

Monday, 14.06.2010

20:00 Welcome event for participants in the Local Museum "Villaseñor"
Special guest: *Da Rosario Roncero*, local concejal of tourism and local economical promotion

Tuesday, 15.06.2010

08:30 *Registration*

09:45 Workshop Opening
T. Hollstein, U. Wissendheit, J. Strueker

10:00 Greetings / Introduction to UCLM

10:20 **How Europe Encourages Investment in Internet of Things Research and Innovation**
Keynote: F. Frederix, Head of Sector 'Radio Frequency Identification', European Commission

11:20 *Coffee Break / Industrial exhibition / Poster session*

11:40 **Industrial and Poster Presentations**
Chair: J. Garcia-Escribano, UCLM, Ciudad Real, Spain

Session 1: Smart Applications

Chair: A. Garcia-Higuera, UCLM, Ciudad Real, Spain

12:15 **Effective Remanufacturing via RFID**
W. Zhou, ESCP-Europe, France

12:45 **Implementation of RFID Tags in Food Containers in Catering Business**
B. Bordetas, Zaragoza Logistics Center, Spain

13:15 *Lunch / Industrial exhibition / Poster session*

Session 1: Smart Applications (continued)

Chair: A. Garcia-Higuera, UCLM, Ciudad Real, Spain

14:15 **Deployment of a Wireless Sensor Network to Support and Optimize Logistical Processes in a Clinical Environment**
F. Meier, Fraunhofer SCS, Nuremberg, Germany

14:40 **Development of a Wireless Sensor Network System for Early Forest Fire Detection**
A. Bayo, University of Zaragoza, Spain

14:05 **Real Time Construction Progress Control Using NFC**
C.Klaubert, Technical University of Munich, Germany

Session 3: Localization and Positioning

Chair: U. Wissendheit, IR-Systeme GmbH Hassfurt, Germany

15:30 **A Novel Approach for UHF-RFID-Based Positioning Through Spread-Spectrum Techniques**
A. Loeffler, University of Erlangen-Nuremberg, Germany

16:55 *Coffee Break / Industrial exhibition / Poster session*

16:25 **Indoor Location System using a Wireless Sensor Network**
Y. Alvarez Lopez, University of Oviedo, Spain

16:50 **Localization in Wireless Sensor Networks using Diversity for Multipath Effects Mitigation**
A. Lazaro, University of Rovira i Virgili, Spain

17:15 **Using Neural Networks and Active RFID for Indoor Location Services**
A. Martinez-Sala, Polytechnic University of Cartagena, Spain

18:00 *Guided tour in Ciudad Real*

20:00 *Social Event*

Session 2: Economics of Smart Objects

Chair: J. Strueker, University Freiburg, Germany

The Internet of Things in Logistics
A. Nettstraeter, Fraunhofer IML, Dortmund, Germany

RFID-based Traceability System for Architectural Concrete
R. Zangroniz, Autolog – UCLM, Ciudad Real, Spain

An Extensible Event Processing Architecture for RFID-based Tracing and Tracking
O. Pawlowski, Hannover University of Applied Sciences and Arts, Germany

Best Practices for Rigorous Evaluation of RFID Software Components
J. Mueller, Hasso Plattner Institute, Potsdam, Germany

The RFID-Equipment Selection and Evaluation Problem
D. Neuhaeuser, University of Stuttgart, Germany

Sustainable Use of RFID Tags in the Pharmaceutical Industry
M. Schapranow, Hasso Plattner Institute, Potsdam, Germany

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Wednesday, 16.06.2010

09:30 Smart Items in the Future Internet
Keynote: S. Haller, Research Program Manager Smart Item, SAP Research, CEC Zurich

Session 3: Localization and Positioning (continued)

Chair: U. Wissendheit, IR-Systeme GmbH Hassfurt, Germany

10:30 Location of Medical Equipment Based on a Maintenance Service Oriented Infrastructure and RFID Technology
D. Bueth, FEIG ELECTRONIC GmbH, Germany

10:55 Reliable and Energy Optimized Routing Algorithm for WSN
C. Torres, University of Applied Sciences Muenster, Germany

11:20 Coffee Break / Industrial exhibition / Poster session

Session 5: Architectures, Components and Parameter of Smart Systems

Chair: T. Hollstein, University Darmstadt, Germany

11:50 Improving the Combination of RFID with Other Technologies by Means of a Multi-service Device
J. García-Escribano, Autolog – UCLM, Ciudad Real, Spain

12:15 A Low-Voltage Single-Supply Analog Lock-in Amplifier for Wireless Embedded Applications
M. Gabal, University of Zaragoza, Spain

12:40 Direct Digitalization and Frequency Translation Using an Undersampling Scheme for Software-Defined-Radio based RFID UHF-Systems
S. Grey, Fraunhofer IMS, Duisburg, Germany

13:05 Lunch / Industrial exhibition / Poster session

14:15 An RFID Reader Network Based on SOAP
C. Popp, IR-Systeme GmbH, Hassfurt, Germany

14:40 -

Session 7: Security and counterfeiting

Chair: T. Hollstein, University Darmstadt, Germany

15:05 Documented Authentication as an Effective Protection Against Counterfeiting for Components in Mechanical Engineering
J. Durchholz, Technical University of Munich, Germany

15:30 Evaluation of the Security Capabilities on NFC-Powered Devices
A.J. Jara, University of Murcia, Spain

15:55 Comparison of DNSSEC and DNSCurve Securing the Object Name Service (ONS) of the EPC Architecture Framework
P. Schmitz, University of Applied Sciences Bonn-Rhein-Sieg, Germany

16:20 Closure of the Workshop

Session 4: Analysis and Measurement

Chair: A. Garcia-Higuera, UCLM, Ciudad Real, Spain

Tolerant RFID Bulk Reading
H. Buechter, Fraunhofer IML, Dortmund, Germany

Statistical Analysis of UHF RFID Bulk Measurements
W. Strauss, Fraunhofer IIS, Erlangen, Germany

Characteristic Numbers for the Evaluation of the Performance of RFID Systems
A. Jungk, Leibniz University of Hannover, Germany Fault

Analysis of the Identification Process in Active RFID Systems with the Capture Effect Phenomenon
M.V. Bueno Delgado, Technical University of Cartagena, Spain

Session 6: Antenna and Antenna Parameter

Chair: J. Garcia-Escribano, UCLM, Ciudad Real, Spain

Antenna Design for Multistandard Transponder ICs
J. Meyer, Leibniz University of Hannover, Germany

A Reader Antenna with Carrier Suppression for Wireless Sensor Systems
A. Hennig, Fraunhofer IMS, Duisburg, Germany

Effects of Antenna Detuning and Gain Penalty on the Read Range of UHF RFID
D. Girbau, University of Rovira i Virgili, Spain

Session 8: Transponder and sensing

Chair: U. Wissendheit, IR-Systeme GmbH Hassfurt, Germany

A Programmable Voltage-to-Frequency Converter for Low-Power Sensor Interfaces
C. Azcona, University of Zaragoza, Spain

Active RFID Sensor with Integrated File System for Logistic Applications
T. Volk, IAF, Offenburg, Germany

A CMOS Differential Voltage-to-Frequency Converter with Temperature Drift Compensation
R. Valero, University of Zaragoza, Spain