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# RFID Security

**A physical defense to limit hacker effectiveness on the security of RFID systems**

Inventor Steven McLaughlin at Georgia Tech has developed an accompaniment to standard cryptography to secure RFID systems. Through the establishing of a physical-layer based security enhancement to existing RFID chips, the systems are more secured from a relay attack, one of the greatest threats to the security RFID technologies.

**Summary Bullets**

- **Dynamic security** — keys are constantly refreshed so even if a given key is compromised, the breach is only temporary
- **Limiting** — hackers ability to access RFID from a distance

Solution Advantages

- **Dynamic security** — keys are constantly refreshed so even if a given key is compromised, the breach is only temporary
- **Limiting** — hackers ability to access RFID from a distance

Potential Commercial Applications

- Banking
- Retail
- Passports/Identification
- Sporting Events
- Tracking of animals and humans

Background and More Information

Radio-frequency identification (RFID) chips use electromagnetic fields to identify and track a wide variety of product, and their small size allows for implementation across fields. They can be used to prevent theft and

manage logistics in retail, secure identities with credit cards and passports, record sports events, or track people and animals. However, their security is somewhat compromised due to the ability of hackers to fool the tracker and chip. A improper chip implementation could result in a security breach with grave consequences.

## Inventors

- Dr. Steven McLaughlin
  Dean and Southern Company Chair of the College of Engineering/School of Electrical and Computer Engineering- Georgia Tech

## IP Status

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## Publications

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