



Berner Fachhochschule
Haute école spécialisée bernoise
Bern University of Applied Sciences

Bachelor Thesis

for Severin Kaderli

Subject Area Computer Science

Supervisor Reto Koenig

Inductive Short-Range Communication Channel

Nowadays, communication channels between electronic devices are based on the properties of electromagnetism. But what if the surrounding medium blocks electromagnetic waves?

In this bachelor thesis, a communication channel will be created that uses the properties of magnetic induction. The standard components of today's smartphones shall be used to turn the smartphone into a receiver.

The aim of the bachelor thesis is to create a proof of concept so that a chat application can be developed on it in which at least one path of communication is inductive. The generation or distortion of the magnetic near field for communication should take place with minimal technical effort and be based exclusively on standard components.

Advisor:

Head of Department: