

## FG Green Wireless

### Focus Group on Energy-efficient Wireless Networking

FG Co-chairs: Karin Anna Hummel (University of Vienna), Rastin Pries (University of Würzburg)

#### Scope

The scope of the focus group on green wireless is to investigate energy-efficient concepts for wireless communication. This includes all different wireless technologies such as sensor networks, mesh networks, cellular networks, and mobile, vehicular ad-hoc and opportunistic networks. Although this seems to be a wide range of network types, the potential methods to reduce the power consumption and work more energy-efficiently are related. Furthermore, in a heterogeneous setting of multi-access and multi-homing wireless devices, methods can rely on a combination of wireless network technologies.

While the scope of the focus group Green Wireless is not on designing new physical layer and radio technologies such as new low-power amplifiers, it is set on energy-efficient internetworking of network components. This focus includes new energy-efficient MAC protocols, planning of wireless networks, context-awareness and adaptation to changing utilization and environmental conditions as well as the implementation of new middleware concepts.

#### Work plan

We plan to reflect to the different expertise in the FG by presenting technologies used in various wireless networking fields within the group. Therefore, we will set up and write a **discussion paper**. The intention of this paper is to provide an overview of the different possibilities to reduce the energy consumption and work energy-efficiently in wireless networks. Among the issues addressed in this paper, we will discuss whether methods are network type specific or generally applicable in wireless networks. We will use face2face meetings as well as remote collaboration facilities to proceed with this joint discussion paper (editorial work done by the co-chairs of the FG).

The objectives of the FG are:

1. Joint discussion paper as starting point and preparatory work for a survey paper as outcome of the FG work
2. Foster collaborations and joint publications between COST IC 0804 wireless networking partners (e.g., by focusing short term scientific actions)
3. Survey paper as a result of the FG work (at the end of the FG)
4. Give a joint tutorial on green wireless at a conference under the name of COST IC 0804

## Duration

May 1<sup>st</sup> 2011 – April 30<sup>th</sup> 2012 (Kickoff meeting planed in Budapest, 18<sup>th</sup> of May 2011)

## Deliverables expected

1. Survey paper as a result of the FG work (at the end of the FG)
2. Tutorial on green wireless at a conference under the name of COST IC 0804
3. Report on the outcome of the FG including report on joint papers, short term visits, and the discussion paper

## Partners expressed involvement

- Carmela Comito, University of Calabria, Italy
- Torsten Braun, University of Bern, Switzerland
- L-F Pau, Copenhagen Business School, Denmark
- Marc Gilg and Pascal Lorenz, Laboratoire GRTC/MIPS, Université de Haute Alsace, France
- Rastin Pries, University of Würzburg, Germany
- Karin Anna Hummel, University of Vienna, Austria

Further potential partner (to be confirmed)

- Marco Conti and Andrea Passarella, Istituto di Informatica e Telematica, CNR, Italy