker has created a miniature virus -- and perhaps planted a malicious tag on a product in store -- the attack begins as soon as the RFID tag is scanned. Attacks on middleware and the back-end databases, she said, could take the form of buffer overflows, code insertions, and SQL injections (a type of specialized code insertion that tricks a database into running SQL code)."

And the Red Herring [wrote about it](#).

Then there was a posting on [Engadget](#).

I searched for news on Google to see how many articles were written on the subject. Search results turned up 69. Do you believe it?

Personally, and this is only my opinion, RFID technology companies have known for awhile about possible virus attacks and security breaches through RFID readers, middleware, software and into the company's databases. They just don't talk about it.

HELLO, an RFID infrastructure comprises semiconductor chips, RFID readers, databases, firmware, middleware, software and more. To think viruses can't travel through this kind of environment is naive.

I've been fielding e-mails and phone calls on the subject all day. Many had little to say. Some offered real insight. Just because it hasn't happened for real, does not mean it can't be done. And it doesn't mean it won't be done.

Yes, this virus Rieback writes about was man-made to prove a point.

Kevin Ashton, [ThingMagic Inc.](#) vice president, and co-founder of the Massachusetts Institute of Technology (MIT) Auto-ID Center, offered insight. "With respect to the students involved, the paper as presented is rather weak," he said. "The researchers did not find a specific vulnerability in any RFID system. Instead, they created their own system and conveniently built the problem into it."

"They hypothesized that an RFID system could carry a virus," Ashton said. "This is a no-brainer- a virus is made of data, and RFID tags can obviously hold data."

Ashton said the students hypothesized that some middleware systems are vulnerable to viruses. "Of course they are, but it's actually unlikely they are vulnerable the way the paper claims, because most RFID tags contain arbitrary bit strings that would be partitioned away from execution anyway."

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"One last twist in the tale," Ashton said. "The 'real' virus they claim to show in this paper is not a virus, just a self-replicating piece of SQL code. They didn't demonstrate any way that you would get that SQL code into RFID middleware using RFID. They essentially say it is possible to write a self-replicating piece of SQL."

I don't claim to have a PhD in radio frequency technology, but I've been writing about RFID for nearly five years.

Your thoughts?

Post your ideas here or write to me at lsullivan@cmp.com

Posted by Laurie Sullivan on Mar 15, 06 09:03 PM in [Software](#)

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