

Android App Handling the NDEF Signature Record Type

Motivation

Near Field Communication (NFC) is a contactless communication technology used in many applications nowadays. NFC enabled smartphones like the Google Nexus S can be used to get some information by touching an NFC tag. To prevent an attacker from modifying the data stored on the tags or replace tags digital signatures are used.

Project description

- Goals
 - Develop an Android App for the Google Nexus S to read NDEF messages and verify their signatures.
- Tasks
 - Communication between Smartphone and Tag.
 - Write signed NDEF messages on the tag.
 - Read the NDEF message from the tag and verify whether the data is valid.
 - Show the security vulnerabilities



Literature

- NFC Forum specification
- „Security Vulnerabilities of the NDEF Signature Record Type“, M. Roland, J. Langer, J. Scharinger.

Deliverables

- Project files (.zip, cleaned)
- Documentation (inline)
- Readme (getting started)
- Presentation (10 .ppt slides)

Project schedule

- Immediately: Decide for a topic
- Block 1: Communication Smartphone – Tag
Write signed NDEF messages
- Block 2: Read and verify NDEF messages
Create fake Message out of two valid messages

Bachelor Project

Studies: INF SEW TEL

Prerequisites

- Java knowledge

Advisor / contact

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