




**OPEN EVENT:**

# WIRELESS COMMUNICATIONS FOR EMERGENCY APPLICATIONS: THE *SALICE* PROJECT EXPERIENCE

*Friday 2 July 2010, Didactic Pavilion, Room 102*

In the case of natural or man-made disasters, it is known that all the communication connections can be destroyed completely or partially in the early disaster phase. For this reason, it is important to install and provide emergency links between rescue teams and survivors in the disaster area. These connections must provide voice, data and, when possible, video transmission from the calamity area. In some situations, it is even impossible to organize temporary terrain mobile stations due to floods, tsunamis, hurricanes (like in New Orleans in 2005), or strong earthquake, where police, fire and emergency organizations were cut from any connection and could not provide any help or necessary information about the situation in injured area. The design and the implementation of communication systems for emergency scenarios are currently matters for many research activities and a major role is being played by the European Commission with lots of projects and research activities being funded within the 6th and 7th Framework Programme (FP6 and FP7). Moreover, parallel activities have been developed in the USA by the FEMA (Federal Emergency Management Agency) with a strong emphasis about requirements in critical conditions and secure and scalable application of heterogeneous networks.
**SALICE** (Satellite-Assisted Localization and Communication systems for Emergency services) is an Italian National Research Project which has been funded in the two-year period 2008-2010 by the Italian Ministry of University and Research (MIUR) in the framework of the 2007 National Projects of Relevant Interest (PRIN) Call. SALICE project aims at identifying the solutions which can be adopted in an integrated reconfigurable NAV/COM device and studying its feasibility in realistic scenarios. The first goal of the SALICE project is the definition of the baseline scenarios and system architecture which will allow the design of new and effective solutions for what concerns integrated communications and localization techniques, Software Defined Radio (SDR) NAV/COM devices, satellite and HAPS integration in the rescue services, heterogeneous solutions in the area of intervention (IAN, Incident Area Network). Particular attention will be devoted to the optimization of the resources management strategies and to the cooperative localization of rescue entities (persons and means) that intervene in emergency situations. SALICE project activities will end in September 2010.
This open event is devoted at presenting to the interested community the main scientific results and the outcomes of SALICE project. The event will be as much as possible interactive, aiming at stimulating a wide and open discussion about the main issues concerning the emerging field of wireless emergency communications.

***Schedule:***

- h. 14.30: Welcome notes *(Enrico Del Re, University of Florence, Dept. of Electronic Engineering, ITALY, and Claudio Sacchi, University of Trento, Dept. of Information Engineering and Computer Science, ITALY)*
- h. 14.40: Global overview of SALICE project (*Enrico Del Re, University of Florence, Dept. of Electronic Engineering, ITALY*)
- h. 15.00: 4G wireless technology, software radio, cognitive and opportunistic radio in emergency communication scenarios: challenges and opportunities *(Christian Schlegel, High Capacity Digital Communications (HCDC) Laboratory, University of Alberta, CANADA)*
- h. 16.00: *"SALICE Coffee Show"*, with poster, demos, invited presentations about SALICE results served with coffee and cakes! *(chair: Marina Ruggieri, University of Rome, Tor Vergata, Dept. of Electronic Engineering, ITALY)*
- h. 16.45: Concluding remarks (*Claudio Sacchi, University of Trento, Dept. of Information Engineering and Computer Science, ITALY*)

(for further information, please contact: **Claudio Sacchi**, e-mail: sacchi@disi.unitn.it)