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# Hungarnet in 6NET (past and future)

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# Content



- Hungarnet background
- IPv6 national efforts
- IPv6 plans

# Background



- Representing the Hungarian research networking community – Hungarnet/NIIF
- Hungarnet has a 14 years history
- Serving 400 institutions and roughly 400000 users
- Personal involvement in Pan European research networking projects

# Key projects in 2002



- Managed MPLS VPN-s
- New tender for 34/155Mbps links, upgrades
- IP Telephony /VoIP
- Nation-wide LDAP directory
- GRID+Supercomputing
- Nation-wide IPv6 testbed

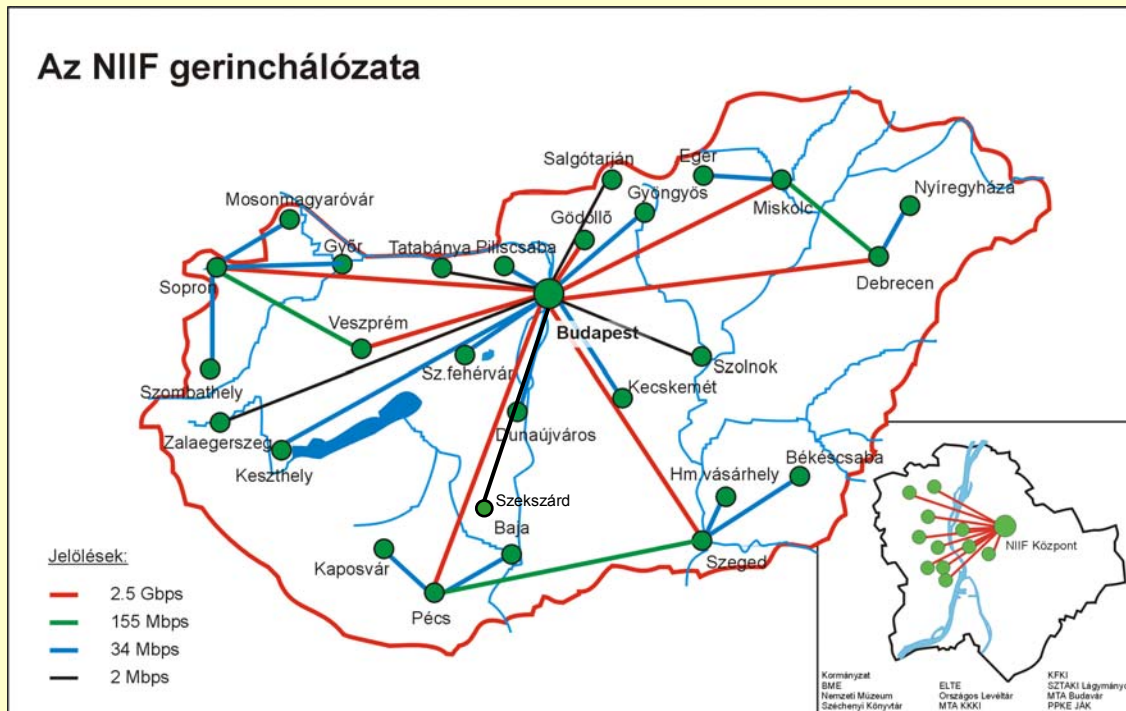
# National efforts

HBONE - the Hungarian research computer network



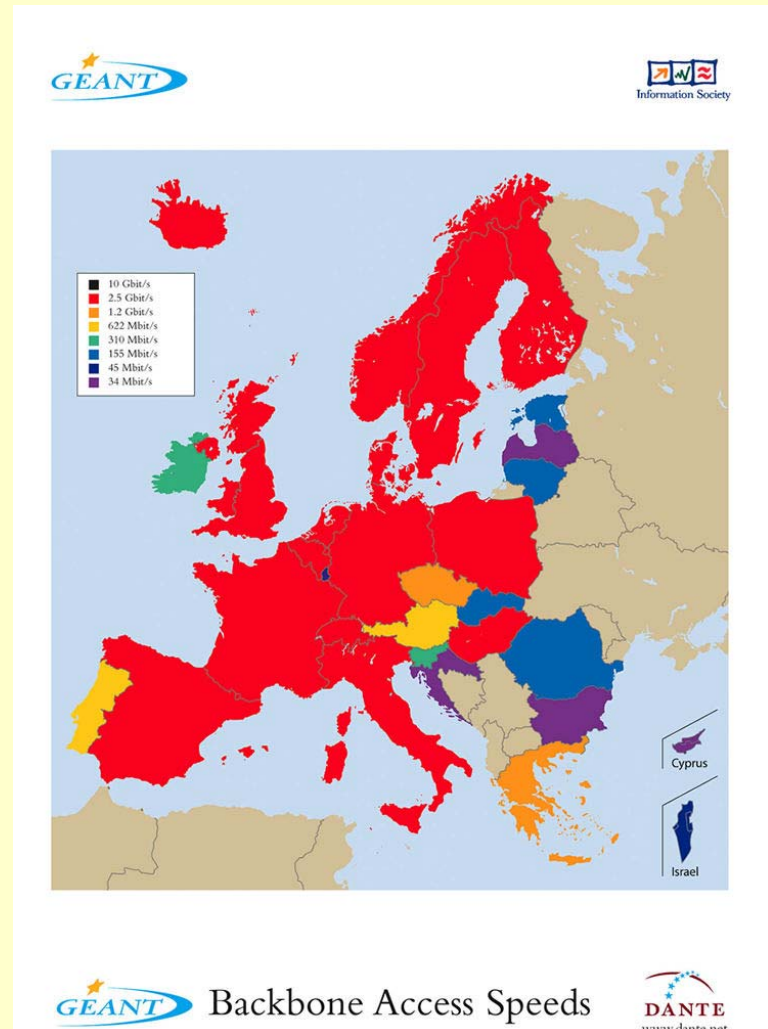
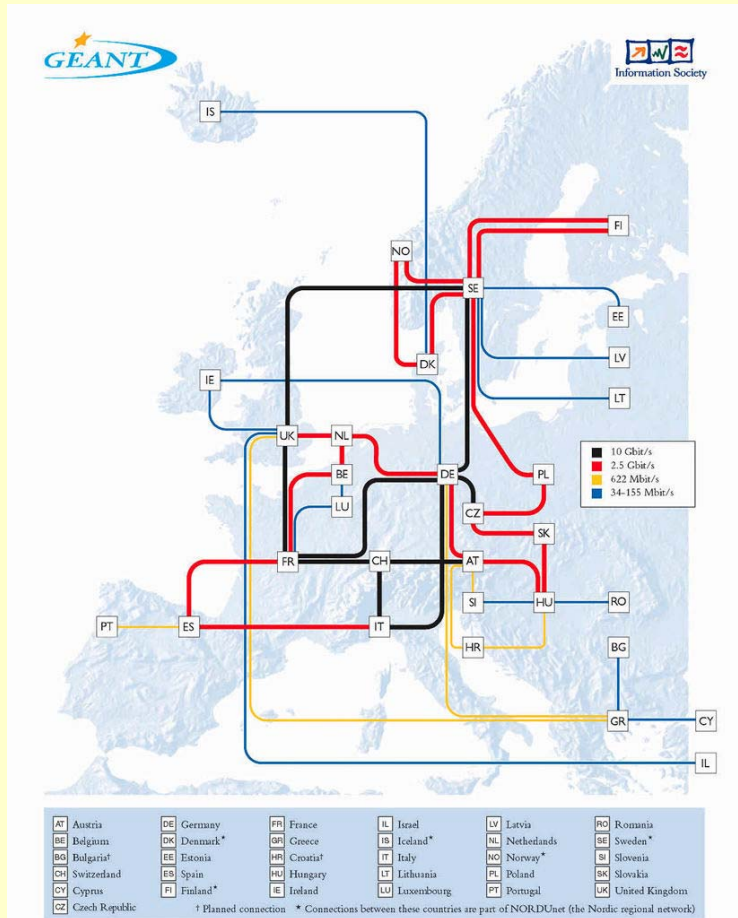
- In a nutshell:
  - covers 400 institutions
  - services for 400000 users
  - all universities/high-schools, academic research institutions, public libraries and museums, + ministries
  - STM-16 connection to GEANT
  - ~30Gbps internally

# Hungarnet Optical Internet



**Leading-edge network services in Hungary**

# Hungarnet in Europe

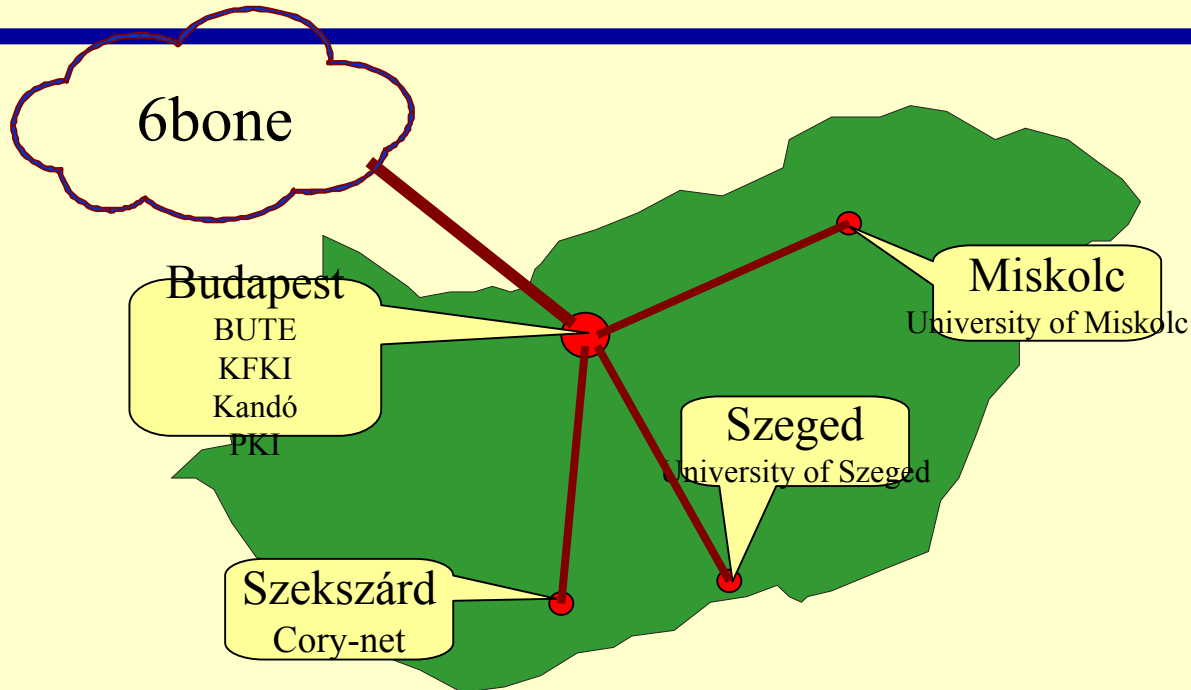


# Goals of TIPSTER6



- IPv6 pilot testing in Hungary
- Hungarian IPv6 information base and documents
- Testing IPv6 implementations and applications
- Setup a test network

# TIPSTER6 in 2000



- Hungary has 6Bone pTLD since 1998
- 10 international 6Bone connections
- more than 25 connections altogether

# IPv6 in Hungary 2000-2001



- Main players
  - Technical University of Budapest
  - HUNGARNET/NIIF
  - KFKI
  - MATÁV PKI
  - University of Szeged
  - University of Miskolc
- IPv6 over IPv4 tunnel + some native links

# Results in TIPSTER6

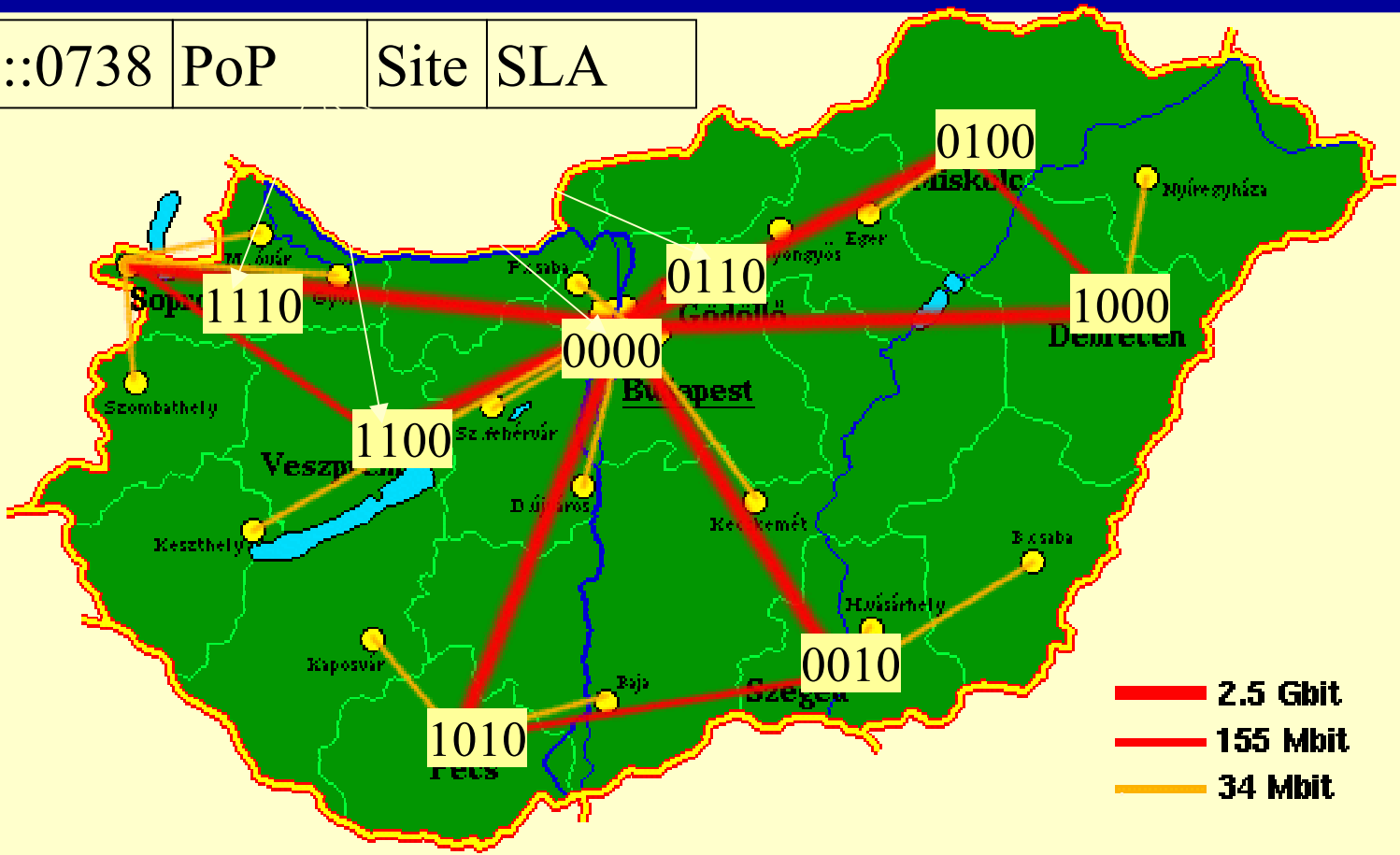


- <http://tipster6.ik.bme.hu/> - mainly in Hungarian
- Comprehensive IPv6 guide
- Result of tests of IPv6 implementation and applications - contribution to TAHI
- Experimental network and traffic statistics - ping/traceroute, BGP, traffic, SNMP etc.
- IPv6 application and patch database - however bit outdated
- IPv6 LDAP-DHCP-DNS application skeleton

# NIIF IPv6 allocation plan



| 2001::0738 | PoP | Site | SLA |
|------------|-----|------|-----|
|------------|-----|------|-----|



Source: www.niif.hu

# Goals in 6NET



- Native IPv6 deployment in Hungary in several locations
- Testing IPv6 in remote managed environment
- Testing IPv6 over MPLS/Longhaul Ethernet VLANs
- Integrate IPv6 management into the existing NMS
- Develop further the existing results of TIPSTER6
  - IPv6 Application/Patch database
  - DNS/LDAP/DHCP tool
- Co-operation in the 6NET
- Disseminate results - in Hungarian academic community