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Overview of GÉANT2 ... with a focus on EGEE

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TNLC, EGEE04, Pisa, 25 October 2005





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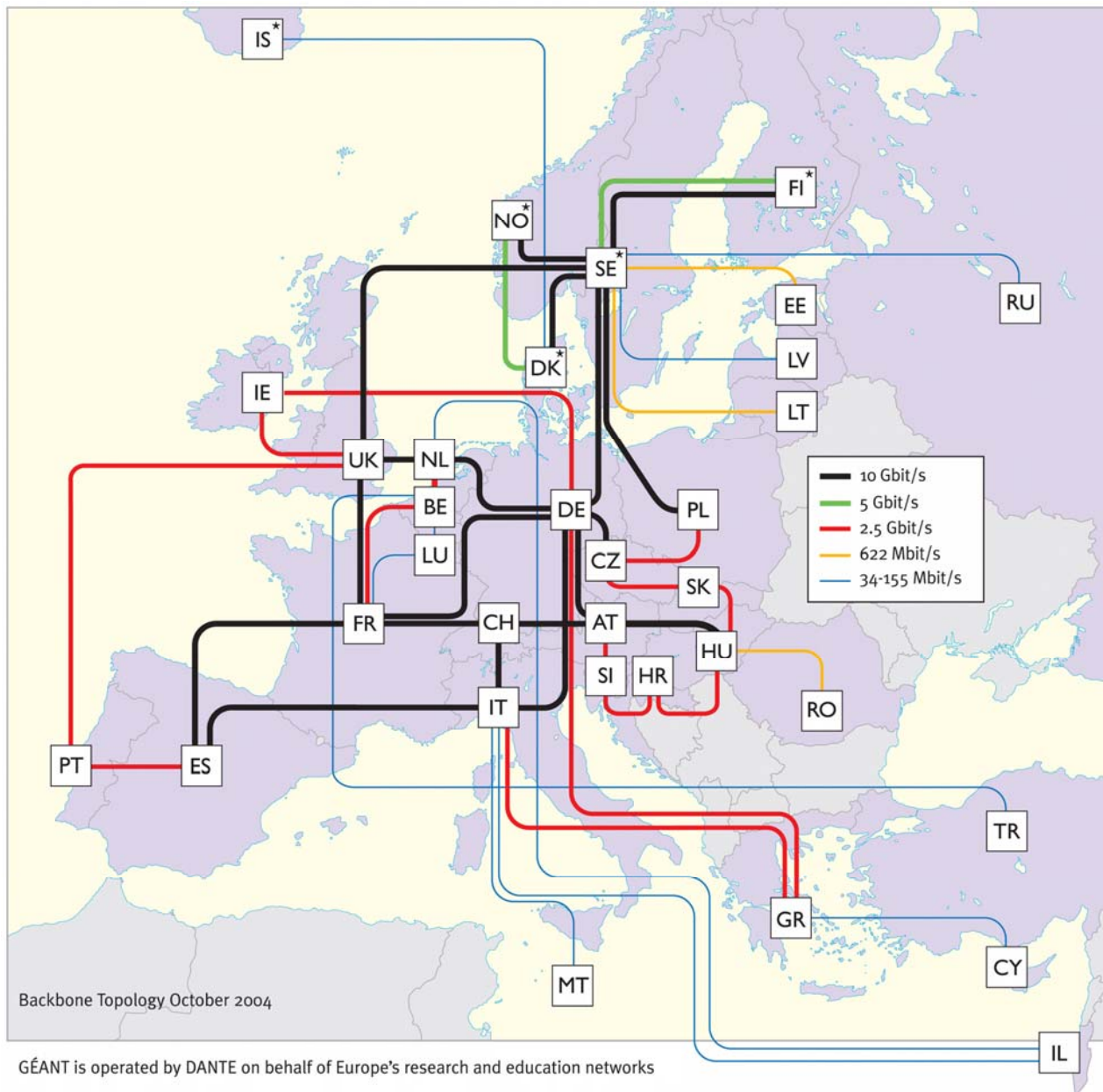




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What is GÉANT2?

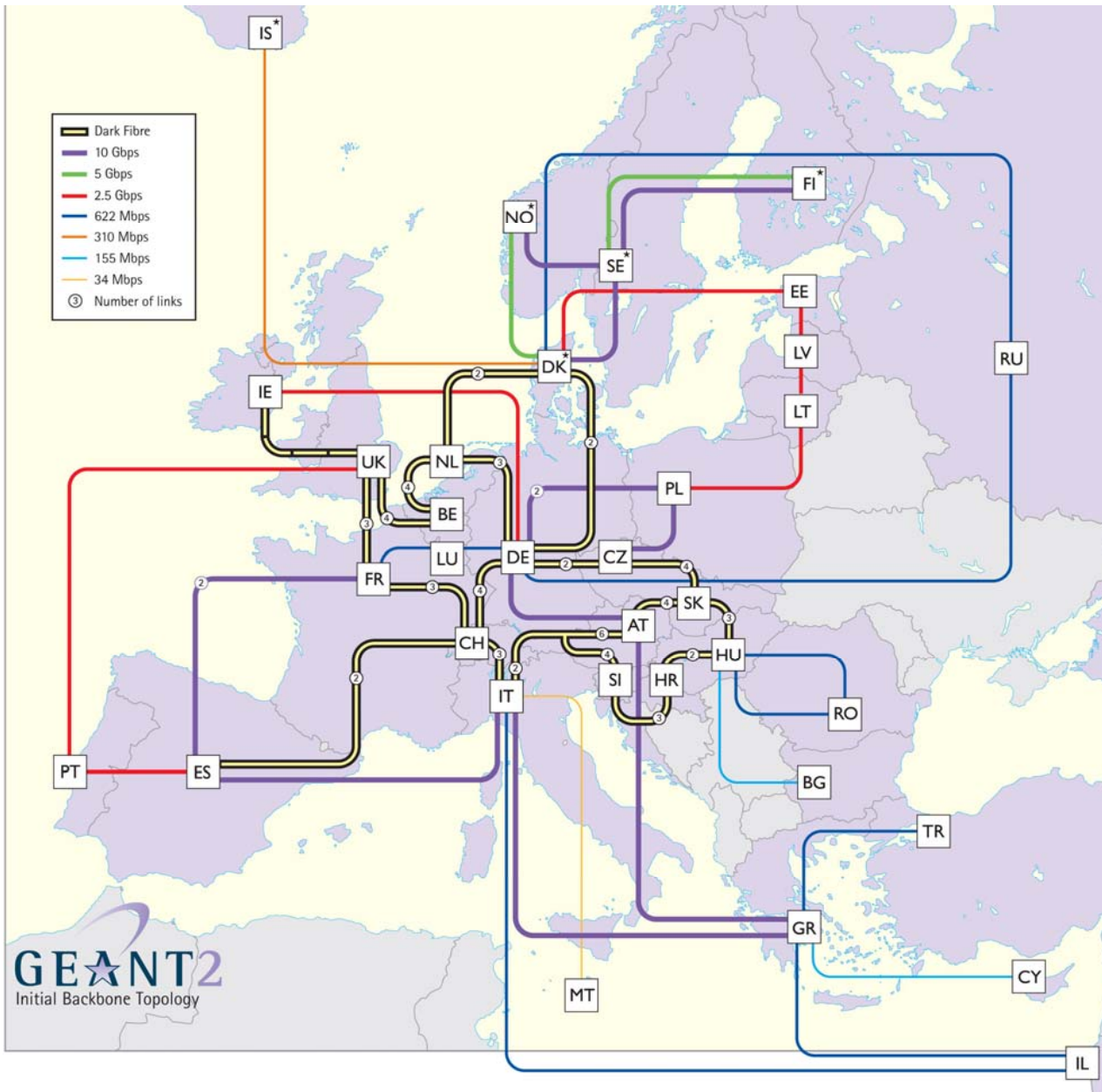
- A hybrid infrastructure ...
 - Continue to provide existing services – BE, LBE, PIP, mcast (v4), IPv6, mcast (v6)
 - Provide new L1 and L2 P2P switched services
- Develop a wider range of network services
 - Performance monitoring (JRA1)
 - Security (JRA2)
 - Bandwidth-on-Demand (JRA3)
 - Testbed facility (JRA4)
 - Mobility and Roaming (JRA5)
 - End-to-end Quality of Service (SA3)



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From GÉANT ...





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... to GÉANT2

C & NE Europe: Oct 2005

W Europe: Nov 2005

SE Europe: Feb 2006

GEANT2

DANTE

Network Performance Measurement



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- A model to provide network backbone data through standardised & pre-defined interfaces
- Working closely with Internet2 and ESnet on the perfSONAR framework
- Deploying infrastructure for measurement points
- Working with EGEE-JRA4
 - Defined appropriate network metrics
 - Agreed to use the GGF NMWG schema (v2)
 - Providing backbone link utilisation from several networks (NPM Diagnostic Tool)

Bandwidth Allocation and Reservation



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- Agreed upon an interface to access network services
- Devised a policy for the allocation of network resources
- First release of provisioning system by Nov 2005
 - Provides advance reserved edge-to-edge multi-domain Premium IP service
 - Basic service deployed in limited domains
 - A more feature rich system by end of 2005
- Connection oriented multi-domain L1/L2 BoD
 - Survey of users, application & related technologies
 - Framework and architecture in progress

Looking ahead: GÉANT2 and EGEE2



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- Interoperation between GRID and Network AA infrastructures
- NPM activity to be taken forward
- ... whereas BAR activity dropped in EGEE2
- What are the implications of EGEE2 dropping BAR?
- What does EGEE expect from GÉANT2?
- How do we move forward?
- GÉANT2 will continue developing BAR services ...
- How should this important collaboration continue?

Network Performance Measurement in EGEE2



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- Data access policy will be devised
- Measurement infrastructure to be fully deployed
- Extension to more metrics and more networks (dependent on the NRENs)
- More diagnostic information available
- Interoperable active tests infrastructure (to isolate a problem along a path)

Bandwidth Allocation and Reservation in EGEE2



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- GÉANT2 SA3
 - Enhance the Provisioning System with more features
 - Deploy the Provisioning System in more domains (dependent on the NRENs)
 - Provide SLA Monitoring capabilities with JRA1
- GÉANT2 JRA3
 - Offer switched GE Bandwidth-on-Demand services
 - Define and automate information flow and processes
 - Automate the intra-domain & inter-domain processes



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Summary

- GÉANT2 is a hybrid network with new services
- Migrating from GÉANT to GÉANT2 in phases by Feb 2006
- EGEE related activities
 - Networking performance monitoring (NPM)
 - Bandwidth allocation and reservation (BAR)
- AA infrastructures need to interoperate
- EGEE2 – NPM services will be enhanced
- Need to clarify implication of EGEE2 dropping BAR

Thank You



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Any further Questions, Comments, Feedback or Suggestions

please contact

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