Axcess seeks to link everything to everything else

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Axcess International, a provider of wireless business activity monitoring solutions, has announced a new micro-wireless technology platform called 'Dot', which uses a small, low-cost, battery-powered wireless computer that aims to provide a dynamic view of the status of everything in the enterprise and how each thing contributes to the goals of the enterprise.

This particular innovation takes a positive step toward an 'everything connected to everything else' business environment. By enabling automatic sensing, identification and assessment of business activity in real time, the Dot chip provides for improved productivity, security and revenue growth by delivering extensive business intelligence.

The Dot market
Dot-based solutions exemplify what industry analyst Forrester Research dubbed *'The Extended Internet'*, the market for which was forecast to grow to some US$11.6 billion by 2012.

Dot's flexibility allows it to take many forms to suit specific needs, and, as an enabling technology, it may find itself at the heart of many new and innovative products such as a long range bar codes, electronic property tags, automatic building access badges, vehicle identification tags, electronic cargo container seals, wireless sensor transmitters, and other applications.

First application
The first end-user product to use Dot technology will ship in December 2007 in a card-based form factor. As a personnel credential or ultra-thin tag, it will be used for assets, vehicles and workers, immediately enabling their wireless visibility.

"The wireless era of 'people talking' has given way to the era of 'things talking'. Dot makes assets, materials, people, sensors and even vehicles wirelessly visible," explained Allan Griebenow, President and CEO for Axcess. "Once you 'Dot the enterprise', real-time data that was previously invisible to the enterprise is immediately made available. This dramatically expands the scope of business intelligence, improves decision-making, and brings a new horizon for automation."

Dotted examples
Dot gives all things in business the ability to be automatically sensed. An example of this sensing is the location of assets such as laptops and identifying who belongs to the assets. In case of an emergency, Dot provides knowledge of where your workers are. For vehicles, you know automatically which trucks came to and left the yard with what materials.

Axcess' product combines a processor, memory and wireless communications into one chip about the size of a grain of rice. The company says that it is about as powerful as the first personal digital assistants (PDAs). It runs for years on a watch battery, can store about three pages of information in memory, and communicates at high speed, all at a cost of only a few dollars each.

Enterprise integration
Dot solutions fit seamlessly into existing corporate networks to operate efficiently and non-disruptively. 'Dotting' the enterprise encompasses the complete life cycle of business operations,

from raw materials delivery reconciliation, to fleet vehicle management, warehousing inventory counts and sensing, production automation, work-in-process tagging, and finished goods locating.

The wireless intelligence comes from wirelessly enabling virtually any and all things in the enterprise in application areas, including advanced workforce management where emergency evacuation information is automatic; improved workflow management where the bill of materials (BOM) list is automated; asset monitoring where critical assets are automatically inventoried and protected; and low cost, pervasive sensing where improved efficiency and safety are outcomes.

The technology

Dot incorporates a battery-powered, software definable wireless transceiver that is compatible with multiple global regulations, including the Electronic Product Code (EPC) Class I and Gen II (passive Radio Frequency Identification [RFID]) standard and is expected to make supply chain tagging more reliable while opening new applications in sensing and security. The active RFID and RTLS portions of Dot's capabilities are built on and are backwardly compatible with the existing Axcess 433 MHz platform.

Dot is a hybrid wireless device, capable of supporting applications in many industries such as manufacturing, the enterprise, oil and gas, utilities, education, government and the military. It can provide a platform for access control badges, passive RFID product tags, active RFID asset tags, Real Time Location Systems (RTLS) and distributed sensor transmitters. Memory and sensor inputs enable the Dot to be tailored to each specific data capture need.

According to Tony Sabetti, Vice President of RF Solutions for Sirit, "It is important to Sirit that companies like Axcess continue the evolution of tag design to support the adoption of RFID into new and expanding markets. Dot is an exciting entry into the RFID tag space due to its small form factor, and we are pleased that it worked with our INfinity 510 UHF reader right out of the box."