NEWCOM#

"The" Network of Excellence in Wireless COMmunications

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GTTI for the Future - Florence, May 14, 2013

"**The Networks of Excellence (NoE) funding scheme is designed for research organisations willing to combine and functionally integrate in a durable way a substantial part of their activities and capacities in a given field, with a** *European virtual centre of research*"

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➤ **NEWCOM : 2004-2007, 60 partners**

➤ **NEWCOM++ : 2008-2010, 17 partners**

➤ **NEWCOM# : 2012-2014, 14 partners**

➤ **Overall financing by the European Commission close to 16 Million Euro**

➤ **Overall effort of 3400 person-month**

- ➢ To produce **medium to long term results** in the area of design and performance evaluation of wireless networks;
- ➢ To strengthen the **integration of partners' research activities** and agendas, both at the theoretical *and* experimental levels;
- ➢ To **foster Industry-Academia cooperation** and, by doing so, make academic research closer to industrial interests;
- ➢ To **train a new generation of researchers** in the field of wireless communications with solid theoretical and experimental skills;
- ➢ To contribute to the long-term sustainability of the NoE by creating a *permanent* **environment for cooperative research: the EuWIn lab**

- Total NoE duration: 36 months
- 14 partners from 14 different countries
- 16 Work Packages organized in 4 Tracks
  - 3 WPs on theoretical research (234 pm's)
  - 3WPs on the EuWIn (187 pm's)
  - 6 WPs on dissemination and training (141 pm's)
  - 3 WPs on management and NoE sustainability (34 pm's)
- Overall effort: 596 person-months
- Total Cost: 5.551 M€
- EC contribution: 2.846 M€
- 16 Affiliate companies
- (More than) 300 researchers involved

1 **CNIT** – Italy (Coordinator)
2 **AALBORG UNIVERSITET** - Denmark
3 **BILKENT UNIVERSITESI** - Turkey
4 **CNRS** Paris - France
5 **CTTC** Castelldefels - Spain
6 **IASA** Athens - Greece
7 **INOV** Lisbon - Portugal
8 **POZNAN UNIVERSITY OF TECHNOLOGY** - Poland
9 **TECHNION** Tel Aviv - Israel
10 **TECHNISCHE UNIVERSITAET DRESDEN** - Germany
11 **UNIVERSITY OF CAMBRIDGE** - UK
12 **UNIVERSITE CATHOLIQUE DE LOUVAIN** - Belgium
13 **OULUN YLIOPISTO** - Finland
14 **TECHNISCHE UNIVERSITAET WIEN** - Austria

- ➢ **TRACK 1 – Theoretical Research Issues (3 WPs)**
- ➢ **TRACK 2 – EuWIn: The European Lab of Wireless Communications for the Future Internet (3 WPs)**
- ➢ **TRACK 3 – Training, Dissemination and Human Capital (6 WPs)**
- ➢ **TRACK 4 – Management (3 WPs)**
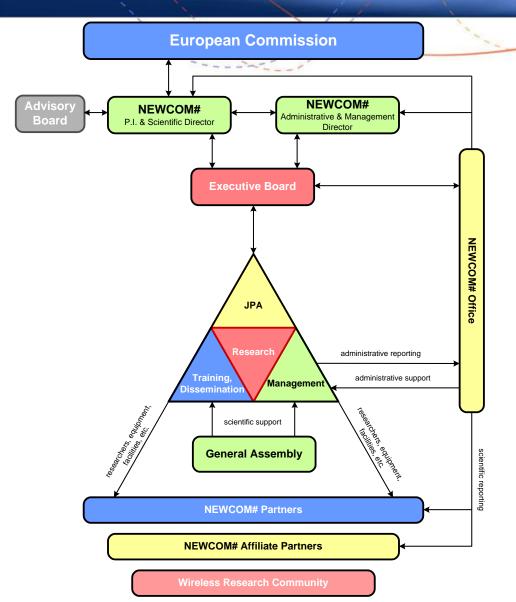
➢ **Track 1 (theoretical)**

- Performance Limits of Communication Networks (including channel codes, relaying, and resource allocation)
- Opportunistic and Cooperative Communications (including delay-tolerant networks, mobile clouds, cooperative sensing)
- Energy- and Bandwidth-Efficient Communications and Networking (including low-power terminals and network optimization)

➢ **Track 2 (experimental)**

- Radio interfaces for next-generation wireless systems
- Networking technologies for the Internet of Things (IoT) with mobile clouds
- Flexible communication terminals and networks

➢ **Track 3 (dissemination and training)**
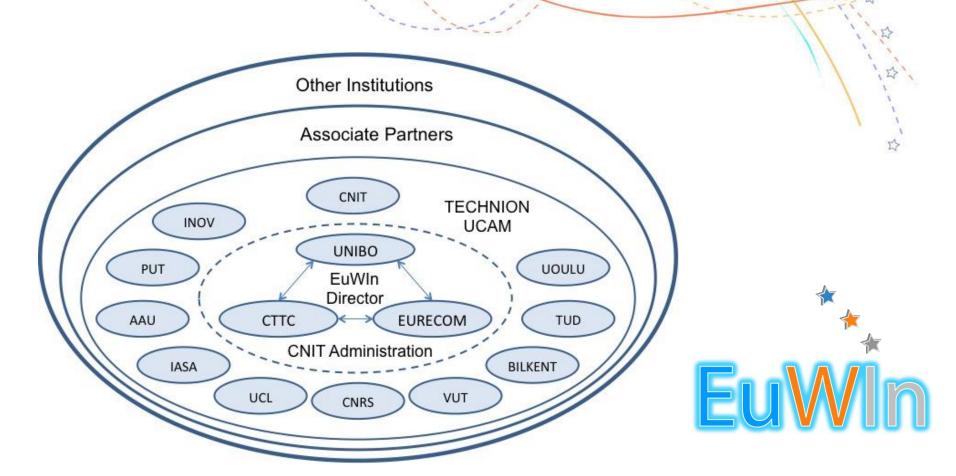
- ▪ Annual NEWCOM# conference, workshops and special sessions
- ▪ Education and Training: schools and workshops
- ▪ Journal special issues, books and book chapters
- ▪ Industry liaison and dissemination
- ▪ Development and valorization of human capital
- ▪ The NEWCOM# Portal and related Web Presence Tools

FLEXTOP node

- Coordinator
- Source Node
- Router

EuWIn

FLEXTOP Gateway

Mast on the roof of the building

2.6 GHz antenna

1.9 GHz antenna

PDSCH Receiver output (64QAM), 5 MHz, -70 dBm input

EuWIn @ CTTC

EURACON

is a non-profit registered association established to *facilitate research and disseminate culture in the fields of communications and networking science and technology at the European level*. The association is establishing national PoP in EU countries, and is liaising with similar entities at the National and International level (SEE, VDE, IEE, AICT/GTTI, FICTE, IEEE, …) to come to a Continental harmonization of the different initiatives in the field.