SCIENCE · PASSION · TECHNOLOGY

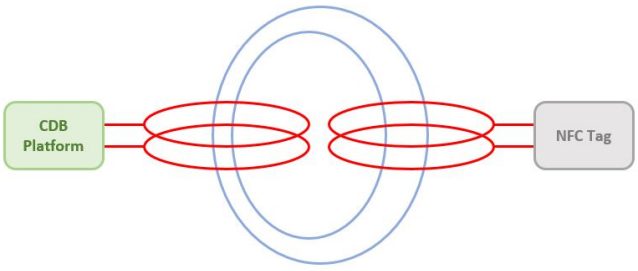
Open Thesis / Project
Coupled distance bounding platform

Motivation
Distance bounding (DB) protocols were established to securely verify the distance between two entities. They are used, for instance, in modern car keys, to ensure that the driver is next to the car when opening it. In a recent paper, we demonstrated that using magnetic coupled fields, we are able to overcome an attack that was previously thought to be unsolvable: the Distance Enlargement Fraud. So far, our results were demonstrated and evaluated via numerical simulations. Your job is to show that the proposed mechanism also works in reality.

Interested? Please contact us for more details!

Target Group
Students in ICE/Telematics, Electronics and related.

Thesis Type
Master Thesis (Duration: 6 months).



Goals and Tasks
- Design a hardware platform for distance bounding;
- Specify the components;
- Implement and test it.

Requirements:
- Good laboratory skills (Oscilloscope, Signal/Function generator, etc.);
- PCB layout and soldering;
- Previous experience specifying hardware components.

Used Tools & Equipment
- Laboratory test equipment
- A Laptop
- The implemented platform

Contact People

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