

Open Thesis / Project

Implementing and evaluating a WiFi Direction Finder

Motivation

Accurate and inexpensive indoor localization is required in many applications, such as tracking objects in a warehouse. State-of-the-art wireless technologies which are typically used for indoor localization, such as BLE and UWB, now support angle-of-arrival capabilities. This feature is also possible using the protocol IEEE 802.11n (WiFi), which requires receivers with multiple antennas. Your job is to implement and evaluate a WiFi direction finder.

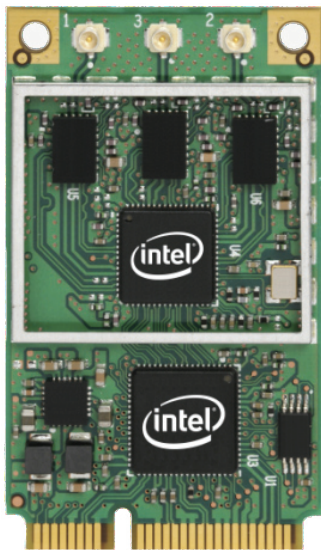
Interested? Please contact us for more details!

Target Group

Students in ICE/Telematics, Electronics and related.

Thesis Type

Master Thesis (Duration: 6 months).



Source: Linux 802.11n CSI Tool, 2020

Goals and Tasks

- Program embedded devices;
- Design and conduct experiments;
- Analyze results and compare with the existing literature;

Requirements:

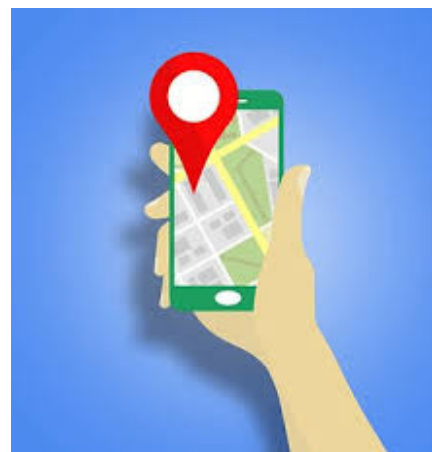
- Good programming skills (e.g., Python);
- Will to learn about different tools and technologies.

Used Tools & Equipment

- WiFi NIC (provided by us)
- A Laptop
- Additional equipment required by the tests.

Contact People

- Dr. Konrad Diwold (kdiwold@tugraz.at)
- Leo Botler (leo.happbotler@tugraz.at)



Source: Medium, 2020