An Open-Source Immobilizer

Motivation
The firmware of embedded systems can be difficult to test, for example due to the interaction between the system under test with its environment, or lack of detailed information on parts of the system’s hardware, or software implementation.

In this project we want to design, implement, and test an open-source car immobilizer, consisting of a key fob, and a base station. The prototype, and the test-suite that are being developed in this project will act as key elements for a case-study on testing complex embedded systems.

Project Description
Goals
• Design and implement the prototype of an open-source immobilizer (key fob and base-station).
• Develop a test suite for the prototype immobilizer software

Background
• Good C programming skills
• Interest in embedded Linux systems (e.g. Raspberry Pi)

Deliverables
• Immobilizer software prototype and test-suite (source code in GIT repository)
• Documentation/Tech Report
• Presentation (15-20 Minutes)

Scope and Credits
Studies: INF SEW TEL MATH
The scope, effort, and credits of this project are scalable.

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