

Master-IT: Project work WS2010/2011

Area: Industrial Communication

Evaluation of different Medium Access Mechanisms for Wireless Local Area Networks

start: Immediately

partner: Consortium EU Project „flexWARE – Flexible Wireless Automation in Real-time Environments“

Description

The CalRadio platform (cf. <http://calradio.calit2.net/calradio1.htm>) is a portable system for research in the area of IEEE 802.11 WLANs. It has been developed to investigate new and innovative 802.11 MAC protocols with less efforts. It is based on a universal Arm7 CPU and a digital signal processor (DSP). Hence, it is relatively easy to flexibly implement new MAC protocols and to test them accordingly without any required changes to the existing hardware. The principle architecture of the CalRadio is shown in Figure 1.

Goals

- Initial start-up of the existing CalRadios
- Supplement of the implementation to allow AP mode and client mode
- Implementation of different medium access mechanisms (HCCA, TDMA basiert, etc.)
- Evaluation of the implemented medium access mechanisms

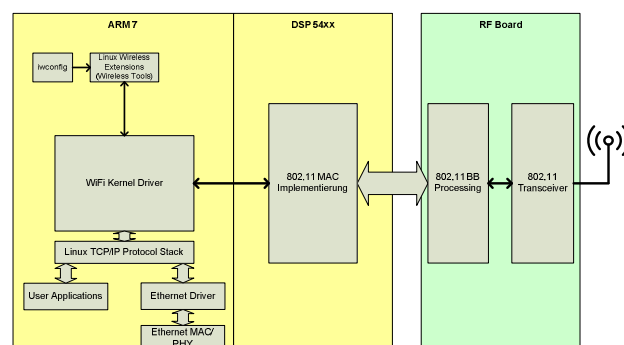


Figure 1: System architecture of the CalRadio