Telematik Newsletter
2005/2

News

Figure 1 Dr. Jidong Wu and his colleagues after his tour over the university campus.

Jidong Wu earns his PhD

Jidong Wu joined the research team of Prof. Zitterbart at the Institute for Operating Systems and Computer Networks in Braunschweig. Since then, his research has been focused on service discovery in mobile ad-hoc networks. Jidong left the Institute for China mid June to focus on new tasks. We wish him the best for his career!

19.04.2005, Mark Doll doll@tm.uka.de

New Research Staff

Thomas Gamer will join the research staff of Prof. Zitterbart to work on the Campus Mesh Project. He wrote his student thesis as well as his diploma thesis entitled „A hierarchical system for anomaly-based intrusion detection in backbone networks“ at the Institute of Telematics.

15.06.2005, Thomas Gamer gamer@tm.uka.de

Faculty prize of the School of Economics and Business Engineering

During the graduation ceremony, Christoph Sorge (doctoral student at the Institute of Telematics) received the faculty prize of the School of Economics and Business Engineering for his diploma thesis. The Professors Lockemann (IPD) and Dreier (ZAR) had been advisors of the thesis about the topic „Software agents: Conclusion of contracts, contractual penalties and forfeiture clauses“.

04.06.2005, Christoph Sorge sorge@tm.uka.de

New Research Staff

Ingmar Baumgart will join the research staff of Prof. Zitterbart to work on the ScaleNet project. His research interests include overlay networks, mobile communications and network security. He wrote both his student thesis (address autoconfiguration in MANETs) and his diploma thesis (security in sensor networks) at the Institute of Telematics.

15.06.2005, Ingmar Baumgart baumgart@tm.uka.de

Students from Karlsruhe win Accenture CampusChallenge 2005

The Accenture GmbH offer this term a competition, in that students write business plans and technical concepts for start-up companies. The students should use the RFID technology in the pharma supply chain. They could use a maximum of 5 million euro of venture capital. The Fakultät für Informatik and the Fakultät für Wirtschaftswissenschaften of Universität Karlsruhe (TH) (Prof. Zitterbart and Prof. Weinhard) took part in the campus challenge with an interdisciplinary team of students.

Other teams of the campus challenge came from the following schools: RWTH Aachen (Informatic, Prof. Jarke), IU Bruchsal (Information Technology, Prof. Altmann, Prof. Cloete, Prof. Nakata), TFH Berlin (Mathematik/Physik, Prof. Faehling Informatik/Medien, Prof. von Klinski), TU Berlin (Wirtschaftswissenschaften, Prof. Krallmann), FHTW Berlin (Wirtschaftsinformatik, Prof. Claßen), TU Dresden (Wirtschaftswissenschaften, Prof. Uhr, Informatik/Medieninformatik, Prof. Lener) FH Furtwangen (Wirtschaftsinformatik, tbd.Medieninformatik Allgemeine Informatik), TH Karlsruhe (Wirtschaftswissenschaften, Prof. Weinhardt, Informatik, Prof. Zitterbart) und FH München (BWL, Prof. Eckstaller, Informatik, Prof. Stützle).

15.06.2005, Christoph Sorge sorge@tm.uka.de
The following students (supervised by Hans-Joachim Hof and Dr. Daniel Veit) belong to the team from Karlsruhe: Ulrike Abelein (Informatik), Lisa Bock (Informationswirtschaft), Anne Grubel (Informationswirtschaft), Antje Nobis (Wirtschaftsingenieurwesen), Dominik Vogelbacher (Informationswirtschaft). The team from Karlsruhe won the campus challenge. http://www.entdecke-accenture.com/5veranstaltungen/5CampusChallenge/index.jsp
30.06.2005, Hans-Joachim Hof hof@tm.uka.de

Conferences & Workshops

NSIS Interim-Meeting in Munich

Dr. Bless attended the 4th Interim Meeting of the NSIS Working Group of the IETF from 23rd til 24th of May. Participants discussed several open issues of the currently proposed NSIS protocols (e.g., NTLP, QoS-NSLP, NAT/FW-NSLP). A first NTLP prototype, implemented by Uni Goettingen, was demonstrated, too. The Institute of Telematics has just started to implement some of the NSIS protocols. http://www.ietf.org/html.charters/nsis-charter.html http://www.ietf-nsis.org/ http://www.ietf-nsis.org/nsis/Munich_InterimMeeting/ 24.05.2005, Dr. Roland Bless bless@tm.uka.de

MobiHoc 2005


ACM ICEIS/IWUC 2005

Erik-Oliver Blaß presented new results regarding research about feasibility of public-key algorithms in sensor networks. Other interesting aspects dealt at this conference concentrated at the composition and interaction of complex services in ubiquitous environments. Also a practical demonstration of a maybe-successor for barcodes was presented that can be evaluated by simple mobile phones. 23.05.2005, Erik-Oliver Blaß blass@tm.uka.de

ICAIL 2005

Christoph Sorge attended the ICAIL 2005 (10th International Conference on Artificial Intelligence and Law) in Bologna, a conference at the interface between computer science and law. He presented his paper „Conclusion of contracts by electronic agents“. 9.6.2005, Christoph Sorge sorge@tm.uka.de

WoWMoM 2005

From the 13th to the 16th of June 2005, the international symposium „World of Wireless, Mobile and Multimedia Networks“ (WoWMoM) was held in Taormina (Sicily). A wide diversity of current researches done in the area of infrastructure, ad-hoc and sensor networks were presented and discussed. Peter Baumung from the Institute of Telematics participated at the symposium and presented his work related to reliable multicast in ad-hoc networks. 14.06.2005, Peter Baumung baumung@tm.uka.de

Kick-off Meeting of the Campus Mesh Project

On 26th of June 2005 the kick-off meeting of the campus mesh project took place with Siemens in Munich. A mesh is a wireless network which uses multi-hop communication to connect for example to the internet via a wired access point. The campus mesh project deals with selected problems of mesh networking like routing or quality of service. Therefore the project looks upon meshes as an extension of the IEEE 802.11 standard. At the beginning of the meeting the current proposal of Siemens for WLAN mesh networking which is in response to the call for proposals of the IEEE 802.11s task group was presented. Thereafter the representatives of the universities of Karlsruhe and Munich presented their designed basics for the campus mesh project. In the context of these presentations they went into the requirements that were needed for the application areas routing, quality of service and security in WLAN meshes. 27.06.2005, Thomas Gamer gamer@tm.uka.de

2nd Workshop „Energy and Communication“

Michael Conrad attended the second workshop of „Energy and Communication“ in Erlangen, Germany and presented the research project SESAM. 22.06.2006, Michael Conrad conrad@tm.uka.de
RealWSN’05

Erik-Oliver Blaß presented new ideas for an efficient key establishment in wireless sensor networks at the RealWSN. Additionally, this conference focused on the exchange of experience regarding the deployment of sensor networks in real-world scenarios.

20.06.2005, Erik-Oliver Blaß

IST Mobile and Wireless Communications Summit

Christian Vogt attended the IST Mobile and Wireless Communications Summit from June 19 through 23 in Dresden. He presented new research results concerning efficient and secure mobility management. The conference’s main topics were current challenges and technical progress for IP-based, heterogeneous 3G networks.

http://tm.uka.de/itm/publications.php?id=105
http://www.mobilesummit2005.org/

19.06.2005, Christian Vogt chvogt@tm.uka.de

Guests & Visits

UMTS Expert Gives Guest Lecture in Course Mobile Communications

Alcatel’s UMTS expert Mr. Sigle gave a guest lecture in the course Mobile Communications on May 24, 2005. He explained the high-speed technology „High Speed Downlink Packet Access” (HSDPA), an approaching extension to UMTS. Mr. Sigle put particular emphasis on the current status of implementation and deployment efforts, and he identified the issues that system engineers are facing now or have successfully solved in the past. Students showed great interest in the subject and attended vividly to the discussion following the presentation.

24.05.2005, Christian Vogt chvogt@tm.uka.de

Projects

The SIMON project

Since the beginning of 2005 the Institute of Telematics is involved in a new project with the name SIMON. The focus of this project is the efficient and fast engineering of software for an organic system. During the two years of duration the itm will focus on security components, the underlaying Ad-Hoc communications, monitoring, and the demonstrator including sensors. 12.07.2005, Lars Völker lars.voelker@tm.uka.de

The ScaleNet Project

The BMBF founded project „ScaleNet: Scalable, efficient and flexible next generation converged mobile, wireless and fixed access networks” with a term of three years has started in July. Together with seven partners the Institute of Telematics is going to design a system, that offers the possibility to integrate different wireless and fixed access networks and technologies in a scalable, cost-saving and efficient way. The system should be high-performance in all areas and support various forms of mobility. One of the main research areas of the Institute of Telematics in this project will be the use of overlay networks to launch novel services in heterogeneous networks in a flexible and cost-saving way.

01.07.2005, Ingmar Baumgart baumgart@tm.uka.de

Student & Diploma Thesis

Analysis, Optimization and Evaluation of a secure distributed service directory for wireless sensor networks


30.04.2005, Hans-Joachim Hof hof@tm.uka.de

New Scalable Simulation Model for IEEE 802.11 in OMNeT++

In his master thesis, Georg Lutz developed a generic simulation model for radio interfaces in the forth generation of mobile networks. This model will be used in the context of the research project WIGWAM in order to investigate large, heterogeneous access networks. Therefore, the scalability of the model is of special importance. Besides the generic model, Mr. Lutz exemplarily implemented IEEE 802.11b in OMNeT++ in a more efficient way. His implementation is about 100 times faster than the two existing models.

Tobias Kühner kuefner@tm.uka.de
SAVE-Sender Address Verification Extension

Matthias Merz finished this Studienarbeit at 30.04.2005. He designed and implemented the SAVE-System. SAVE avoids unwanted eMails. It uses a novel security approach. One of the advantages of SAVE is that it can be used by either a mail server provider or a user. SAVE protects immediately because it does not rely on any infrastructure.

30.04.2005, Hans-Joachim Hof hof@tm.uka.de und Michael Conrad conrad@tm.uka.de

Infrastructure

In-place Upgrade of Windows NT Server 4.0 to Windows Server 2003

On 17.3.2005 an in-place upgrade of the existing Windows NT Domain to a Active Directory based Windows Server 2003 took place. To be able to perform an in-place upgrade, first a Windows NT Server on modern HW had to be installed, an promoted to PDC. After the upgrade, a second Server – the new File-Server – running Windows Server 2003, was installed. Currently the domain is run in mixed mode (there is still one active NT Server).

17.03.2005, Gentiel Mussgnug mussgnug@tm.uka.de

Publications


CHRISTOPH SORGE: Conclusion of contracts by electronic agents. In International Conference on Artificial Intelligence and Law, June 2005. accepted.