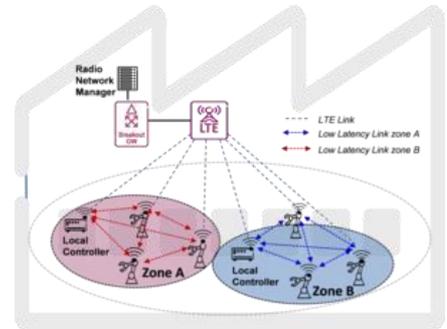


HiWi Position (9+h/w) in the field of Cross-Layer Coordination in Linux

As of August 2017, COMSYS (Computer Science 4, Prof. Wehrle) has an opening for a student assistant (HiWi) position in the context of the Kol Project (**Ko**ordinierte **I**ndustriekommunikation). If you are interested in working with us on the future of wireless communication in industry, you are very welcome to contact us!

About the Project

The Kol project is a joint project between academia (RWTH Aachen and WZL, U Paderborn, Fraunhofer) and research-oriented industrial partners (Ericsson, WiseSense, Weiss Robotics). The goal is to develop a highly-reliable wireless communication infrastructure for industrial automation scenarios based on a special low-latency link technology and coordinated via LTE. Your work will be loosely centered around coordinating and negotiating the requirements of applications with the services offered by the lower network layers (so-called **cross-layer coordination**).



Your Task and Challenges

To achieve our goal of creating an architecture for the coordinated communication of devices in industrial scenarios, we need a self-reliant student assistant (HiWi) to **develop additional modules for an existing cross-layer coordination solution in the Linux Kernel**. Application-specific requirements concerning reliability and timeliness of exchanged messages need to be monitored by this framework, and specific actions (adaptions of layer functionality) must be taken when they are likely to be violated. Additionally, multiple instances of the framework on different machines may need to communicate with each other. Towards the end of the project (December '17 / January '18), a short evaluation study also needs to be conducted.

Requirements and Environment

For this position, it is necessary for you to have previous experience in Linux Kernel development, as well as some knowledge of the different "OSI layers" (at least passed the *DatKom* lecture). You will be working near the core of COMSYS' **CRAWLER** cross-layer framework (Aktas et al.); you can find details on the project page at <https://goo.gl/rtcxEF> and the associated paper at <https://goo.gl/CPuWz9>.

COMSYS offers you a friendly, research-driven and open-minded working atmosphere, candy, soft drinks and coffee close to purchasing price via our "convenience" system, occasional social gatherings and more. Should you be interested in the offered job, feel free to contact us!

Please note: This position is limited until December 2017 / January 2018.

Contact



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