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systems & applications

The Annual Highlight of the Wireless Community!

Wireless Congress 2016: Systems & Applications

November | 9 - 10, 2016
Munich | Germany

DAY 1 | Wednesday | November 9, 2016

09:00 - 09:05	**Welcome** Prof. Dr. Axel Sikora, University of Applied Sciences Offenburg			
09:05 - 09:30	**KEYNOTE: Low Power Wide Area – the Future of Industrial IoT Networking** Dale Ford, IHS Markit			
09:30 - 10:00	**KEYNOTE: Wireless Communication – Opportunities and Challenges for Industry 4.0** Prof. Dr. Hans D. Schotten, University Kaiserslautern			
10:00 - 10:30	COFFEE BREAK & NETWORKING			
10:30 - 11:00	**Session 01: Wireless IoT**	**Session 02: Technology**	**Session 03: Thread**	**Session 04: LoRaWAN**
	The Internet of Things is a Service Application Cees Links, GreenPeak-Qorvo	**Industrial Radio Research – Insights from the BMBF Research Programme "ICT2020: Research for Innovations – Reliable Wireless Communications for Industry 4.0"** Dr. Norman Franchi, TU Dresden	**Understanding Thread Technology: The Future of IP-Based Mesh Networking for the IoT** Skip Ashton, Silicon Labs/Thread Group	**How an Open Standard Disrupts the LPWAN Market** Marcus Walena, Dr. Gerald Troopenz, Digimondo
11:00 - 11:30	**How to Select Wireless Technology for IoT-Platforms – A Guide through the Jungle** Lyn Matten, mm1 Technology	**Implementation Concept for Automated Wireless Coexistence Management** Marko Kraetzig, ifak Magdeburg	**Thread Network Topology & Co-Existence with Other Home Standards: Why 2.4GHz 802.15.4 & Mesh on Top of 6LowPAN** Robert Cragie, ARM/Thread Group	**LoRa and LoRaWAN a Standard for Sensor Networks** Michael Fink, Semtech Germany
11:30 - 12:00	**Interoperability of Devices in the IoT – THREAD, ZigBee, Bluetooth, WiFi and Other** Joe Lomako, Underwriters Laboratories	**E-band Front End Module for Cost-Optimized Gigabit Datalinks** Uwe Rüddenklau, Infineon Technologies	**Talk about Benefits of 802.15.4 for Low Power, Mesh Benefits to Extend Range + Direct Addressing from Cloud** Greg Hodgson, Silicon Labs/Thread Group	**LoRa Pushed to the Limit** Alexander Raimondi, Miromico
12:00 - 12:30	**Multiprotocol Analysis with Software Defined Radio for Short Range Devices** Christian Roßberg, University of Technology Chemnitz	**Li-Fi Communication for Industrial Real-time Data Links** Michael Faulwaßer, Fraunhofer Institute for Photonic Microsystems IPMS	**Thread Stack Layers and Review, Thread Device Commissioning, Thread System Integration** Alin Lazar, NXP Semiconductors/Thread Group	**Open Source Software-Stack for LoRaWAN** Prof. Dr. Axel Sikora, Offenburg University of Applied Sciences
12:30 - 13:30	LUNCH BREAK & NETWORKING			
13:30 - 14:00	**Leveraging the Range of Sub-1 GHz Technology to Connect Ultra-low Power IoT Sensors to the Cloud** Ram Machness, Texas Instruments	**Session 05: Energy Harvesting**	**Session 06: Z-Wave**	**Certificare Necesse Est – Or why LoRaWAN-Certification is More than Useful** Markus Ridder, IMST
		Powering Long Range Wireless Nodes with Harvested Energy Prof. Dr. Marcel Meli, ZHAW InES	**Towards Apple HomeKit – the New Z-Wave Security Architecture S2** Prof. Dr. Christian Paetz, TU Chemnitz	**Session 07: Automotive**
14:00 - 14:30	**Key Design Considerations for Ultra-Low-Power Wireless IoT Devices** Greg Hodgson, Silicon Labs	**Development of Rotational Electromagnetic Energy Harvesting Generator** Dragan Dinulovic, Würth Elektronik eiSos	**Developing Z-Wave-Devices with Energy Harvesting.** Marco Bönig, Stagetronics	**Field Study on the Performance of In-Car WLANs** Dr. Florian Pfeiffer, perisens, Bernd Napholz, Daimer
			Session 08: RFID	
14:30 - 15:00	**The Key to Connecting Smart Homes** Brian Bedrosian, Cypress Semiconductor	**Energy Autarkic Radio Sensor for Measuring Velocity of Wind** Thorsten Zenner, Reutlingen University	**Monitoring of Building Constructions with Passive RFID Technology** Basil Brunner, Zurich University of Applied Sciences	**Virtual Modelling of Unintentional and Intentional Electromagnetic Emissions from Electric Vehicles** Dr. Pascal Hervé, CSA Group
15:00 - 15:30	**Session 09: 6LoWPAN**	**Harvesting Energy from Small Temperature Differences** Prof. Dr. Juan-Mario Gruber, Zurich University of Applied Sciences	**A Passive RFID-to-I2C Bridge** Dr. Ralf Hildebrandt, Fraunhofer Institute for Photonic Microsystems IPMS	**Session 10: ULE**
	Verification and Validation of 6Lo Protocol Stacks Artem Yushev, IvESK,Offenburg University of Applied Sciences			**DECT ULE as a Wireless Connectivity Technology in Embedded Applications** Prof. Gerald Kupris, Technische Hochschule Deggendorf
15:30 - 16:00	COFFEE BREAK & NETWORKING			
16:00 - 16:30	**Wake on Radio in Real Wireless Applications** Manuel Schappcher, IvESK,Offenburg University of Applied Sciences	**Tutorial 01: Worldwide Radio Approvals**	**Using NFC for Communication Between Devices in Laboratory Automation** Peter Hildebrandt & Daniel Grabner, Zühlke Engineering	**Tutorial 04: ULE**
	Tutorial 02: Energy Harvesting	**Worldwide Radio Approvals, Different Type Approval Processes** Uwe Dollitz, Phoenix Testlab	**Tutorial 03: EnOcean**	**Introduction to the ULE Technology & Alliance**
16:30 - 17:00	**Introduction and Moderation**		**From EnOcean to Watson** Oliver Fischer, Digital Concepts	**ULE Basics, Technical Overview**
	Simulation of the Energy Conversion			**ULE HAN-FUN Application Layer**
17:00 - 17:30	**Robust and Reliable Piezoelectric Power Conversion for Autonomous Sensor Nodes**		**Remote Commissioning of EnOcean Networks & Installers** Thomas Rieder, ViCOS	**ULE over IP - 6LowPAN**
				ULE Certification Program
17:30 - 18:00	**Robust Systemintegration**		**EnOcean Interoperability and Certification Program** Norbert Metzner, Viessmann Hausautomation	**Product Design with ULE over 6LowPAN - Manufacturer's Experience**
	Reliable Design for Vibrational Loads			**Chipsets, Starter Kits & Development Tools**
	Energy Efficient Design of Autarkic Sensor Systems Dr. Olaf Wittler et al., Fraunhofer IZM			Avi Barel et al., ULE Alliance

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DAY 2 | Thursday | November 10, 2016

09:00 - 09:30	**Session 11: ZigBee**	**Session 12: Bluetooth**	**Session 13: Mobile Radio Communications/M2M**	**Session 14: Wireless Power**
	The ZigBee Alliance, a 15 Year History of Innovation for the Wireless IoT Victor Berrios, ZigBee Alliance	**Bluetooth: Transforming the Connected and Connectionless IoT with Bluetooth 5** Chuck Sabin, Bluetooth SIG	**The Potential of Cellular IoT – What to Expect after 3GPPs Agreement on Rel13 MTC Standard Extensions** Matthias Weiss, CommSolid	**Empowering Future Devices with Wireless Power** Jörg Hantschel, Würth Elektronik eiSos
09:30 - 10:00	**ZigBee 3.0: One Solution for All IoT Applications** Bozena Erdmann, Philips Lighting	**Bluetooth Mesh: a Platform for Services** Simon Slupik, Silvair	**Evaluation of NB-IoT Cellular Solution for Internet of Things** Daniela Raddino, Rohde & Schwarz	**Selecting the Right Inductor for Wireless Power Transfer** Cem Som, Würth Elektronik eiSos
10:00 - 10:30	**ZigBee Application Layer** Skip Ashton, Silicon Labs	**Developing Beacons with Bluetooth Low Energy Technology** Joe Tillison, Silicon Labs	**Experiences from a First Pilot of a NB IoT Smart Meter** Wolfgang Esch, WEPTECH elektronik **Session 15: KNX**	**Flexible Approaches to Wireless Charging** Johannes Fottner, Semtech Germany
10:30 - 11:00	**France Linky Project Architecture** Vincent Illionet, EDF	**Easy and Safe Pairing for Bluetooth Smart** Prof. Dr. Marcel Meli, ZHAW InES	**KNX Secure - an Extension to the KNX Protocol for Any KNX Medium** Joost Demarest, KNX	**Wireless Power: Extended Power Profile in Qi v1.2** Winfried Bilgic, ROHM Semiconductor
11:00 - 11:30	COFFEE BREAK & NETWORKING			
11:30 - 12:00	**RF4CE Remote Control** Bram Van den Bosch, Qorvo	**Bluetooth Low Energy Use in Automotive: Applications, Security and Data Throughput in 30 Minutes or Less!** Brian Senese, OpenSynergy	**Session 16: RF-Frontend** **Advances in System-level Modeling of Large Phased Arrays for 5G Applications** Joel Kirshman, National Instruments	**Design and Optimization of an Highly Integrated Inductive Power Transfer System for Pluggable Applications** Stefan Ehrlich, Fraunhofer IISB
12:00 - 12:30	**Regulation and Certification for ZigBee Products** Jon Harros, Element Materials Technology	**Chip or Module "Cookbook" for BLE Designs** Thomas Rupp, Arendi	**UWB Antennas to Enable Increased Security, Localization, and Monitoring Performance** Andela Zaric, Taoglas	**High Power Wireless Power Transfer for the Industrial Environment** Cem Som, Würth Elektronik eiSos
12:30 - 13:30	LUNCH BREAK & NETWORKING			
13:30 - 14:00	**Panel Discussion** **Low Power Wide Area Networks for industrial IoT – Licensed versus Unlicensed Bands?** Simon Glassman (u-blox), Vivek Mohan (Semtech), Hamid-Reza Nazemann (Qualcomm), Jonathan Pearce (Microchip Technology), Fabien Petitgrand (Ubiik), Tobin Richardson (ZigBee Alliance), Chuck Sabin (Bluetooth SIG), Frank Schmidt-Künzel (Telefonica), Aurelius Wosylus (Sigfox) Panel Host: Prof. Dr. Axel Sikora, University of Applied Sciences Offenburg			**Advantages of an OFDM-based Implementation for a Simultaneous Energy and Data Transmission through Inductively Coupled Resonances** Eduardo Lloret Fuentes, University of Applied Sciences des Saarlandes
14:00 - 14:30				**PCB Coils for Wireless Charging Applications** Uwe Maaß, Fraunhofer IZM
	Session 17: Localisation	**Tutorial 07: Bluetooth**	**Tutorial 05: Antenna Part I**	
14:30 - 15:00	**Improved Indoor Localization Approach Based on Bluetooth Low Energy** Nizam Kuxdorf-Alkirata, Bergische Universität Wuppertal	**Advanced Bluetooth Low Energy Development** Adrian Eggenberger, Arendi	**Self Made Embedded Antenna Design versus Chip Antenna** Harald Naumann, Tekmodul & Author of the IoT/M2M Cookbook	**Highly Resonant Wireless Power for Medical and Industrial Applications** Colin McCarthy, WiTricity
15:00 - 15:30	**Micro-Location: Adding Value and Security to the IOT** Mickael Viot, Decawave			**Certification and Regulatory Approval of a WPC Qi Device** Niels Jeß, CETECOM
15:30 - 16:00	COFFEE BREAK & NETWORKING			
16:00 - 16:30	**Session 18: Weightless**	**Tutorial 09: IP500**	**Tutorial 05: Antenna Part II**	**Tutorial 08: RFID**
	Reliable, Ultra-low Energy, High-capacity Scalable Networking Fabien Petitgrand, M2COMM	**IP500 at the Glance** Helmut Adamski, IP 500	**RF Measurements with Inexpensive USB Based Vector Network Analyzer** Roger Denker, megiq RF Measurement Tools	**Smart RFID System Integration via OPC UA** Prof. Dirk Reichelt, Fraunhofer Institute for Photonic Microsystems IPMS
16:30 - 17:00	**Tutorial 06: LPWAN**	**IP500 Technology / Solutions** Zbigniew Ianelli, CoreNetiX		
	How to Run a Licence-free Long-range Radio Network Tim Simon Leßmann, PHOENIX CONTACT Electronics	**IP500 redundancy & robustness in large wireless sensor network** Florian Schintke, ZUSE Institut Berlin		
17:00 - 17:30		**IP500 Mobile Guidance and Access based on BACnet Infrastructure / IP500 Infrastructure – Scalability & Redundancy** Alexander Landgraf, GEZE, Frank Konrad, Microsens		
		IP500 Certification Process & Tools Jens Hempel, TÜV Rheinland		
		IP500 SmartCity Project Freiburg Peter Meyer, badenova		
17:30 - 18:00				

Program is subject to change.

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