



Semester Thesis:

NFC Glove

Near field communication (NFC) allows modern smartphones to exchange data in a fast and easy way. While one recent application is to use it for payment services, like Google wallet, it is also possible to read information from and write it to so-called NFC-tags. These can come in many forms and shapes. Since they are a specific subset of RFID-chips, NFC-tags do not need their own source of energy to function. The signal sent out by the smartphone is used for modifying and sending the data, allowing tags to be placed anywhere without special maintenance or their own power supply.



Passive NFC-tags are pretty cheap (less than 1 CHF) and can store a decent amount of data (up to roughly 1 KB). In a sense they are similar to QR-codes, but QR-codes cannot be modified and need to be captured well with a camera. Some simple ideas are already used in real-life, like activating a special profile when you enter or leave your house by holding your phone to a tag for less than a second.

Goals

- Develop hardware that can access NFC tags and transmit data via bluetooth based on the Arduino platform that can be mounted to a glove.
- Write software for that Arduino board to transmit NFC tag information to and from other Bluetooth devices.
- Develop an Android client application.

Requirements

- Good Programming skills and the ability to work independently on the topic are required to work on this project successfully.

Interested? For more details please contact

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