Boston Engineering to Develop Secure Baggage Tracking System for Logan Airport

As the only U.S.-based licensed engineering service provider for INKODE Corporation's innovative patented Chipless Remote Identification System (CRIS) technology, Boston Engineering Corporation is leading a pilot project that will demonstrate a cost-effective, fail-proof baggage-tracking security system at Logan Airport. Called SEATS, for Secure Environment for Airport Terminal Systems, the project is a collaboration between Boston Engineering and Virginia-based INKODE. SEATS combines an award-winning passive disposable wireless tracking technology with a hardware system designed to improve airport baggage identification and tracking security, while reducing costs to airlines.

Failure-free Tracking

The project's wireless remote tracking system is based on INKODE'S patented long-range passive Radio Frequency Identification (RFID) technology. This ground-breaking technology recently received the Frost & Sullivan 2006 *Excellence in Technology of the Year Award* in the field automatic identification systems. As the world's first chipless RFID system, the technology sidesteps many of the shortcomings of silicon-based chip RFID, and offers a disposable, cost-effective option.

&quotMany existing RFID tracking systems cannot withstand the exposure to static electricity generated by baggage conveyors and baggage scanning systems,&quot said Mark Smithers, vice president and COO of Boston Engineering. Chip-based RFID tags have failure rates between 40% to 100% in environments such as airline baggage handling systems. With a range much greater than other systems, CRIS allows detection and tracking beyond 10 meters. &quotPlus, as a chipless system, it's hacker-proof and tamper-resistant &#151 a definite security advantage for airports and other applications,&quot added Smithers.

The proposed tracking system hardware being developed by Boston Engineering for the Logan Airport SEATS project includes a secure wireless system that keeps all information linked in a continual flow. This includes:
&#149 A self-serve boarding pass kiosk which scans IDs, takes a photo and verifies passenger profile;

&#149 An integrated boarding pass kiosk and bag accepter, which again scans the ID and takes a photo that is printed on NanoRCS&reg baggage tags;
&#149 An agent check-in and bag accepter to scan photo ID and verify bag tags;
&#149 An in-line bag-conveyor NanoRCS&reg reader with ramp-loader and reader to wirelessly track the bag through the system;
&#149 A gate boarding pass reader that confirms the passenger has boarded.

Boston Engineering expects to develop additional industry applications for this technology for retail, commercial and other security uses. Companies wishing to develop chipless RFID applications may contact Boston Engineering for engineering development support.