

The Reality Search Engine

While Google is great at finding written or recorded information, it can't deliver when it comes to real-time, real-life events. RFID could change that.

By Kevin Ashton

Sept. 8, 2008—If you had to pick one company to represent the state of the art in information technology at the start of the 21st century, it would probably be Google. Founded just 10 years ago, the company has become not only a \$200 billion global corporation but also a verb: to "Google" was added to the *Oxford English Dictionary* in 2006. Googling is officially defined as "using the Google search engine to seek online information"—and this is wholly consistent with Google's corporate mission, "to organize the world's information and make it universally accessible and useful."

But the word "information" also has an official, or at least theoretical, meaning: It was defined in 1948 by scientist Claude Shannon, "the father of information theory," as—to put it simply—anything new. Information is not just stuff that has been written or otherwise recorded—it is created by every minor traffic delay, every suddenly empty shelf, and anything else that ever changes, no matter how small or apparently insignificant.

While Google makes an astounding amount of information very easy to find—I used it to check the facts for this column—it can't, for instance, confirm whether Best Buy will have the DVD I want to purchase, tell me what construction roadblocks I should avoid on the way to the store, or help me find the missing paring knife I need to butterfly a chicken. This type of detailed, real-time information is rarely available using today's information technology, yet this is the stuff of life—and the stuff of the global economy as well.

RFID can change this. It has the potential to track products on shelves, monitor potholes and traffic on any and every road, and even help us find things we've lost or forgotten in our homes. This information is well worth capturing and making searchable.

Ravi Pappu, my friend and onetime colleague at RFID company ThingMagic, has a vision of RFID tags deployed everywhere and connected to Google-like technology. He calls his vision "the reality search engine." It's a compelling idea. What if we could go online and search the real world as if it were one giant, perfectly up-to-date database? What if searching the contents of our homes were as easy as searching the contents of our hard drives?

RELATED_ARTICLES If Google, or some future Google competitor, truly wants to "organize the world's information," it can't restrict itself to written or recorded information; it also must capture data automatically from real-time, real-world events—and that will mean a lot of RFID-based data.

Yes, it's an ambitious idea, and no, it won't happen overnight. But it wasn't that long ago that a search engine as powerful and easy to use as Google seemed like a wild-eyed dream.

Kevin Ashton was cofounder and executive director of the Auto-ID Center.

