

**RFID, the New New Thing?**

Investors have bemoaned the fact that since the bursting of the NASDAQ bubble four years ago nothing much has been happening in the technology arena. Sure the Internet has spread to touch every aspect of our lives, and various technologies promoting information and communications availability in an untethered fashion are on their way to becoming nearly ubiquitous, but these were secular trends that the market has been and continues to discount. Even the much-heralded digital consumer revolution has yet to spark much investor enthusiasm, the revival of Apple Computer excepted. So what might get the technology intelligentsia excited once again? How about the build out of a new infrastructure with the potential to be adopted by every enterprise of consequence around the world involved in the manufacture, distribution or sale of goods? Over the course of the next several quarters, following mandates from Wal-Mart, the Department of Defense and others, companies the world over will attempt to re-engineer a number of business processes starting with supply chain management, using a new technology called Radio Frequency Identification, or RFID.

Initially, RFID technology might be thought of as a “bar code on steroids”, deployed in applications like track and trace, but with the added feature of heightened security. Unlike a bar code, no direct contact with a reader is necessary nor is direct line of sight required. Furthermore, this technology offers an enormous speed advantage over traditional bar code approaches when reading massive amounts of data. And perhaps most interesting, in some implementations the encoded information to be read can be changed in real-time, opening up the possibilities of all sorts of new applications that static labeling does not permit. One can immediately appreciate the improved visibility into the overall manufacturing, supply, and distribution chain that this technology allows. It is not much of a stretch to speculate on new direct marketing possibilities and even whole new automation prospects either.

Like any new technology, there are many hurdles to overcome not the least of which is related to cost. Yet given the amount of investment already under way, the odds favor a number of developments on the RFID front throughout 2005. Investment opportunities may center initially on those firms offering RFID tags and readers, in other words many of the traditional bar code-related companies that are aggressively migrating to RFID solutions. However, to make this technology really effective, the information that is captured must be shared. To this end, a “shadow internet” will be built between enterprises worldwide because each item or pallet that is tagged will have a unique address that points to a specific location on the network that contains information about the item, the analogy being a domain name server pointing to a web page. The manufacturer of the item can then choose what and how much information to allow others to see.

This build out will require many of the same types of components that were necessary to create the Internet-networking, database, middleware, application software, analytical tools and a host of other technology products and services. Anything close to full deployment of these technologies will span a number of years with derivative applications surfacing as the cost of the underlying technology drops over time. And while it is difficult today to predict the twists and turns the evolution of RFID technology may take, the enormous potential is already quite evident.

*The Hangar 4 Investment Fly-By is a quarterly publication intended to give our partners, and prospective partners, some insight into various themes that factor into our investment posture. Hangar 4 Partners LLC is an equity growth manager focused on technology, consumer product, and service companies. Michael P. De Santis and Bruce M. Lupatkin are the portfolio managers. For information regarding Hangar 4 Partners, please contact Michael P. De Santis, [mpd@hangar4partners.com](mailto:mpd@hangar4partners.com) or Bruce M. Lupatkin, [bml@hangar4partners.com](mailto:bml@hangar4partners.com).*