

G-LAB PARTNER



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PROJECT DATA

Project name: German Lab (G-LAB)

Start date: October 1st, 2008 (Phase 1)

September 1st, 2009 (Phase 2)

Total funding: 12 Mio €

Webpage: <http://www.german-lab.de>

Phase 1 (6 partners)

- Establishing the experimental facility with approximately 170 nodes
- Studies of NGN mechanisms and algorithms, explore their testability on G-Lab exp. platform
- Duration: 3 years

Phase 2 (28 partners)

- Enhance the Phase 1 work packages
- Expand the experimental platform with e.g. sensor nodes
- participants: SMEs, industry, research centers, universities
- Duration: 3 years



National Platform for
Future Internet Studies

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G-LAB MISSION & VISION

Modern societies and economies depend more and more on the Internet whose foundations are based on mechanisms and algorithms that were developed in the 70s and 80s. New business and home applications require new features for which the Internet was never designed and are faced with security problems that reveal the architectural deficits of today's Internet. The project G-Lab develops technologies for a reliable and secure network of the future.

Mission

New Internet services and applications make increasing demands on security, reliability, and quality of the networks. To cope with the growing demands, new architectures and protocols need to be developed on the conceptual level and tested in an experimental facility. G-Lab consists of two major fields of activities:

- Research studies of future Internet components
- Design and setup of experimental facilities

Objectives

The project partners develop a secure and reliable platform for applications and services. It aims at

- providing an experimental platform for studies on mechanisms, protocols, and applications towards Future Internet;
- investigating the interdependency of theoretical studies and prototype development;
- cooperating with other NGI platforms.

G-Lab is part of the worldwide efforts to develop the foundations of a future Internet.

Benefits

The Internet is an integral part of an efficient society: virtual social meeting points, business processes in economies, education and advanced training, tele-medicine and entertainment base upon the Internet. Similar to the road system and the power grid, the modern network infrastructure is the base of our wealth and essential to human basic needs for communication.

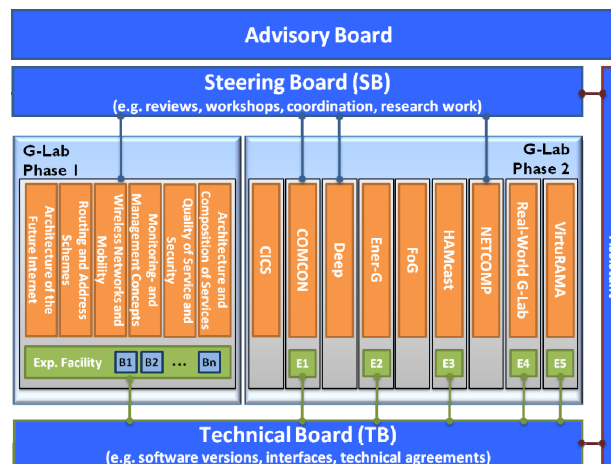
FUTURE INTERNET STUDIES

Phase I

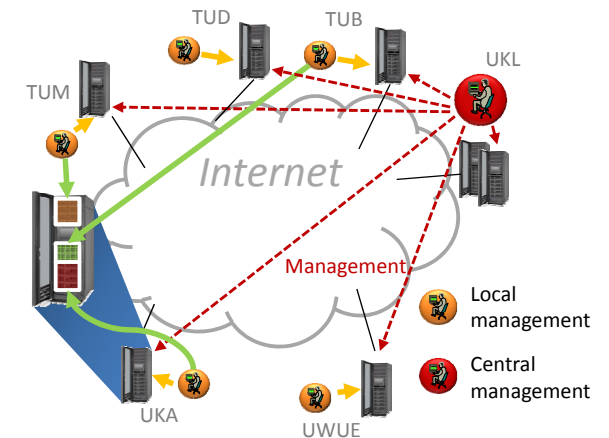
- WP1: Architectures of the Future Internet
- WP2: Routing and Address Schemes
- WP3: Wireless Networks and Mobility
- WP4: Monitoring and Management Concepts
- WP5: Supporting Quality of Service and Security
- WP6: SoA and Composition of Services
- WP7: Experimental Facility

Phase 2

- CICS (Convergence of Internet and Cellular Systems)
- COMCON (Control and Management of Coexisting Networks)
- DEEP (Deepening G-Lab for Cross-Layer Composition)
- Ener-G (Energy Efficiency in G-Lab)
- FoG (Forwarding on Gates)
- HAMcast (Hybrid Adaptive Mobile Multicast)
- NETCOMP (Network-Computing for the Service Internet of the Future)
- Real-World G-Lab
- VirtuRAMA (Network Virtualization)



EXPERIMENTAL FACILITY



Environment Specification

- Homogeneous hardware
- At least 25 nodes at each site
- G-Lab Central with 59 network nodes in Kaiserslautern
- More than 170 network nodes in total
- Additional sites with sensor networks
- Currently based on PlanetLab software
- Adaptation according to requirements of Future Internet Studies

