

Tracking everything that moves



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Radio frequency identification technology (RFID)—which consists of minuscule microchips that listen for a radio query and respond by transmitting their unique ID code or serial number—is a potentially transformative technology.

If the current buzz is true, RFID technology could be used to track the movement of every product in the world. The race is on as the market is huge and growing rapidly.

A recent report published by Venture Development Corporation, located near Boston, Mass., which specializes in the RFID industry, estimates that global shipments of RFID systems in 2002 reached about \$965 million, and with an estimated five-year compound growth rate of 22.6 per cent, the market size will explode to \$2.7 billion by 2007.

Until recently, RFID technology was too expensive and too limited. However, RFID tags can now cost as little as 30 cents for a passive tag or as much as \$100 for an active tag with a sophisticated sensor and a battery.

An active tag is used to track high-value goods and has a read range of 100 feet or more. In contrast, passive tags are much less expensive as they have no battery, a read range of less than 10 feet and require no maintenance.

Wal-Mart's recent announcement that it is going to require that its top 100 suppliers deliver RFID tagged products by 2005, will fuel the growth of the RFID industry. By the end of 2006, Wal-Mart plans to extend this requirement to all of its products.

The US Department of Defense also announced plans to ask its top 100 suppliers to put RFID tags on pallets, cases and big-ticket items starting in 2005. Gillette currently uses the tags to track cartons of Venus women's razors through a packaging and distribution centre in Massachusetts and has indicated that they will buy as many as half a billion tags over the next two to three years.

Seven million tags are already attached to the keychains of drivers who pay for their gas with ExxonMobil's Speedpass system. Major airlines are starting to use the technology to enable them to track the location and movement of the nearly 3.5 billion

articles of luggage that are moved every year.

Industry experts are predicting a rapid adoption curve. A survey held at the recent Electronic Product Code Symposium in Chicago found that while 67 per cent of survey participants are not currently using RFID in their supply chain, 100 per cent of

The Massachusetts Institute of Technology recently held a conference on the privacy issues associated with the use of RFID technology. The conference addressed everything from how RFID may conflict with new privacy legislation to the potential for the technology to allow retailers to track people in their stores.

the movement of cellphones from the manufacturing facility to the retailer.

According to John Kingsmill, president and CEO, Identec, the long-term growth prospects of the RFID industry are excellent.

"We anticipate significant growth in the RFID market as companies continue to implement this technology to improve the efficiency and effectiveness of their supply chain," he says.

To me, the RFID industry is a great example of innovation and perseverance. Innovation created new ways to economically track goods. Perseverance continued developing a technology many had given up on.

It looks to me as if this transformative technology is here to stay.

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them indicated that they plan to use or pilot the technology within the next two years. Nearly half plan to do so within the next year.

A potential barrier to rapid adoption of RFID technology is the potential privacy concerns.

A major RFID company, Identec Solutions, is located right in the heart of the Okanagan Valley in Kelowna, BC. Identec recently partnered with Nokia on a pilot project to use its Intelligent Long Range active RFID technology in combination with a Global Positioning System to track

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REGIONAL NEWS

ASTech honours Albertans for science, technology and research

CALGARY, AB—The Alberta Science and Technology (ASTech) Leadership Foundation has honoured Albertans for their outstanding achievements in science, technology and research.

"ASTech's theme, Innovations for Living Well, was demonstrated admirably by this year's field of finalists and prize recipients," says Carmen Forster, chair, ASTech Foundation.

Two individuals who stood out among this year's qualified field of finalists included the winner of the Leaders of Tomorrow Award, Tim Poon, and John O'Donovan, the 2003 recipient of the AVAC/Dow Agro Sciences/ASTech Innovation in Agricultural Science Prize.

Poon is performing fundamental research in wireless communications in the Informatics Circle of Research Excellence Wireless Communications Laboratory.

O'Donovan got the Agricultural Science Prize as a result of his pioneering research and technology transfer in the field of weed management.

The ASTech Award Winners for 2003 are:

- Outstanding Leadership in Alberta Science Award: Brian Sykes, Edmonton
- Outstanding Leadership in Alberta Technology Award: Michael Brett, Edmonton
- Outstanding Achievement in Applied Technology and Innovation Award: Miodrag Belosevic, Edmonton
- Outstanding Commercial Achievement in Alberta Science

and Technology Award (To corporations having gross sales less than \$25 million per annum): Upside Software Inc., Edmonton

- Outstanding Commercial Achievement in Alberta Science and Technology Award (To corporations having gross sales equal to or greater than \$25 million per annum): NOVA Chemicals Corp., Calgary

- Leaders of Tomorrow Award: Tim Poon, Edmonton

- Outstanding Contribution to the Alberta Science and Technology Community Award: Matt Spence, Edmonton

The ASTech Prize Recipients for 2003 are:

- NRC/ASTech Innovation in Industrial Research Prize (north of Red Deer): Acrodex Inc., Edmonton

- NRC/ASTech Innovation in Industrial Research Prize (Red Deer and south): Spartek Systems Inc., Sylvan Lake

- Syncrude/ASTech Innovation in Oil Sands Research Prize: Paraffinic Froth Treatment Technology Commercialization Team, Calgary and Devon

- AVAC/Dow AgroSciences/ASTech Innovation in Agricultural Science Prize: John O'Donovan, Beaverlodge

- Al-Pac/ASTech Innovation in Integrated Landscape Management Prize: EMEND Project Partners, Edmonton

- Excellence in Science and Technology Public Awareness Prize: University of Alberta's Faculty of Graduate Studies and Research Outreach Program, Edmonton

- ASTech Foundation Special Award: Alastair Ross, in memoriam, Calgary

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