

# Two Visions of an RFID-Enabled Future

There are both dark and sunny versions of what the world might look like when RFID becomes ubiquitous. So why is all the focus on the dark version?

By Mark Roberti

Feb. 11, 2008—Here is what Associated Press "investigative reporter" [Todd Lewan](#) thinks the world might look like in a few years when radio frequency identification technologies become widespread:

- Microchips with antennas will be embedded in virtually everything people buy, wear, drive and read, enabling retailers and law enforcement agencies to track consumer items—and, by extension, consumers—wherever they go, from a distance.
- A seamless, global network of electronic "sniffers" will scan radio tags in myriad public settings, identifying people and their tastes instantly so that customized ads—"live spam"—will be able to be beamed at them.
- In "Smart Homes," sensors built into walls, floors and appliances will inventory possessions, record eating habits and monitor medicine cabinets—all the while, silently reporting data to marketers eager for a peek into the occupants' private lives.

Here's an alternative version of an RFID-enabled future:

- Consumers will be able to get information on the entire history of the products they buy. For example, reading a tag on a steak they purchase will enable them to get information from the seller's Web site about where the beef came from, where the cow was raised, what the cow was fed, where it was slaughtered and the temperature at which the meat was maintained while in transit.
- Deaths and illnesses from food-borne diseases will be cut dramatically due to the ability to track shipments that need to be recalled, and to trace problems to their source.
- Far fewer consumers will unknowingly purchase counterfeit drugs that are ineffective or, worse, deadly because RFID will enable the secure tracking of drugs from the moment they are manufactured to the moment they are consumed.
- Deaths in hospitals due to the wrong patients receiving the right drugs, or the right patients the wrong drugs, will be completely eliminated due to the ability of RFID to identify both patients and drugs and sound an alarm before a mistake occurs.
- Recycling will be greatly improved by the ability to identify objects that should not end up in a landfill.
- The cost of goods will fall dramatically due to greater efficiencies in the supply chain.
- The supply chain, parcel shipments and passenger flights will become safer because of the ability to identify cargo and trace it back to its point of origin.

The problem is that Lewan isn't the only reporter focused on the dark side, and the articles they write influence many legislators and regulators in the United States and Europe. As a result, those legislators are considering bills that could kill all the potential positive benefits of RFID. Unfortunately, it seems those who hold a darker vision of the future may have done a better job of selling it than the RFID industry has done in promoting the benefits.

Of course, neither vision described above will fully come to fruition. RFID is neither the end of privacy as we know it, nor the savior of mankind. But what comes to pass will undoubtedly be far closer to the positive version than the negative. To believe the negative vision of the world will come about, you must assume several "facts":

1. RFID is undetectable, allowing companies to spy on people without their knowledge
2. Companies will benefit from spying on their customers
3. Consumers will not have any choice but to shop at retailers that spy on them.

None of those statements, of course, are true. RFID interrogators, unlike video cameras, cannot be hidden. The kinds of passive tags that will be placed on consumer products require energy from the reader to work. As soon as a reader emits energy, any geek with \$20 worth of electronics bought online can detect it. So any company spying on people would be quickly exposed, which would hurt its reputation and lose it customers.

I have yet to hear any explanation of how a company might benefit by spying on individual customers, or from gathering personalized information without its customers' knowledge. Companies could benefit from knowing that I like to buy tweed jackets, but not from knowing which specific tweed jacket I bought—and bar codes already provide that information. Companies could also benefit from marketing to people in stores—but only if they opt-in.

Consumers will always have a choice. If people are creeped out by retailers "spying" on them, other retailers will quickly advertise that they either don't use RFID, or that they kill tags before you leave the store.

On the other hand, to believe in the positive vision, as I do, you must accept several assumptions as well:

1. Companies will provide more information about their products to gain sales.
2. Food producers and sellers will want to reduce the costs of recalls and potential lawsuits through technology investments.
3. Hospitals will want to reduce lawsuits and improve efficiencies and patient safety through investments in technologies.
4. Retailers will invest in technologies that make them more efficient.
5. Governments will require companies to spend money to improve recycling.

RELATED\_ARTICLES All of these things not only seem entirely reasonable—they are already happening. In other words, we are already moving toward the more positive vision of the future. Unfortunately, it's difficult for the RFID industry and end users to promote the more positive aspects of RFID without sounding as if they are trying to convince consumers they should want something that's bad for them.

All we can do, I think, is continue to show the benefits, address the concerns raised about privacy and educate, educate, educate. Eventually, journalists like Lewan will be embarrassed to write articles that are so ill-informed.

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