



Towards Real Energy-efficient Network Design

General project presentation

Plenary Meeting
Gent, February 14, 2012

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Politecnico di Torino



TREND Plenary Meeting
Gent, 14-15 February 2012



Agenda (morning)

10.00 Welcome - **Piet Demeester (IBBT)**

10.10 Opening - Marco Ajmone Marsan

10.20 WP1: Selected technical presentations

- GPON evolution: energy efficient way for Next Generation Access - Julio Montalvo (TID)
- Dataset for characterizing distributed OSN - Roberto Gonzalez (UC3M)
- Power consumption of base stations - Alberto Conte (ALBLF)

11.20 WP2: Selected technical presentations

- Energy efficiency maximization in mimo systems (TUD-PoliTO) – Giusi Alfano (PoliTO)
- Optimal Sleep Modes in Cellular Systems - Michela Meo (PoliTO)
- How green are the mobile users of OSNs – Carmen Guerrero (UC3M)

12.20 Technical presentations from other projects

- Energy efficiency for transport networks - main achievement from ICT STRONGEST - **Andrea Di Giglio (Telecom Italia)**
- ITU and academia, opportunities for collaboration on ICT and CC - **Bilel Jamoussi (ITU)**

13.00 Lunch break

Agenda (afternoon)

- 14.00 Technical presentations from other projects
- Efficient and sustainable ICT - Time for coordinated action - **Flavio Cucchietti (Telecom Italia - EARTH)**
 - An overview of the GREENET project - **Christos Verikoukis (Telecommunications Technological Centre of Catalonia)**
- 14.40 WP4: Selected technical presentations
- Energy Efficiency Monitoring in Small Scale Datacenters: Case Study of the International Hellenic University - George Koutitas (UTH)
 - Green 3G femto prototype - Ivaylo Haratcherev (ALBLF)
- 15.20 Coffee break
- 16.00 WP3: Selected technical presentations
- The potential of sub-wavelength switching to reduce the energy consumption of core and metro networks (FT-PoliTO) - Raluca Maria Indre (FT)
 - Introducing standby capabilities into next-generation network devices (UNIROMA-CNIT) - Antonio Cianfrani (UNIROMA)
 - Cost-efficient Task migration in the cloud (UTH) - George Koutitas (UTH)
 - On the Energy Consumption of IP-over-WDM Architectures (PoliMi-FW) – Achille Pattavina (PoliMI)
- 17.30 AOB and Closing
- 20.00 Social Dinner

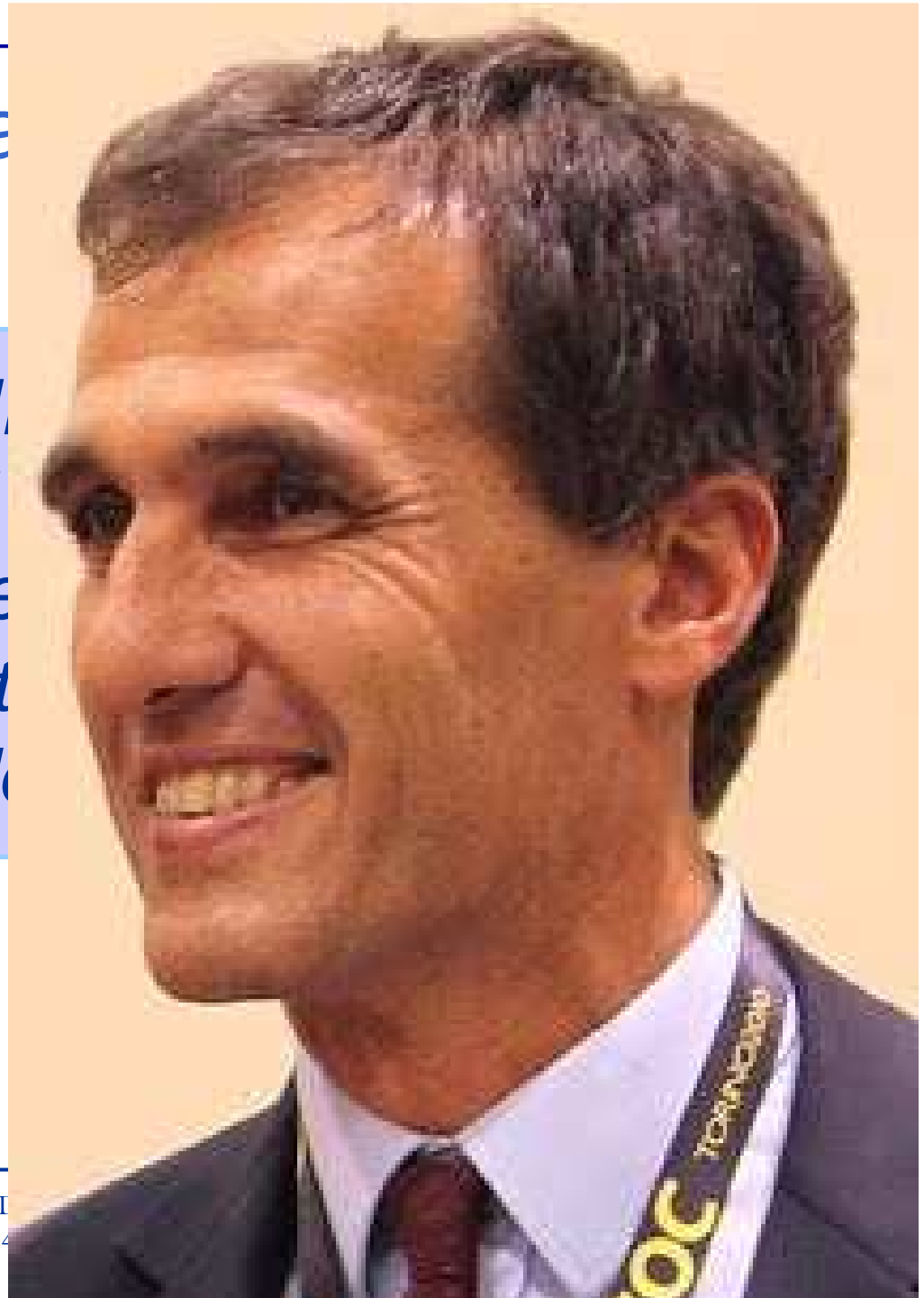
Logistics

- ❑ Coffee breaks and lunch will be served in the **lobby**
- ❑ Social dinner (offered by IBBT - **THANKS**) at the restaurant “De Acht Zaligheden” at 20h00 (see map in the folder)
- ❑ WiFi access is available in the meeting room

id: **IBBTvisitors**
password: **WelcomeATibbT** (capitalization!)

TREND rationale a

The aim of TREND is the
integration *of*
community in green
long term *perspective*
European leadership



TREND at a glance

- **12 partners** (2 manufacturers – 3 telecom operators – 7 university groups) + Collaborating Institutions, all with significant previous experience in the technical topics
- duration: **3 years**
- estimated effort: **446 person/months**
- project budget: 4.4 MEuro (79% for RTD activities, 14% for other activities, 5% for project management)
- EC contribution: **3.0 MEuro**

TREND partners



- (1) **POLITECNICO DI TORINO**
- (2) **ALCATEL - LUCENT BELL LABS FRANCE**
- (3) **HUAWEI TECHNOLOGIES DUESSELDORF GmbH**
- (4) **TELEFONICA INVESTIGACION Y DESARROLLO SA**
- (5) **FRANCE TELECOM SA**
- (6) **FASTWEB SPA**
- (7) **UNIVERSIDAD CARLOS III DE MADRID**
- (8) **INTERDISCIPLINARY INSTITUTE FOR BROADBAND TECHNOLOGY**
- (9) **TECHNISCHE UNIVERSITAT BERLIN**
- (10) **ECOLE POLYTECHNIQUE FEDERALE DE LAUSANNE**
- (11) **CONSORZIO NAZIONALE INTERUNIVERSITARIO PER LE TELECOMUNICAZIONI**
- (12) **PANEPISTIMIO THESSALIAS**

Current Collaborating Institutions



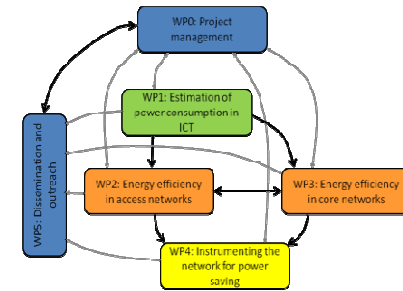
Current CIs

- ❑ Politecnico di Milano
- ❑ Università di Roma La Sapienza
- ❑ Fondazione Ugo Bordoni
- ❑ Technische Universität Dresden
- ❑ Deutsche Telekom Laboratories
- ❑ Institute IMDEA Networks
- ❑ ICAR-CNR
- ❑ International Hellenic University
- ❑ Technical University of Denmark (CI agreement not signed yet)
- ❑ Boston University (CI agreement not signed yet)

Pending CIs: confirmed interest to join the NoE, waiting for the plan of activities

- ❑ Tsinghua University, Beijing (China)
- ❑ Federal University of Juiz de Fora (Brazil)

TREND organization



■ 6 workpackages:

- ❑ WP1: Assessment of power consumption in ICT (IBBT)
- ❑ WP2: Energy efficiency in access and home networks (UTH)
- ❑ WP3: Energy efficiency in core networks (FT)
- ❑ WP4: Instrumenting the network for power saving (A-LBLF)
- ❑ WP5: Dissemination and outreach (UC3M)
- ❑ WP6: Project organization and management (PoliTO)

■ Integration enablers:

- ❑ Integrated Research Actions and Joint Experimental Activities
- ❑ mobility and joint publications
- ❑ joint education and dissemination

