

COST  
605

Econ@Tel

A Telecommunications Economics COST Network



# 1<sup>st</sup> Econ@Tel Training School

*Welcome from the School Chair*

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# Outline

- Welcome
- About Econ@Tel COST Action
- School Programme Overview



# COST605 - Econ@Tel

## Overview

- European Cooperation in Science and Technology
  - Precursor of advanced multidisciplinary research
  - Increases the mobility of researchers across Europe
  - Nine key domains:
    - Biomedicine and Molecular Biosciences
    - Food and Agriculture
    - Forests, their Products and Services
    - Materials, Physical and Nanosciences
    - Chemistry and Molecular Sciences and Technologies
    - Earth System Science and Environmental Management
    - Information and Communication Technologies
    - Transport and Urban Development
    - **Individuals, Societies, Cultures and Health → IS0605**



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## Overview

- COST Actions
  - Networks of national research projects
  - Cover basic and pre-competitive research for peaceful purposes
  - Every COST Action has an objective, defined goals and clear deliverables
  - Described in a “Memorandum of Understanding”, accepted by the participating COST Countries
  - Results through its cooperative activities: meetings, workshops, short-term scientific missions, etc.
  - Such activities build efficient networks



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## Action Timings and Member Countries

- COST Action IS0605 (COST605)
- Title: A Telecomm. Economics COST Network
- Acronym: Econ@Tel
- Domain: Individuals, Societies, Cultures and Health
- Chair: Prof. Dr. Burkhard Stiller, Switzerland
- Co-chair: Prof. Dr. Louis-Francois Pau, The Netherlands
  
- MoU: 337/06
- CSO approval date: November 20, 2006
- Entry into force date: April 18, 2007
- Start of action date: October 2, 2007
- End of action date: October 1, 2011
- #Members: 21 + 1 , #Non-COST: 2



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## Action's Motivation

- To discuss and develop partially a **strategic research** outline among key people/organizations on **Tele-communication Economics** by integrated means of
  - **Technical/architectural** aspects
  - **Economic/business** aspects
  - **Social** aspects
  - **Regulatory/legal** aspects
- To **enhance participant's competence** in the field of
  - Telecommunication economics
  - Network management tasks for an integrated Internet
  - Telecommunication networks and its services



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## Scientific Objectives (1)

- To support an European engineering leadership gained by new sustainable business models in a fully deregulated and diversified demand framework.
- To study and identify business opportunities throughout the value chain, especially for enterprises, content, and specialized services.
- To contribute to a strategy relative to socio-economic needs by increasing the motivation for deployment of cost effective and flexible solutions using networks and content.



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## Scientific Objectives (2)

- To provide guidelines and recommendations for utilizing different types of technologies and model and quantify, as far as possible, necessary actions.
- These results will potentially supply **regulators** and **standardization bodies** with **analysis and guidelines** for creating conditions for fast growing competitive mobile, broadband, and content markets, while speeding up business of today's and tomorrow's players.





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## Action's Scope (1)

- WG 1: Economics of Telecommunications and Content Distribution Technologies (ETC)
  - Tariffing and billing (transmission and content)
  - Macroeconomics and universal services
  - Econometrics for ICT (single/multiple function models, price indices)
- WG 2: Communications Business (CBU)
  - Communication strategies
  - Affordability and social aspects, sectors and lead markets
  - Innovation from services to products



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## Action's Scope (2)

- WG 3: Regulation and Public Policies (RPB)
  - Interrelation between regulation and competition
  - Interfacing regulatory and technology guidelines, incl. security
  - Public policies and impacts of disruptive technologies
- WG 4: Network Management Architectures and Economics (NAE)
  - Competition in Future Internet/Telecommunication architectures, network management
  - User needs and social values (Quality-of-Experience)
  - Deployment issues, implementation, and economics



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## Website and Events

- COST IS0605 web site:
  - <http://www.cost605.org>
- Public areas
  - WG and Members
  - MoU etc.
  - Technical presentations
  - Planned events
- Contribute and participate
  - Econ@Tel Training School (✓)
  - Affiliated conferences
    - Final Action Conference in 2011



# School Programme Overview

## Lectures 1-2 – Day 1

- Adoption and Diffusion of Innovations by Lauri Frank
  - Introduction to the lectures. Participants will learn the basic concepts and theories related to the Innovation Diffusion Theory (IDT) and be able to relate these to the ICT field
- Diffusion of ICT Innovations in the Information Society - case broadband in Finland by Lauri Frank
  - Participants will familiarise themselves with the basic concepts related to Information Society and be informed on the development of Information Society within the European Union. Participants will be informed on the case of broadband diffusion in Finland



# School Programme Overview

## Lecture 3 – Day 1

- Charging & accounting technologies for the Internet by Burkhard Stiller
  - The charging of Internet services requires, depending on the layer and technology, a set of suitable technological and protocol hooks, which can deliver via technical accounting approaches those type of data and information that are needed for the charging itself. Thus, on one hand, this lecture will outline major charging models for the Internet and will derive major technical accounting needs. On the other hand, the set of available tools and protocols for the technical accounting will be discussed to determine, which aspects of charging schemes cannot be supported as of today or which accounting needs still require technical developments to progress.



# School Programme Overview

## Lecture 4 – Day 2

- Foresight methods and business model planning by Erik Bohlin
  - This lecture will review foresight methodologies, such as trend analysis and scenario planning, and business modelling. The lecture will also provide concrete examples of how these methodologies have been used in policy advisory studies.



# School Programme Overview

## Lecture 5 – Day 2

- Value network design for Internet by Heikki Hämmäinen
  - The objective of this lecture is to improve understanding about theory and design processes of value networks in Internet. The basis of lecture is the STOF model but also other methods such as scenario planning and system dynamics will be introduced. Design examples include different domains such as application level services and Internet access services. The relationship between technical and industry architectures will also be elaborated.



# School Programme Overview

## Lecture 6 – Day 2

- International Roaming, Competition Policy In Telecom by Morten Falch
  - One of the most important issues in the debate on interconnect regulation has been use of forward looking costs for setting of interconnection charges. This debate has been ongoing within the EU as well as in US. This lecture discusses the European experiences and in particular the Danish experiences with use of cost based interconnection charges, and their impact on competition in the telecom market.





# School Programme Overview

## Lecture 7 – Day 3

- **Autonomic Management of Mobile Networks by Antonis Hadjiantonis**
  - The concept of Autonomic Management is receiving intense interest from both academia and industry since it emerges as an appealing solution to the increasing complexity of managing IT and Telco systems. In this lecture we focus on the applicability and potential of AM to Mobile Networks. The policy-based management (PBM) paradigm is often linked to autonomic management and will be also examined. The specification of high level objectives and their automated deployment and lifecycle management within complex mobile networks make PBM approaches and technologies important candidates for Autonomic Management realisation.



# School Programme Overview

## Lecture 8 – Day 3

- Techno-Economic Modelling In Telecommunications by Dimitris Katsianis
  - In this lecture, a techno-economic evaluation of the business prospects of selected large scale telecommunications networks is carried out. The evaluation is based on a Techno-Economic (TE) tool which, taking into account network topology, area characteristics, service demand and price evolution forecasting as well as risk analysis, estimates key economic figure-of-merits. In the first part the techno-economic methodology will be presented and analysed. In the second part selected business cases will be presented and discussed for European Market concerning technical, business and economic aspects.



# School Programme Overview

- ESR Presentation Sessions
  - Short presentations (10') followed by questions and discussion
  - Focus on main innovative concepts and methodology, without placing emphasis on explaining technical details
  - The aim is that every participant can see the big picture of presented work, join the discussion and benefit
    - You may also include research questions for further discussion and to motivate others.

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**Thank you!**  
**Enjoy your stay!**

