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Sophia Antipolis le 31/10/2014

PRESS RELEASE

World's Most Complete Open Source LTE Base Station (eNB) Software Supports USRP Software Defined Radio

Today, EURECOM announces USRP software defined radio support for OpenAirInterface , an open source LTE base station and core network (EUTRAN – eNB and EPC) software stack, enabling real-time interoperation with commercial LTE devices. OpenAirInterface provides a standard-compliant open-source implementation of a subset of Release 10 LTE for UE, eNB, MME, HSS, SGw and PGw on standard Linux-based computing equipment. When combined with a standard Intel x86 based desktop PC and Ettus Research USRP software defined radio hardware, the complete system is capable of associating and communicating with commercial LTE USB devices or mobile phones in real-time.

OpenAirInterface has matured as a top research platform for 4G and next generation 5G research surrounding the LTE wireless standard. The projects free and open source approach means that academic and industry researchers can customize any layer of the stack and conduct live over-the-air experimentation. Adding support for the Ettus Research USRP B210 with plug-in OCXO Module makes the software stack more accessible than ever before. OpenAirInterface with the USRP B210 covers all cellular frequency bands, with continuous coverage from 70 MHz to 6 GHz, TDD and FDD LTE channels up to 20MHz bandwidth and has 2 tx/rx channels for 2x2 MIMO support.

 "USRP device support provides new opportunity to grow the OAI user base." said Dr. Raymond Knopp, the principal architect of OpenAirInterface. "Users can build a LTE compliant base station with the USRP B210 and board mounted OCXO for less than 1,900 Euro."

We invite academic and industry researches to downloaded OpenAirInterface free of charge from the Eurecom web site which supports simulation/ emulation and hardware based IO. Users can utilize the full software stack provided through OpenAirInterface as-is or integrate their own elements such as replacing the core network with another. Development and support for the software stack is provided by the community through the OpenAirInterface mailing list.

The system will be demonstrated live at WinnComm Europe, November 5, 2014 in Rome, Italy.

Links

- Download & setup Instructions for OpenAirInterface with USRP
- Learn more about Ettus Research USRP B210 Software Defined Radio
- Join the OpenAirInterface mailing list

About EURECOM

EURECOM is a Graduate school and Research Centre in Communication Systems located in the Sophia Antipolis technology park (French Riviera), a major European place for telecommunications activities.

It was founded in 1991 in a consortium form [GIE][1] that allowed EURECOM to build a large network of renowned academic and industrial partners. The "Institut Mines Telecom" is a founding member of EURECOM consortium. EURECOM research teams are made up of international experts, recruited at the highest level, whose work is regularly honored and has earned international recognition.

EURECOM is particularly active in research in its areas of excellence while also training a large number of doctoral candidates. Its contractual research is recognized across Europe and contributes largely to its budget.

Based on the close ties it has developed with industry, EURECOM can direct an essential part of its research activities towards areas of interest for its industrial partners. One of our challenges is to fill the gap between fundamental research and the more business oriented one in our partner companies. From the beginning, the main objective set by our members was excellence on an international level. In research this excellence results in a high number of publications and patents, in the active participation to international scientific events and organizations and of course in getting many important European contracts in the European framework. Given its size, EURECOM chose to focus its research activities on three main areas: networking and security, multimedia communications and mobile communications.

The largest department, Mobile Communications, focuses on digital signal processing for mobile communications applications that include current generation 4G and next generation 5G cellular radio systems, wireless protocols, information theory, and networking. Funding for research activities comes from private industry, European and national level sources in field of wireless communications.

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[1]**Current members of EURECOM consortium** :

SFR, Orange, ST Microelectronics, BMW Group Research & Technology, Symantec, Monaco Telecom, SAP, IABG.

Telecom ParisTech, Aalto University (Helsinki), Politecnico di Torino, Technische Universität München (TUM), Norwegian University of Science and Technology (NTNU), Vietnam National University Ho Chi Minh Ville (VNU), Chalmers University

Principality of Monaco. Institut Mines Telecom is a founding member.