

Hungarian Research Program for the Future Internet

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Outline

- Participants of the program
- Program history
- Internet research in Hungary
- The concept of the Future Internet Research program

Participating Institutions and Persons

- National Information Infrastructure Development Institute - NIIF

Miklós Nagy Director

Tamás Maray Deputy director

János Mohácsi Deputy director

Péter Stefán Head of Department

The Institute is responsible to manage the National Information Infrastructure Development (NIIF) Program, which serves as a framework for the development and operation of the research network in Hungary.

The NIIF Program covers the entire Hungarian academic, research and public collection community by providing them with :

- an integrated computer networking infrastructure and, on the basis of that,
- a wide range of communication, information, and co-operation services,
- leading-edge environment for networking applications, as well as
- advanced framework for content generation and provision.

Participating Institutions and Persons

- Eötvös Loránd University, ELTE - Budapest

György Csepeli Professor - Social Sciences,
Director of Public Policy Prime Minister Office
Chairman of the NIIF Program Council

László Lovász Director of the Mathematical Institute
Member of the Hungarian Academy of Sciences
Wolf and Knuth Prize holder
Field of research: Combinatorial optimization,
graph theory, theoretical computer science

Gábor Vattay Professor and Chair
Program Director of Network Research of the e-
Science Regional Knowledge Center ELTE
Scientific Advisor- MTA SZTAKI

Participating Institutions and Persons

- Technical University of Budapest- BME

László Pap- Professor and Chair
Department of Telecommunications
Member of the Hungarian Academy of Sciences

Istvan Vajda- Professor and Head of:
Criptography and System Security Laboratory

- Computer and Automation Research Institute-HAS

Center of Excellence of the EU

Peter Bakonyi Ph.D Deputy Director

Former member of the executive committee of
RARE and Terena

Executive President of the HUNGARNET Association

Andras György Ph.D Head of Research Unit

- Zrínyi Miklós National Defence University

Sandor Munk Professor and Chair

Internet research in Hungary

- Hungarian Research Network Programme (NIIF)
Part of the EU- gigabit/s GEANT network
Universities, research institutions, important libraries are connected.
This is the bases of the network experimentations
- R&D in different fields: theoretical applied and industrial research.(see: Program leaflet)
- International cooperations:
GEANT,
OneLab2 ,
Federica,
Anemone

Hungary achievement on Internet research is among the best in the region

Program history 2007-2009

- Elaboration of the program concept
- On the agenda of Program Council of the NIF program - November 2007.

The Council consists of the high level representatives of seven ministries, The Hungarian Academy of Sciences and the Hungarnet Association

The program concept was approved

- Detailed program proposal - March 2008
- Introduction of the Future Internet Research Program to the Minister for Research - July 2008
- Meeting with the new President of National Office for Research and Technology (NKTH)- September 2008
A call for tender is expected in 2009
- Workshop to introduce the program to the potential Hungarian participants- November 2008
- Introduction of the Program to EU representatives- January 2009

The Concept of the Program

- The objective of the program is to co-ordinate and strengthen the Internet related research activity in Hungary and to ensure the required financial support and the critical manpower that is necessary to have a successful program
- Based on the earlier research results and international co-operations it is anticipated that Hungary could successfully participate in the European Future Internet Initiative and the 7th framework program
- Furthermore it is an important goal to include industrial partners in the program

The Hungarian Research Initiative

- Participation in the new Internet research programs are vital for our future to keep steps with the European and worldwide research activity
- The concept is similar to the ongoing US and EU programs

Theoretical research:

- New network architecture
- Network design
- Intelligent network
- Social science related research

The Hungarian Research Initiative

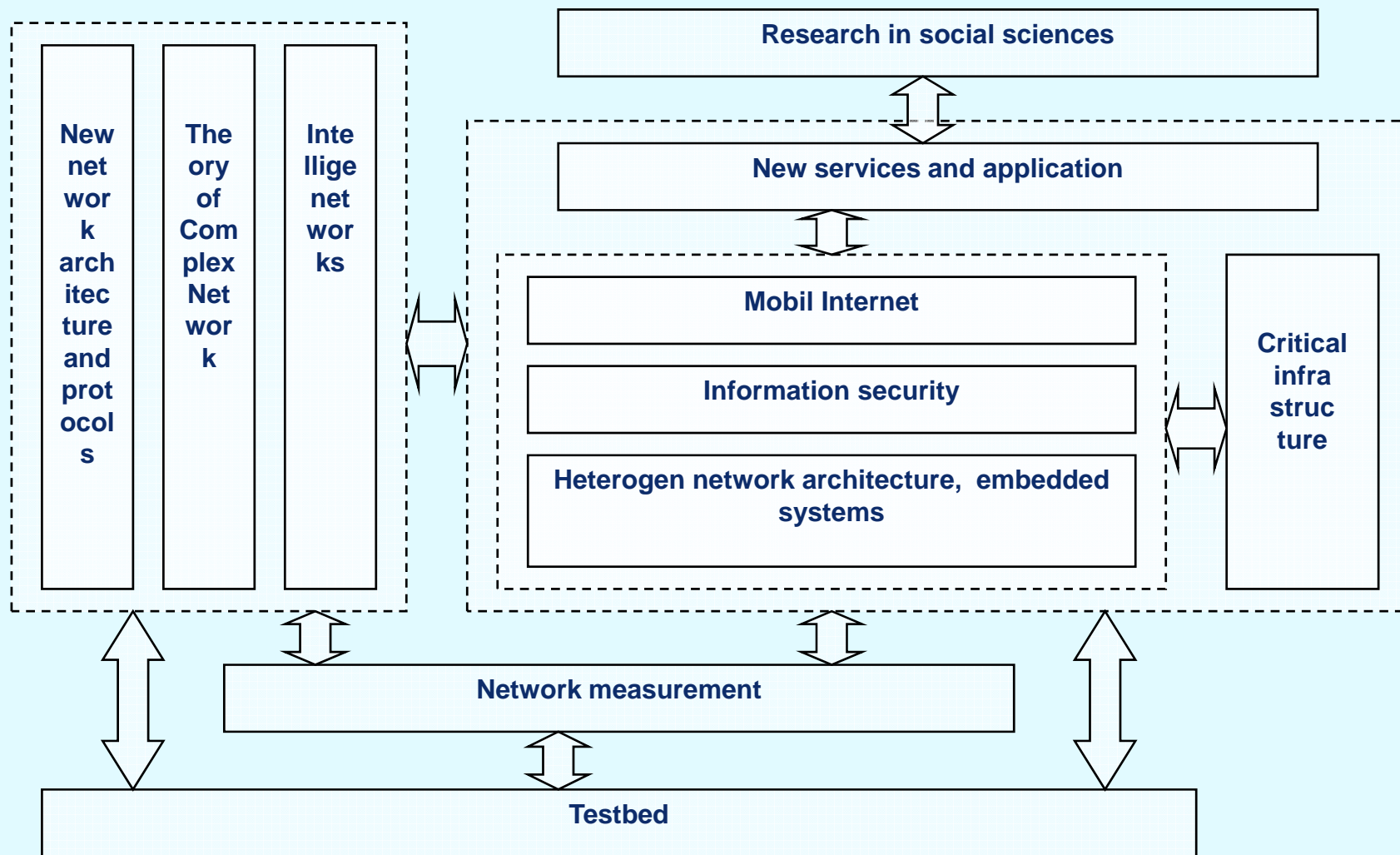
Applied research:

- Network measurement
- Mobil Internet
- Information security
- Ambient intelligence
- Critical infrastrucures

Network Experiments:

- Setting up tesbeds and virtual environment
- Experimenting new protocols, services and applications
- Participation in international experimentations

Structure of the research



Expected added value to European Future Internet Research activity by Hungarian Researchers

- **Theoretical research:** Modelling very large network

It is a great challenge to describe the very large networks like Internet by mathematical means. We can study this type of network by local sampling. This theory is the boundary of computer science and statistics. We have significant results and researcher base in Hungary. (ELTE)

- **Social science related research-** ELTE
- **Critical infrastructure -** Zrinyi
- **Internet of Things - RFID -** SZTAKI
- **Mobil Internet -** BME
- **Measurement of network traffic-** ELTE
- **Interoperability of Testbeds -** NIIF, ELTE, SZTAKI
- **Virtual services -** NIIF
- **Information security -** SZTAKI

Thank you for the attentions