

Towards Real Energy-efficient Network Design The Network of Excellence on Energy Efficient Networking April 2012 Newsletter Issue N° 5

EDITORIAL

During this first quarter of 2012, the TREND consortium is reaching the halfway point of the second year period of the project. A successful plenary meeting hosted by IBBT was celebrated in Ghent in February 2012. Everything is also ready for the celebration of the 3rd IEEE/ACM/SIGCOMM e-Energy 2012 conference hosted by UC3M and IMDEA Networks. If you want to be up-to-date on these events please check regularly the TREND website www.fp7-trend.eu, wherein updates are frequently posted.



TREND Plenary Meeting in IBBT

The fourth TREND Plenary Meeting was celebrated in Ghent in February 14-15 2012. The meeting was organized and hosted by IBBT. The agenda, available on the TREND website, includes a general project presentation and discussions on WPs activities plans. There were also talks given from CIs (ICAR-CNR - Carlo Mastroianni and IHU - George Koutitas) and from related EU projects on energy efficiency such as STRONGEST and GREENET. There were also representation from the standardization body ITU presenting a talk on ITU and academia, opportunities for collaboration on ICT and CC by Bilel Jamoussi, Chief of the ITU-T's Study Groups Department. More details on the agenda and talks can be found on the TREND website.

IHU joins TREND as Collaborating Institution

The International Hellenic University (IHU) was established in October 2005 (Law No. 3391). The IHU is Greece's first state university where programmes are taught exclusively in English. The School of Science Technology (SST) has been established to provide excellence in Technology Education. Its activities cover research and postgraduate programmes on Energy Systems and Information and Communication Technology (ICT) Systems. The research activities of the SSTIHU cover the areas of Information and Communication Technology Systems and Energy Systems focusing on the scientific domain of Green ICT. Within the MSc in ICT Systems there is a specialization stream entitled as **ICT for Sustainable Growth**. Distinguished academics and research personnel are working hard to provide research excellence in these areas.

The School of Science Technology (SST) has already initiated research activities in the area of Green ICT and ICT for Green. The most important contributions are :

1. Teaching Green ICT course (ac. year 2010-2011) to postgraduate students in ICT Systems. This was performed in collaboration with prof. Michela Meo (PoliTO) and Dr. George Koutitas (UTH).
2. Organization of a workshop in Green ICT at 17 March 2011. Speakers from TREND were prof. Leandros Tassioulas (UTH) and Dr. Ivaylo Haratcherev (A-LBLF)
3. Joint publications in the area of 'energy efficient network planning and management' and 'Smartgrids' with PoliTO and UTH.
4. SST runs a research project entitled as 'Smart IHU' that is based on Smartgrid prototype.
5. SST monitors in real time energy efficiency of IHU datacenter

In the framework of TREND project, and in particular with regard to WP2, IHU will collaborate in the following activities:

1. Test smartgrid algorithms within the Smart IHU environments (in collaboration with UTH)
2. Present results based on the real time WSN of energy efficiency monitoring within the IHU datacenter (collaboration of UTH or CNIT is possible)
3. Research base stations/access points management schemes
4. Research on algorithms for scheduling and management of flexible power loads in the smartgrid
5. Collaborate with TREND partners



Alcatel-Lucent



Green Communication Network

www.fp7-trend.eu

follow us on twitter

@fp7_trend_noe





Towards Real Energy-efficient Network Design

The Network of Excellence on Energy Efficient Networking

December 2011

Newsletter Issue N° 4

INRIA joins TREND as Collaborating Institution

The minimization of ICT energy consumption has become a priority with the recent increase of energy cost and the new sensibility of public, governments and corporations towards energy consumption. In this context, the goal of INRIA is to propose and analyze energy-aware network design and management, using tools from performance analysis, graph theory and optimization. The goal is to increase the life-span of telecommunication hardware and to reduce the energy consumption, hence the operating costs as well. This work has been initiated by the project-teams MAESTRO and MASCOTTE, within several contracts (ANR Ecoscells, ANR DIMAGREEN, APRF RAISOM) and in collaboration with several partners (Orange labs, SME 3Roam, Alcatel-Lucent Bell Labs). Preliminary results have been obtained for **cellular networks, for broadband wired networks and for fixed wireless backhaul networks.**

INRIA will collaborate with the TREND partners in the context of **WP2 (Energy-Efficiency in Access and Home networks)** and **WP3 (Energy-Efficiency in Core Networks)**. Focusing on WP2, INRIA will investigate the energy-efficient management of wireless networks, with emphasis on real-time algorithms. Moreover, the trade-off between energy savings and network signaling/complexity in centralized and distributed algorithms will be studied. As second activity, INRIA, will investigate the issue of energy consumption in mobile/fixed networks by relying on the use of renewable energy, where network devices can acquire a certain amount of energy from local generators exploiting renewable sources. This may be an effective approach especially to bring wireless communications to developing countries at affordable cost or, also for developed countries, for sustainability reasons, due to increasing energy costs and pollution issues. Focusing on WP3, INRIA will investigate optimization models for optimizing the usage of network resources in backbone networks. As second activity, INRIA will design and evaluate heuristics solutions to reduce power consumption in core networks. This part will be performed in collaboration with the other TREND partners. Finally, INRIA will define theoretical models to assess the performance of energy-efficient solutions for backbone networks. Interaction with PoliTO will be put into place, with mobility actions of one post-doc researcher of PoliTO hosted at INRIA.

WHO WE ARE

<http://www.fp7-trend.eu/content/who-we-are>

CALENDAR AND EVENTS

<http://www.fp7-trend.eu/content/calendar-events>

CALL FOR PAPERS

<http://www.fp7-trend.eu/content/calls-for-papers>

TEACHING MATERIAL

<http://www.fp7-trend.eu/content/dissemination-teaching-activities/teaching-material>

AWARDS

<http://www.fp7-trend.eu/content/awards>

You can receive the TREND Newsletter by subscribing to the trend-news@tlc.polito.it mailing list. The subscription is available in the main page of the TREND website: www.fp7-trend.eu



Alcatel-Lucent



Green Communication Network

www.fp7-trend.eu

follow us on
twitter

@fp7_trend_noe

