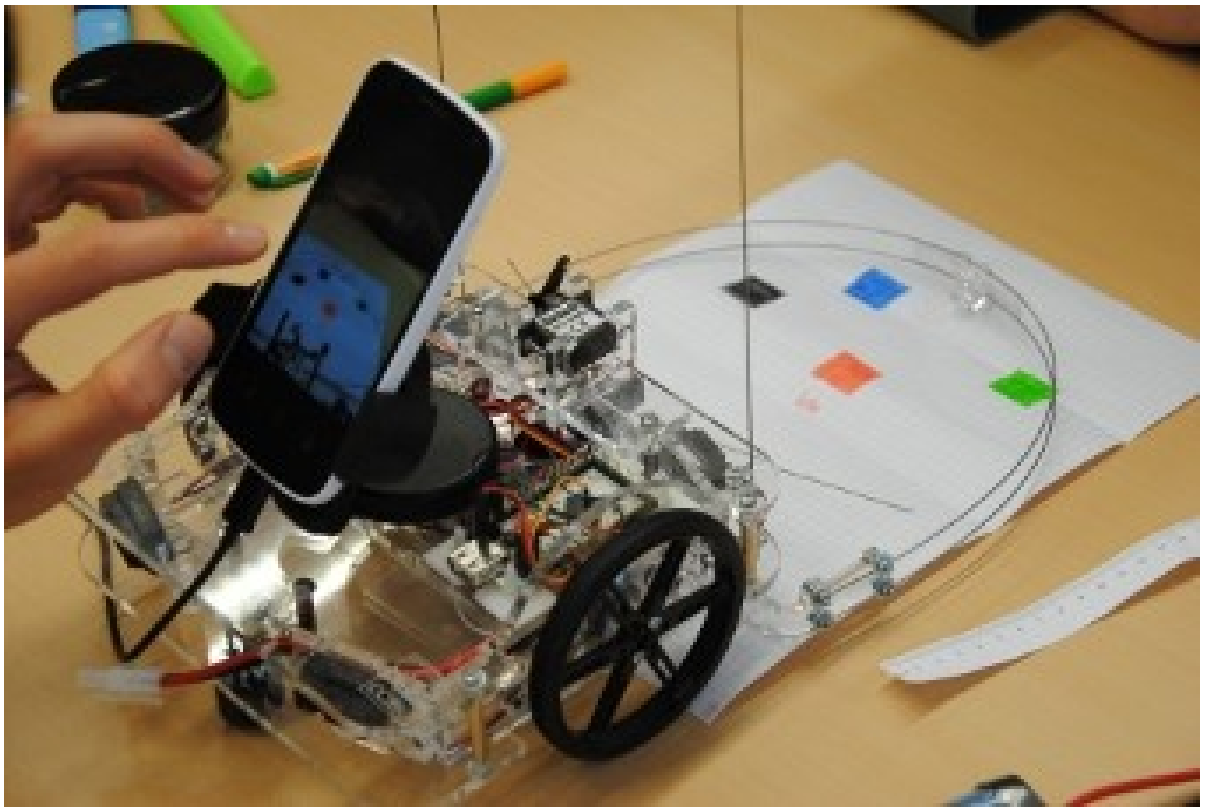
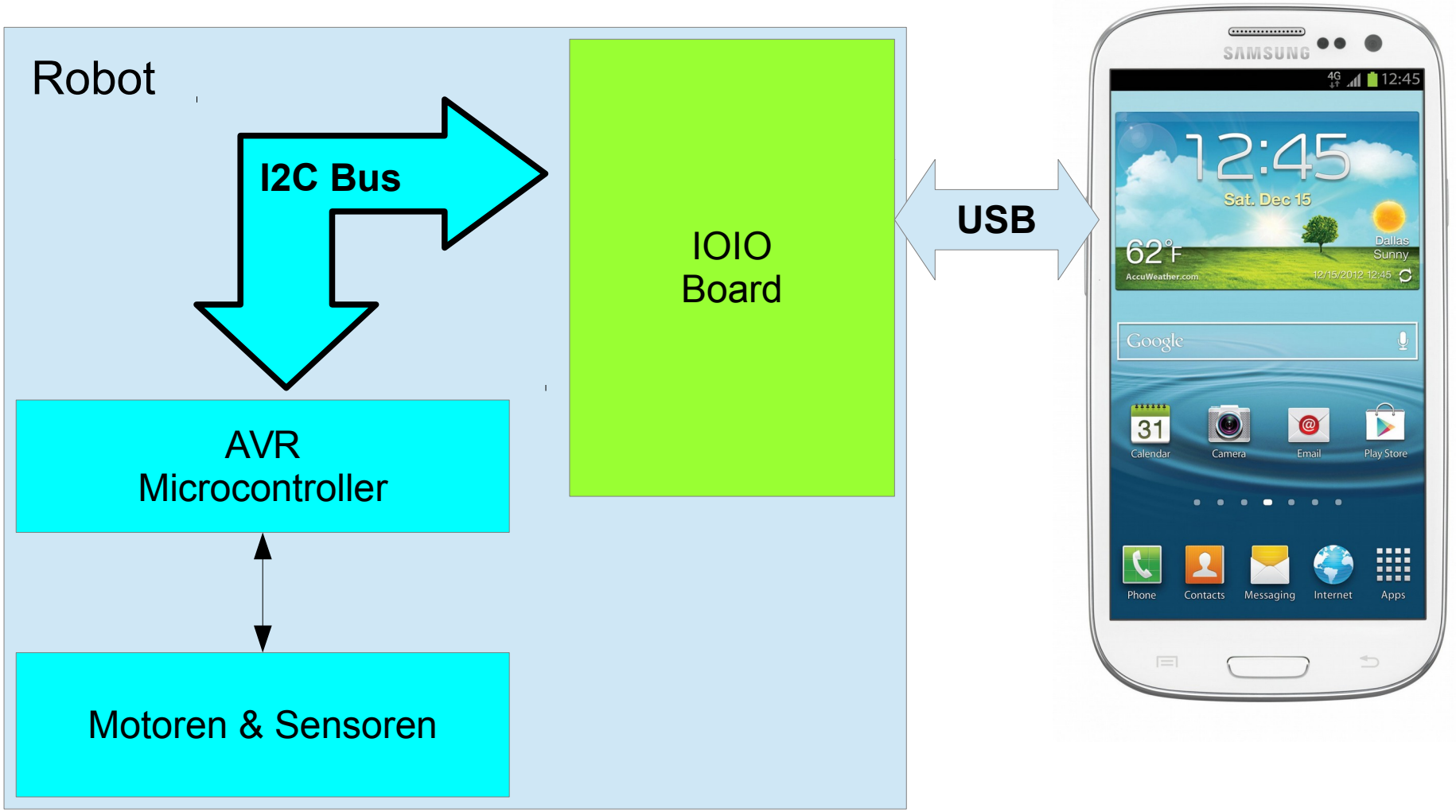
Improved On-Board Communication for Low-Cost Mobile Robots



Autonomous and Intelligent Systems

Betreuer: Simon Haller, Justus Piater

Robot Internals



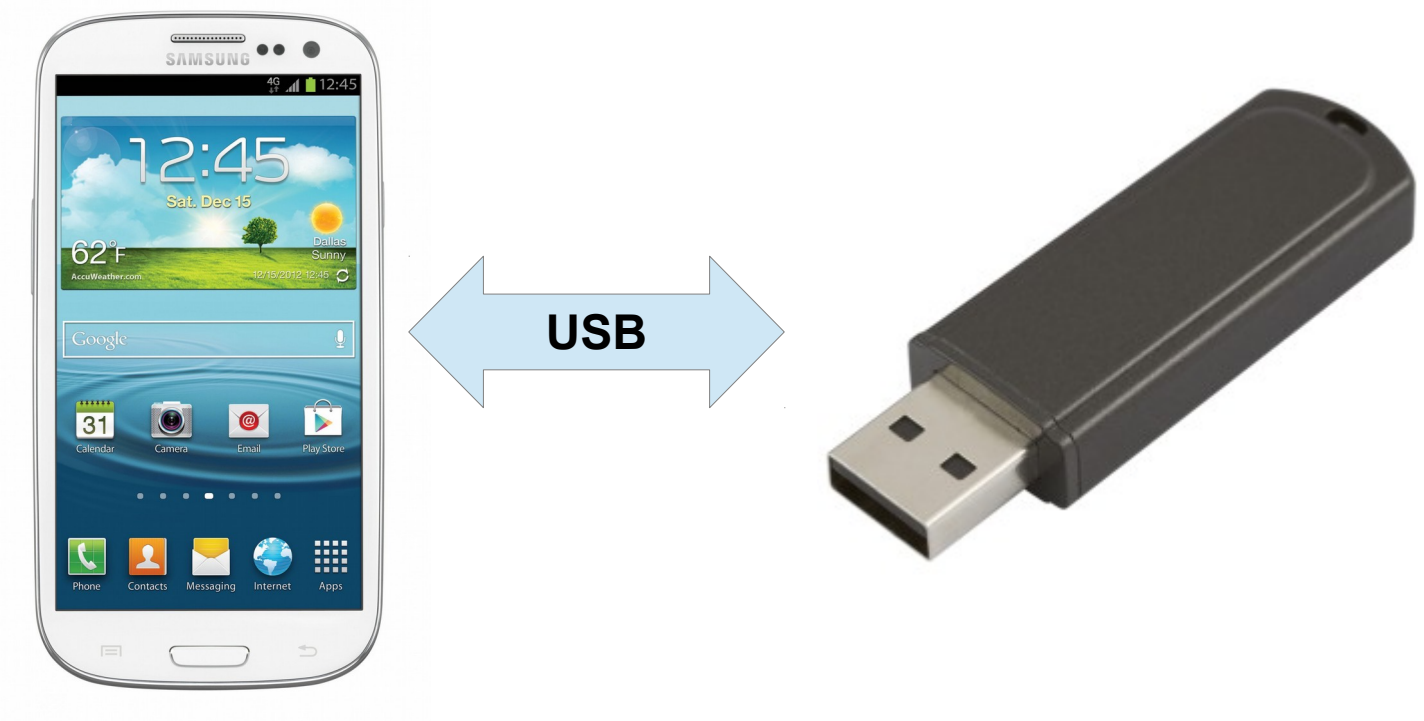
USB Mode: Host + Accessory

Host **Accessory**

- Benötigt meist Treiber
- Host muss Accessory richtig erkennen

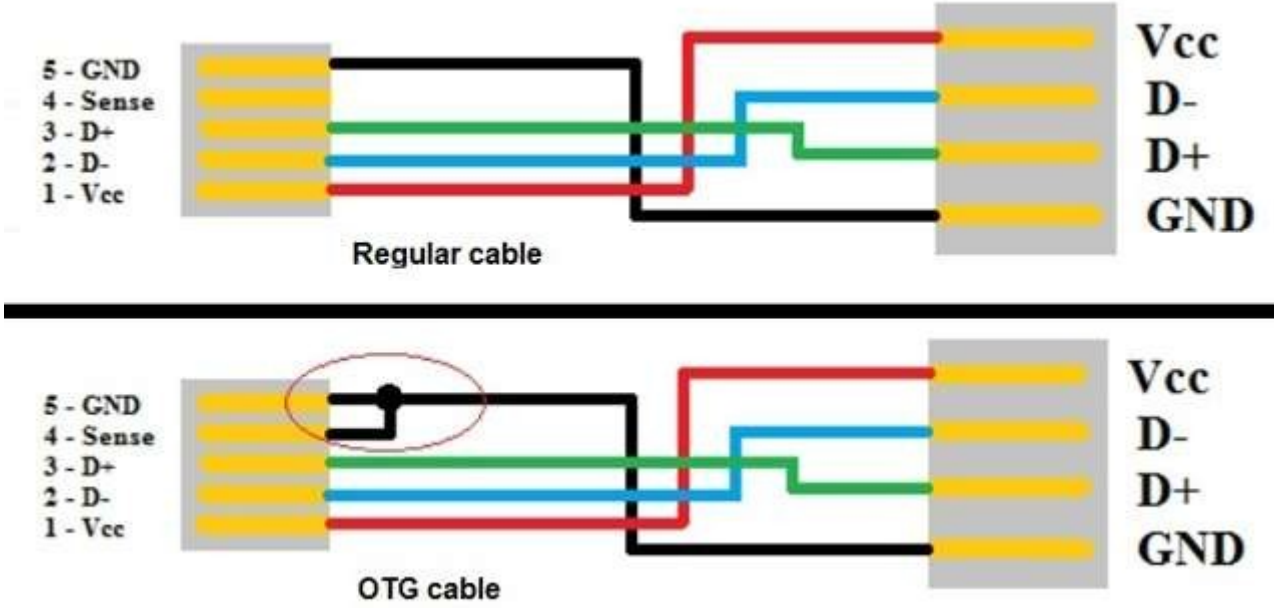
USB Mode: On-The-Go (OTG)

Host **Accessory**



- Benötigt eigenes OTG Kabel
- Nicht jedes Android Phone kann OTG

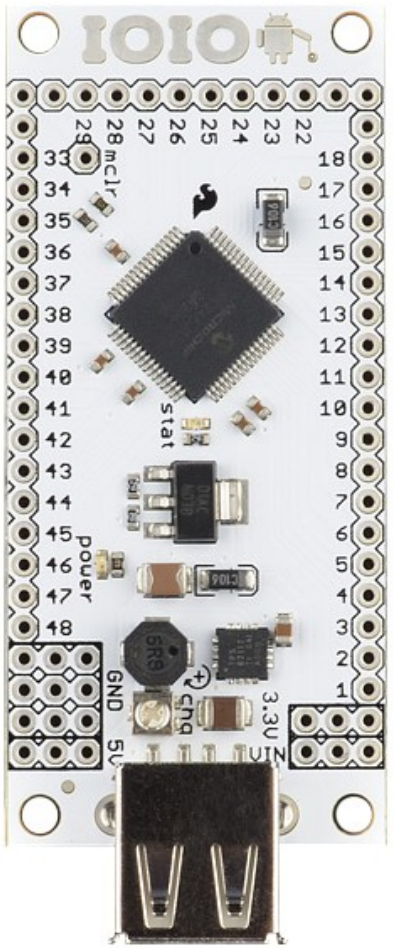
USB OTG Kabel



- Geringe Kosten
- Lieferbar

IOIO Board (Host + Accessory)

Host



- Unnötig komplex
- Große API

  (Android IOIO Lib)
- Android Versions Abhängigkeit

FT311D (Host + Accessory)

Host

- Einfach
- Multifunktional
- Android Versions Abhängigkeit

FT232 (On-The-Go)

Accessory

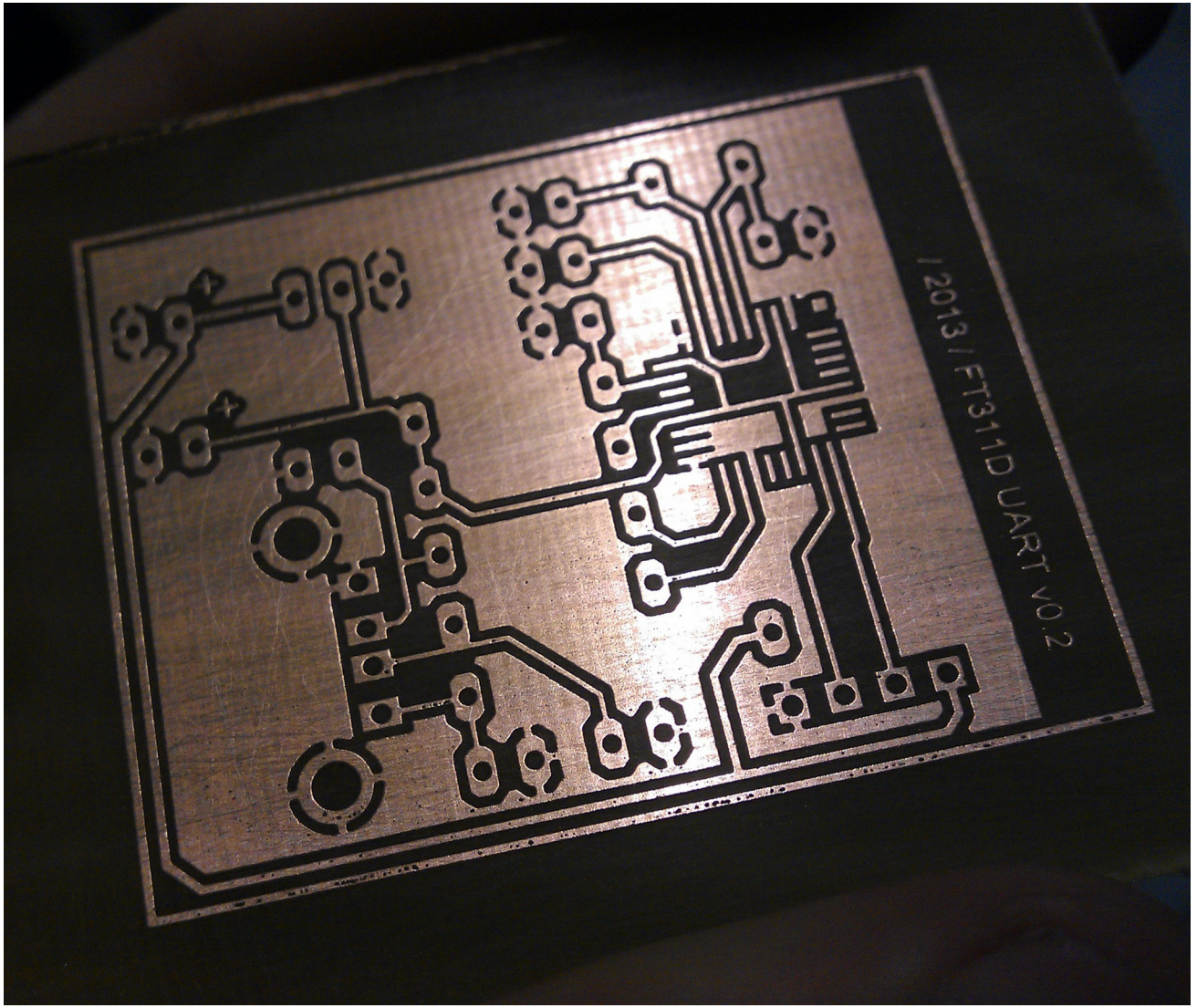
- Weit verbreitet

  (Treiber)

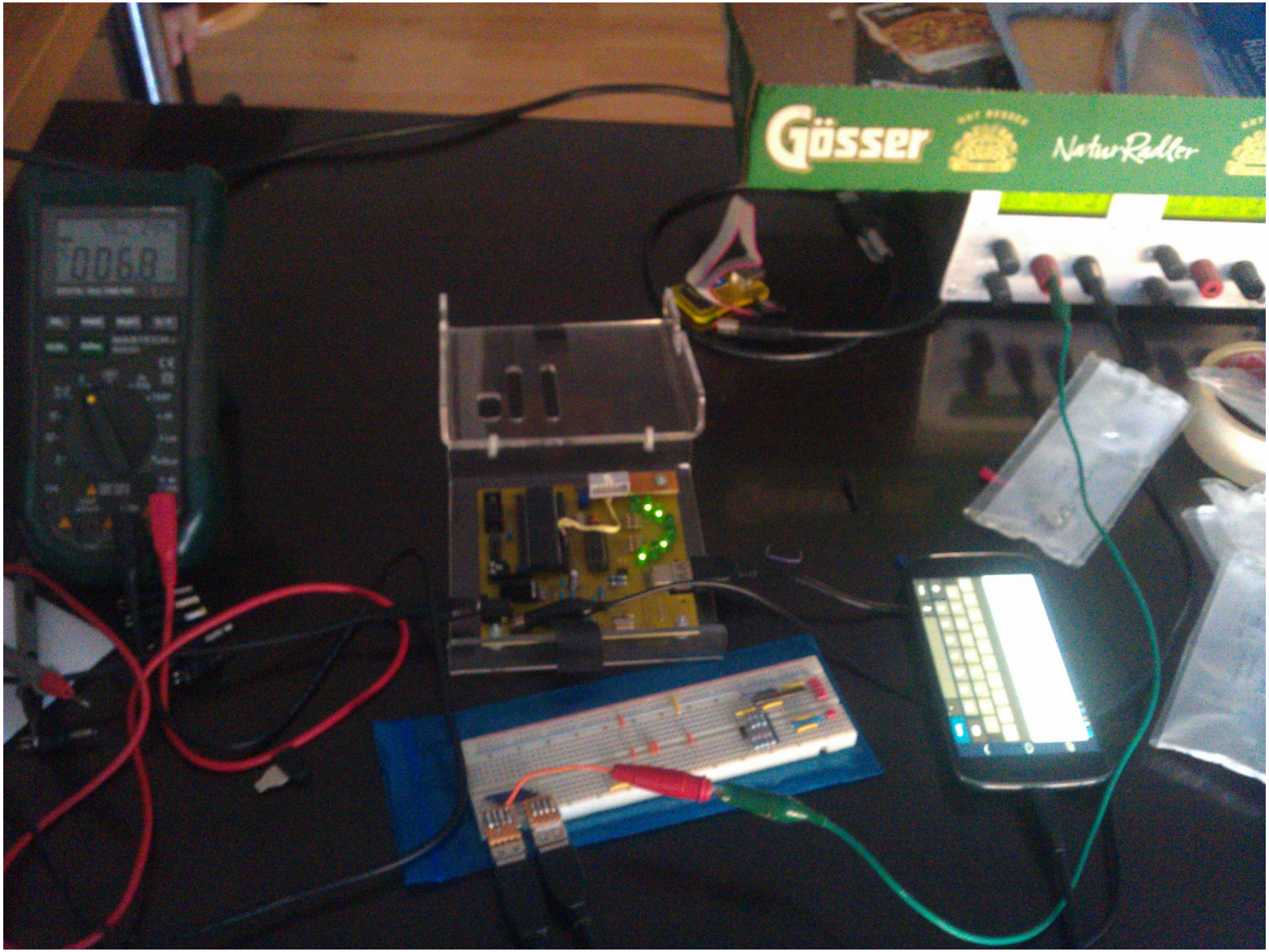
- Simpler USB zu Serial converter

- Simples Interface

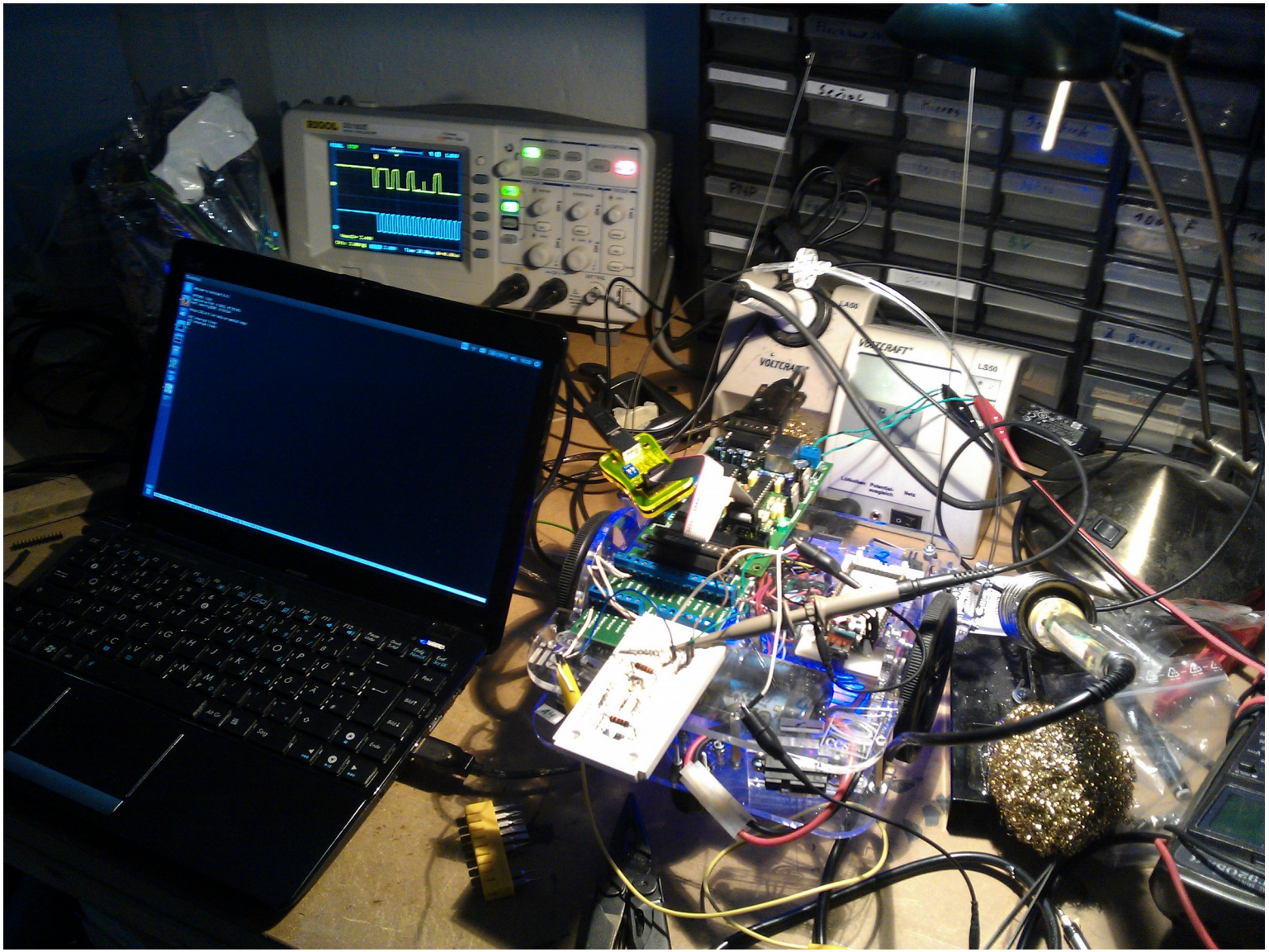
Prozess: Prototyping



Prozess: Prototyping



Prozess: Prototyping



Output

- Neue Kommunikations-Hardware
  - Erweiterbar
  - Versionsunabhängig
- Software Library + Example
- Gute Dokumentation