EDITORIAL

During this last quarter of 2011, the TRENDS consortium is starting the second year period of the project. A successful plenary meeting hosted by UC3M was celebrated in Madrid, then a joint workshop on Energy Efficiency (within the Future Networks 8th FP7 Concertation Meeting) took place in Brussels. If you want to be up-to-date on these events please check regularly the TRENDS website www.fp7-trend.eu, wherein updates are frequently posted.

TRENDS Plenary Meeting in Madrid

The third TRENDS Plenary Meeting was celebrated in Madrid on September 26-27, 2011. The meeting was organized and hosted by University Carlos III of Madrid. The agenda, available on the TRENDS website, includes a general project presentation and discussions on WPs activities plans. There were also talks given from CIs and from related EU projects on energy efficiency such as CHRON, C2POWER and STRONGEST.

IMDEA Networks joins TRENDS as Collaborating Institution

Collaborating Institutions (CIs) participate to the TRENDS research activities with no budget allocation. In September 2011 Institute IMDEA Networks signed the CI agreement. We warmly welcome them in the TRENDS community. Institute IMDEA Networks is an independent, non-profit research institute, legally founded in 2006 and located in Madrid, Spain, whose multinational team is engaged in cutting-edge fundamental science in all areas of computer networking. IMDEA Networks identifies and addresses major scientific and engineering challenges in computer networking. The nature of these challenges changes with ever-greater rapidity. To ensure the relevance of its research activities, the Institute continuously adjusts its research agenda to stay at the forefront of the technological innovation. Currently, the Institute’s research focuses on the following areas: Energy-efficient Networking, Network Protocols and Algorithms and Wireless Networking. More information about IMDEA Networks at: www.networks.imdea.org

TRENDS joint Workshop with EARTH, ECONET and C2POWER

TRENDS project had an active role in the last Future Networks 8th FP7 Concertation Meeting in Brussels on October 6-7, 2011. Inside the meeting an half-day workshop on energy-efficiency was scheduled on October 6 with talks by: Pertti Jauhiainen (European Commission), Magnus Olsson (Ericsson, Stockholm, SE), Massimo Enrico (Ericsson, Genoa, IT), Ramin Khalili (LCA2/IC – EPFL, Lausanne, CH), Dieter Ferling (Alcatel-Lucent / Bell Labs, Stuttgart, DE), Jacek Kibilda (Wrocławski Centrum Badan EIT+, Wrocław, PL), Ayman Radwan (IT, Aveiro, PT), Anastasios Zafeiropoulos (GRNET, Athens, GR), Ward Van Heddeghem (IBBT - U. Ghent, Ghent, BE), Anna Tzanakak (AIT, Athens, GR).

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

Green Communication Network
www.fp7-trend.eu
Towards Real Energy-efficient Network Design
The Network of Excellence on Energy Efficient Networking
December 2011
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TREND and IBBT
IBBT (Interdisciplinary Institute for Broadband Technology) is a Flemish research institute based in Ghent and with a focus on ICT. It brings together companies, authorities, and non-profit organizations to join forces on research projects. Both technical and non-technical issues are addressed within each of these projects. The IBBT team that participates in TREND is part of the IBCN (Internet Based Communication Networks and Services) research group of Ghent University. IBCN, headed by Piet Demeester, has expertise on topics such as network modelling, mobile and wireless networking and high performance multimedia processing. IBBT is contributing to several other research projects on energy efficient network design, such as STRONGET and GreenTouch. Within TREND, the focus is on data centre footprint studies, core network power consumption reference models, protection and restoration issues, and wireless femtocells. For more information, see [http://www.ibcn.intec.ugent.be/?q=ResearchTopic_greenict](http://www.ibcn.intec.ugent.be/?q=ResearchTopic_greenict)

Recent and forthcoming publications
Data centre Life Cycle Assessment studies:
W. Van Heddeghem (IBBT), W. Vereecken (IBBT), D. Colle (IBBT), M. Pickavet (IBBT), P. Demeester (IBBT), *Distributed Computing for Carbon Footprint Reduction by Exploiting Low-Footprint Energy Availability*, Future Generation Computer Systems, May 2011. [http://dx.doi.org/10.1016/j.future.2011.05.004](http://dx.doi.org/10.1016/j.future.2011.05.004)
W. Vereecken (IBBT), W. Van Heddeghem (IBBT), D. Colle (IBBT), M. Pickavet (IBBT), B. Dhoedt (IBBT), P. Demeester (IBBT), *The Environmental Footprint of Data Centers: The Influence of Server Renewal Rates on the Overall Footprint*, GCN 2011, Chongqing, China, July 2011. [http://dx.doi.org/10.1007/978-94-007-2169-2_98](http://dx.doi.org/10.1007/978-94-007-2169-2_98)

Core power consumption reference model and values:
W. Van Heddeghem (IBBT), F. Idzikowski (TUB), W. Vereecken (IBBT), D. Colle (IBBT), M. Pickavet (IBBT), P. Demeester (IBBT), *Power consumption modeling in optical multilayer networks*, Photonic Network Communications, January 2012. [http://dx.doi.org/10.1007/s11107-011-0370-7](http://dx.doi.org/10.1007/s11107-011-0370-7)

Wireless femtocells:

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