NFC Device Security and Privacy

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Abstract

The aim of this paper is to show security measures for NFC use cases and devices. We give a brief overview over NFC technology and evaluate currently available devices and their implementation of NFC operating modes. Out of this technology review we derive different use cases and applications based on NFC technology. Based on the use cases we show assets and interfaces of an NFC devices that could be a possible target of an attacker. In the following we apply different attacks against the operation modes to show how applications and devices could be protected against such attacks. The information collected is consolidated in a general threat model giving guidelines on how to improve security and deal with privacy issues. This allows to implement NFC technology in a secure way for the end consumer.