

Purpose of FIRE

- ***"FIRE aims at addressing the emerging expectations which are being put on the Internet by providing a research environment for investigating and experimentally validating highly innovative and revolutionary ideas."*** *
- To put Europe in a vantage position in the development of the Future Internet
- To provide an environment to test future internet architectures
 - e.g. transport/routing paradigms, dynamic topologies, service architectures

* *From the FIRE report, June 2007, see*
<http://cordis.europa.eu/fp7/ict/fire>

dimensions of Future Internet

Terabyte networks
Complexity
Mobility
Internet of things
Clean slate approaches

Technological

Economic

Societal/Political

Support investments:
backward
compatibility
Need for (open)
standards
Security for commer-
cial services and
applications

European competitiveness on future Internet (act where market forces fail)

Consumer protection / empowerment

Social responsibility: preserve neutrality, openness, fairness, social role

Balance the need for security/accountability and the right to privacy



FIRE PROJECTS

New Paradigms (Architectures and concepts):

- **OPNEX** design and optimisation of multi-hop wireless networks
- **ECODE** cognitive routing system
- **ECHOS** (NANODATACENTER) data hosting at the edge of the network
- **PERIMETER** to design user-centric protocols based on Quality of Experience
- **N4C** Delay Tolerant Networking (DTN)
- **Self-NET** cognitive self-managed elements
- **SMART-Net** SMART-antenna multimode wireless mesh Network
- **RESUME-NET** Resilience for future networking
- **VITAL++** merging IMS with P2P

Large-scale interconnected testbeds (sensors, virtualisation, management):

- **WISEBED** Wireless Sensor Network Testbeds
- **OneLab2** to create an open federated laboratory
- **PII** to provide an infrastructure for interconnecting test-beds

Support:

- **FIREWORKS** Strategic and operational Coordination of FIRE
- **PARADISO** Socio-economic impact of future internet architectures

Paradigm shifts for the Future Internet design with socio-economic relevance

- **Content- and human- centric networking**
 - social networks
- **Cooperative, multi-hop, self-managed networks**
 - new economic models, trust, privacy
- **More intelligence within the network (QoS, etc.)**
 - network neutrality, control
- **Communication resources as shared commodities**
 - economics, energy efficiency

Study "Towards a Future Internet: Interaction between Technological, Social and Economic Trends"

- to investigate the deep interrelation existing between technological social and economic trends related to the Future Internet:
 - Discuss the possible technological options for its further development and their likely socio economic impact
 - Consulting the main authorities in the field of Internet developments, both at political and technological level
 - Stimulating global debate
- Expected deadline for proposal submission: September 2008