

The Making of a Market

A vast new market for low-cost RFID tags and readers is emerging, and Wal-Mart is the driving force behind it.

July 8, 2002 - I got a call a couple of weeks back from a gentleman working towards a Ph.D. in entrepreneurship at the University of Virginia. He's interested in writing about the birth of new markets and is focusing on RFID because he believes it is going to be one of the biggest new markets to emerge in quite some time. He asked me how I thought the new market would emerge. I said that was simple: Wal-Mart would tell suppliers to start putting RFID tags on all their products and -- *voila!* -- new market.

That was perhaps a tad simplistic and glib, but I don't think it's far off. I'm no academic, but it seems to me demand is either created by an innovative new product, like the original Sony Walkman. Or the demand already exists, and companies emerge or adapt to meet it. In the case of low-cost RFID, the demand is there because companies have spent years developing sophisticated information systems only to find the data in them isn't very good.

Wal-Mart has been a leader in using information to lower costs. The company has been looking at RFID for more than a decade and knows that the superior information RFID tags would provide would help it reduce supply chain costs dramatically. Wal-Mart is so big that the demand it represents is enough to create a market.

It's already happening. When Alien Technology was started, the company was called Beckman Displays and it was set up to make low-cost computer and smart card screens. If you look on Alien's Web site today, you'll notice that there is no information about the display business.

Jeff Jacobsen, Alien's CEO, says RFID has become such a huge opportunity that the company can't pursue both businesses simultaneously. Wal-Mart is a big part of that because Jacobsen knows that if he can create low-cost RFID tags, Wal-Mart will ask the suppliers that send it more than 20 billion units a year to tag each one of them.

Alien isn't the only company that has switched gears because of the lure of the new market. On June 26, RFID Journal published a story about a company called NanoPierce Technologies, which has developed an innovative method of attaching microchips to circuit boards. It is now focused on primarily on attaching RFID antennas to microchips.

And I recently spoke to a professor doing some innovative research into smart sensors. Originally, he had no interest in RFID, but now he's almost totally focused on that market. He's talking to some of the world's largest retailers and consumer packaged goods companies, which are hungry for low-cost RFID tags. (We'll be writing about his innovative approach to RFID in a couple of weeks.)

The general business press can't see the market forming yet, but the Auto-ID Center represents pent-up demand for 500 billion low-cost RFID tags a year (many sponsors either supply Wal-Mart or compete with it, which again shows the company's power to influence the market). There are startups all over the world that are hearing about this market, through sites like RFID Journal. Many are adapting technologies that originally

had nothing to do with RFID to try to tap this emerging market.

These are not business school grads with half-baked business plans for selling widgets on the Web. These are real companies with real intellectual property being drawn towards an emerging opportunity. Some of their technologies may turn out to be worthless. Others will be adapted or combined with related technologies as smart entrepreneurs figure out new ways to meet the market demand. Within 18 months, the venture capitalists will figure out what's going on and start funding new companies. There will be an explosion of innovation.

My friend from the University of Virginia is right: It is a fascinating thing to write about.

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