TELEMATIK NEWSLETTER

2010/4

News

Launch of SANDbed, our Testbed for Wireless Sensor Networks

SANDbed was finally launched in its first expansion stage and is now available for experiments in wireless sensor networks. Up to now there are 20 SANDbed nodes deployed at the facilities of the Institute of Telematics at Karlsruhe Institute of Technology (KIT). Currently there are several test experiments for topolgy detection running in SANDbed. In principle the testbed is available for remote access by research institutions, so it will be used for upcoming evaluations of sensor network applications.

http://tm.kit.edu/projects/sandbed

12/23/2010 Anton Hergenröder <hergenroeder@kit.edu>

Conferences & Workshops

Participation in the 2nd workshop "Automotive meets Communications"

Figure 1 Workshop place and exhibition hall of the 2nd AMC Workshop

Figure 2 Closing discussion

On October 27th, the 2nd Workshop "Automotive meets Communications" was held at T-Mobile in Bonn (Fig. 1). Various automotive manufacturers and telecommunication companies showed current Internet applications in cars and presented their visions towards future developments. UMTS and smart phones enable the use of Internet services and applications already today. The upcoming LTE technology will push this trend even more, so that streaming of audio and video content into cars will be taken for granted in the future. Some exhibitors showed LTE connected car prototypes. An interesting discussion (Fig. 2) on the "Connected Car" and potential future developments closed the workshop.

http://www.automotive-meets-communications.eu/

10/27/2010 Dr. Roland Bless <bless@kit.edu>

Best Paper Award for the paper "R/Kademlia: Recursive and Topology-aware Overlay Routing" at ATNAC 2010

The paper "R/Kademlia: Recursive and Topology-aware Overlay Routing" written by Bernhard Heep was awarded best paper at the Australasian Telecommunication Networks and Applications Conference 2010 (ATNAC 2010) in Auckland/New Zealand (Fig. 3). The paper presents a recursive variant (R/Kademlia) of the popular P2P protocol Kademlia and appropriate mechanisms for topology adaptation. For the evaluation, R/Kademlia was compared to the original protocol regarding routing efficiency under varying churn rates by using the OverSim overlay framework.

Figure 3 Prof Harris from the Massey University New Zealand hands out the certificate

http://telematics.tm.kit.edu/article.php?publication_id=416

http://atnac2010.aut.ac.nz/

11/02/2010 Bernhard Heep <heep@kit.edu>

Participation in the First Workshop on Pervasive Group Communication (Pergroup)

On December 6, Christian Huebsch attended the first Workshop on Pervasive Group Communication (Pergroup), co-located with the Globecom conference in Miami. He presented his work with the title "On Shared Medium Capacity Awareness in Heterogeneous Application- Layer Multicast", in which also Oliver Waldhorst was involved. Here, current problems of bottlenecks in cellular access networks in the context of dissemination strategies are discussed.

12/06/2010 Christian Hübsch <huebsch@kit.edu>

Projects

Conclusion of the Project MoSe

The BSI-funded project MoSe – Modellierung drahtloser Sensornetze – has been successfully concluded. In cooperation with the University of Braunschweig, the BSI and several external industry experts, an application-aware process to design secure sensor networks has been developed and validated. Starting by the ascertainment of the application, its constraints and possible attackers, up to the selection of appropriate security mechanisms and protocols, this process makes it possible to systematically develop a secure sensor network architecture.

11/16/2010 Denise Dudek <denise.dudek@kit.edu>

Miscellaneous

New co-worker Fabian Hartmann

Figure 4 New co-worker Fabian Hartmann

As of December 2010, Fabian Hartmann (Fig. 4) joined the Institute of Telematics research team. Within the scope of the Young Investigator Group "Service-oriented, decentralized and secure social networks (SODESSON)" he works on modern service provision using mobile devices. Particular subject of this research is the usage of social connections between users for collaboration, communication and granting permissions.

12/01/2010 Fabian Hartmann <fabian.hartmann@kit.edu>

Christmas Party

Figure 5 Christmas party

In this year, the TecO and DSN organized the traditional christmas party (Fig. 5) in which all finstitutes of telematics took part. In the cozy atmosphere of the decorated Room 217 (SCC) the professors, staff, students and alumni enjoyed good food and delicious Vogelbier. After dinner, the heads of the institutes provided a retrospect of the past year. The traditional secret junk santa provided many offices with new and absurd accessoires.

12/08/2010 Sebastian Mies <mies@kit.edu>

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