



News Release

SecureRF Proves Feasibility of Secure RFID Tags with National Science Foundation Grant

Security on RFID Tags Will Benefit Pharmaceutical and Other Industries

WESTPORT, CT, April 30, 2009 –SecureRF Corporation announced that they have proven the feasibility of implementing strong security protocols that run on passive Ultra High Frequency (UHF) radio frequency identification (RFID) tags. SecureRF research was funded by a National Science Foundation (NSF) Small Business Innovation Research (SBIR) grant to create RFID security solutions that will protect the movement of high-value prescription drugs in the U.S. pharmaceutical supply chain. The company partnered with the National Council for Prescription Drug Programs, Inc. (NCPDP) and a major US pharmaceutical distributor in their development effort.

“The cryptography technology developed in this NSF project provides some strong yet easy to implement security measures for the industry to consider,” said Louis Parks, SecureRF’s CEO. “These methods will allow those responsible for safely delivering our pharmaceutical products the ability to not only authenticate the information stored on the RFID tag, but also protect data during transmission, and to confirm that none of the data has been altered.”

Although the pharmaceutical sector, along with many other industries, like our food supply chain, are turning to RFID to protect their high value assets, RFID technology used today has little or no security. This makes implementing SecureRF’s Algebraic Eraser™, the world’s first linear-based cryptographic methods, directly on a passive tag a significant innovation. The initial design and testing targeted the EPCglobal Class 1 Generation 2 UHF RFID (Gen2) tags that will likely be used in the pharmaceutical supply chain. In Phase I, SecureRF proved feasibility of using their Algebraic Eraser security protocol as a cryptographic engine on a passive Gen2 tag enabling an RFID reader to authenticate the tags. They also proved that the tag can create a shared secret with the reader and support various security protocols including the onboard encryption of data.

In Phase IB, with additional funding from the NSF, SecureRF worked with partners in the pharmaceutical industry to design and validate protocols that can be used with the appropriate levels of security in a secure, passive UHF RFID tag. RFID tags can carry a significant amount of data so the level of security that is appropriate for a particular pharmaceutical application such as e-pedigree, track-and-trace and cold chain management vary and must be balanced against the apparent and real risks. SecureRF has applied for NSF SBIR Phase II funding to further the development of a UHF passive tag that will comply with EPCglobal, Class 1, Gen 2 protocols, have ultra low power requirements and yet allow secure cryptography to run on the chip itself, an industry innovation.

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SecureRF's proposed secure passive RFID tag is a way for the pharmaceutical industry, which handles nearly four billion U.S. prescriptions annually, to ensure the safety of drugs delivered through the use of onboard authentication and data protection features. Potential customers include pharmaceutical manufacturers, distributors, wholesalers, and pharmacies that need to ensure patient safety and privacy along with drug integrity.

Today's RFID tags, and many other embedded, resource-constrained or performance-sensitive devices, cannot protect the user from unauthorized reading, copying, or tracking due to the lack of on-board security. The security methods developed in this project will also be applicable to high value asset tracking, contactless payment systems, wireless sensor networks, Smart Grid microcontrollers, and Defense/Homeland Security border security systems. Last year, SecureRF received a second SBIR grant from the US Air Force to develop a secure global active RFID solution for use by both land-based and satellite reader systems.

SecureRF's team of world-leading mathematician/cryptographers previously developed a public key cryptography security protocol, known as the Algebraic Eraser™, which is thousands of times smaller and faster than any other cryptographic function. The SBIR projects are under the direction of SecureRF's Chief Scientist, Dr. Iris L. Anshel. The passive RFID tag work was supported by the National Science Foundation under Grant No. 074072 as part of the 2007 SBIR/STTR Solicitation (NSF 07-551).

About SecureRF

SecureRF Corporation provides secure embedded and radio frequency identification (RFID) solutions for high value asset tracking, monitoring and anti-counterfeiting applications in the pharmaceutical, food, defense, homeland security and other sectors. The company's technology, based on a breakthrough in cryptography that is lightweight yet highly secure, provides authentication and data protection security for embedded systems, RFID tags, sensor networks and other low resource devices. SecureRF's LIME Tag™ is a secure, battery-assisted, passive RFID tag, which meets both EPCglobal and ISO standards, with optional sensors that provide cold chain management functionality. SecureRF solutions can also be licensed as a software toolkit, a core, or a chip, addressing a wide range of applications and environments. More information about SecureRF can be found on its Web site at www.SecureRF.com. SecureRF's insights into RFID Security can be found on its blog at www.SecureRF.com/RFID-Security-blog/.

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The award abstract can be viewed at <http://www.nsf.gov/awardsearch/showAward.do?AwardNumber=0740472>.