Open Thesis / Project:
*papageno*PCB **Module Design**

Motivation & Summary

Embedded prototyping platforms must be flexible and easily adaptable. Therefore, interchangeability of both hardware and software are of interest.

*papageno*PCB is a concept, where printed circuit boards can be created based on the combination of existing modules and their definition.

This proposed work, therefore, aims at creating modules of computing platforms (e.g., MCUs, FPGAs) or external peripherals (e.g., ADCs, communication ports) including drivers and integrate them into a MCSmartOS-based environment.

Specific tasks or modules can be negotiated individually.

Ideas for Modules

- CAN interface
- SD card slot
- "modular" Launchpad
- Power supply for MCUs

Recommended Prior Knowledge

- EAGLE CAD
- C/C++
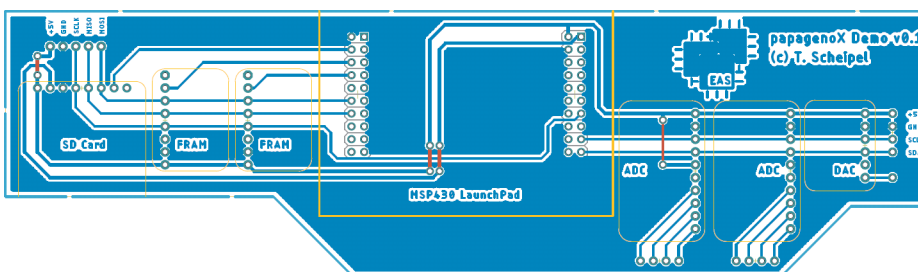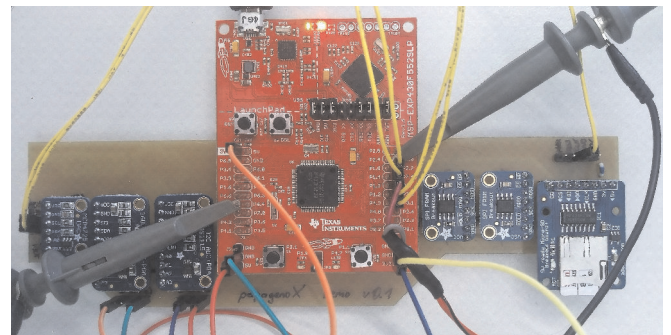- Real-time operating systems

Thesis Type

- Bachelor's Thesis

also scalable to:

- Master's Project

Student Target Groups

- Information and Computer Engineering (ICE)
- Electrical Engineering (EE)

Goals and Tasks

- PCB schematics and layout design
- Module description for *papageno*PCB
- Integration into MCSmartOS-based environment

Contact & Information

Prof. Marcel Baunach   baunach@tugraz.at

Tobias Scheipel   tobias.scheipel@tugraz.at

http://www.tugraz.at/en/institutes/iti/teaching/open-theses/

Institute of Technical Informatics
Embedded Automotive Systems Group