

Ecosystem for Future Internet Applications

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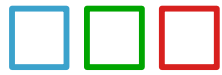
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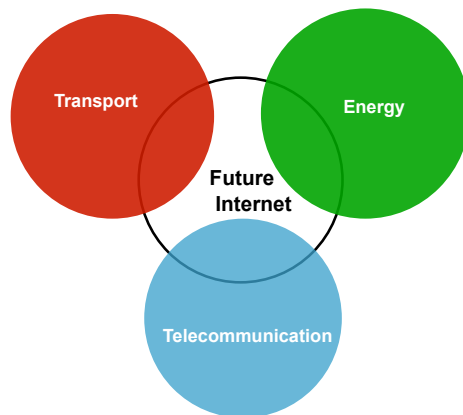
Bridging Industry and Academia

- Nationally leading and internationally acclaimed center for research and development of communications technologies
- Competence Center for Excellent Technologies supported by the Austrian Government and the City of Vienna within the competence center program COMET.
- **Academic Members:** Vienna University of Technology, Graz University of Technology, University of Vienna, Johannes Kepler University Linz, VRVis, Joanneum Research Forschungsgesellschaft

Focus in Research and Innovation

- Theories, algorithms and processes for the intelligent management of future communication systems under real-time conditions.
- Research and development of communications scenarios for telecommunications, transport and energy.
- These three infrastructures are strategic ICT growth fields with the potential of setting significant growth impulses for the entire economy.

3 Application Fields

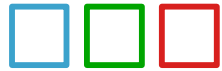


5 Main Objectives

- Assuring Quality
- Sustainability
- Managing Complexity
- Guaranteeing Safety
- Assuring Availability, Security & Privacy

Industrie Partners





The Chair of Future Communication

Endowed by TELEKOM AUSTRIA

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Selected Research Topics



Future Communication

- Future internet, network virtualization
- Future network control plane
- Performance evaluation (Event-based Simulation, Analysis)
- P2P algorithms, self-organization
- P2P content distribution (mobile, wireline)
- Future Internet services and Internet of Things
- Quality-of-Service and Quality-of-Experience
- Traffic-oriented network management
- Network security (architecture and performance evaluation)

Collaboration with FI Project

- Akari (Japan, K. Tutschku was member of NICT)
- EuroNF (Europe, WP leader)
- G-Lab (Germany, application and association),
- OneLab2 (Europe, association)
- GENI/PlanetLab (USA, listener/member, participant to GEC3/4/6/7)
- Setup of first GENI/Gpeni-Nodes in Vienna (subproject of GENI)
- Invited talk on Network Virtualization at EU-sponsored Future Internet Cluster (FIC 2010)
- Advisory board European PPP project "Future Internet"

Research Instruments

Future Transport Lab

Vienna Think Tank for Future Communication

- Focus industry collaboration
- Endowed by Telekom Austria



FutureServices Lab (planned)

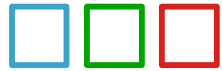
School of Internet Architects

- Focus on academia
- Applied for funding (planned)



Partners





FI Approach, Know-how and Resources



Challenges for Designing a Sustainable FI Ecosystem

Design of network virtualization
Design of network federation techniques
Design methods for the FI
Performance evaluation methods for the FI
Design of operational methods for the federated FI
Service composition, optimization, brokering, and execution
Context management, identity, privacy and security
Large-scale media and data delivery
Nomadic and mobility support
Permanent and non-permanent connectivity support
Content based routing and addressing FI environments
Advanced Interfaces
Content based routing and addressing

Smart Mobility of Individuals and Goods

We intend to develop a Trans-European mobility usage field. Our smart mobility research and innovation approach comprises

- value chain creation concepts and strategies
- established cooperation patterns connecting infrastructure providers, industry, key players and stakeholders
- an excellent industrial environment for building up a central part of a Trans-European mobility testing field
- an interdisciplinary knowledge beyond technology in economics, regulation, transport, mobility, energy, and user needs.

Horizontal FI PROJECTS

- **FP7 Euro-NF** Network of Excellence – Network of the Future
- **FP7 Euro-NF** Joint Research Project **MOMO** Multi-overlays for Multi-homing – A Wireless Mesh Network Use Case;
Multinext: Measuring Concurrent Multipath in an Experimental Facility
- **FP7 ETICS** Economics and Technologies for Inter-Carrier Services
- **FP7 DEMONS** Decentralized, cooperative and privacy-preserving Monitoring for Trustworthiness (call 5 in negotiations)
- **FP7 mCIUDAD** A Metropolis of Ubiquitous Services
- **FP7 PRISM** Privacy –aware Secure Monitoring
- **FP7 OptiBand** Optimization of Bandwidth for IPTV video streaming
- **FP6 Magnet Beyond**: Context Management, Identity and access management, user centric personalization
- **SESAME** Semantic Smart Metering: *FFG Program Austria*
- **DARWIN+** Data Analysis and Reporting in Wireless Networks *COMET Program Austria*
- **CelticAware@FTW** Aggregation of Wireless Access Resources *COMET Program Austria*
- **BACCARDI** Beyond Architectural Convergence *COMET Program Austria*

Mobility and Transport PROJECTS

- **FP7 Strep ALARP** Railway automatic track warning system
- **FP6 COOPERS** Co-operative Systems for Intelligent Road Safety
- **FP6 HIDENETS** Highly Dependable ip-based Networks & Services
- **REALSAFE** Realtime, Safety-related Traffic Telematics *COMET Program Austria*
- **ROADSAFE** Robust and Distributed Safety-improved traffic telematics *COMET Program Austria*
- **TUNNEL-HELP** Emergency infrastructure in tunnels *COMET Program Austria*
- **HIMONI** Highway Monitoring (sensor fusion of Video and audio signals) *COMET Program Austria*
- **KOFLA** Driving assistance for charging electric vehicles *Ways2go Program Austria*