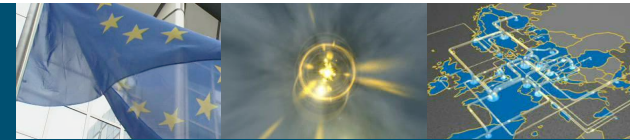


GN3 overview

Roberto Sabatino, DANTE
JTechs,
College Station, Texas
3 February 2009

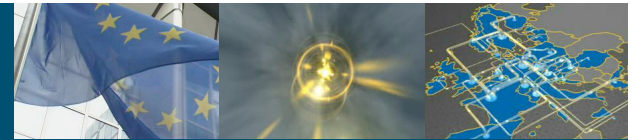


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Introduction

- GN3 is a project proposal to the EC under the 7th framework programme for Research Infrastructures
- It involves European NRENs, TERENA and DANTE as co-ordinator
- Proposes to continue to develop the GEANT network as associated services and technologies complemented by a set of (human) networking activities

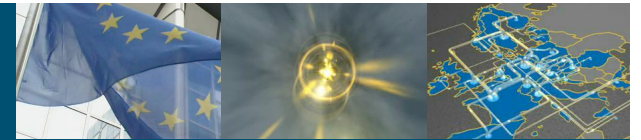




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Status of Proposal

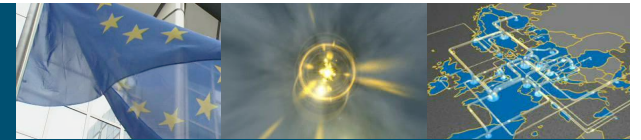
- Submitted 11 September 2008
- Requesting 93 M Euros of funding
- Passed all reviews to date – now in negotiation phase (next hearings 10-11 Feb)
- If all goes well, target start date is 1 April 2009, for 4 years



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Content of proposal

- 4 Service Activities
 - Strong focus on strengthening existing services and introducing service innovation.
- 3 Joint Research Activities
 - Develop innovation for existing and planned services
- 4 Networking Activities
 - To promote awareness, promotion of services, interaction with user communities, standards....
 - “Green” networking

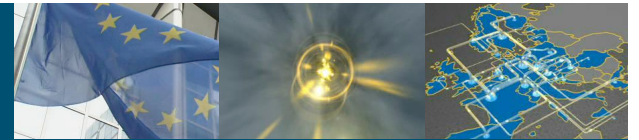


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The Activities

- **SA1** GÉANT Backbone ← **JRA1** Network of the Future
- **SA2** MD Network Service Operation ← **JRA2** MD Resources & Services
- **SA3** End User Services in Fed Env ← **JRA3** Enabling Communities
- **SA4** Software Governance

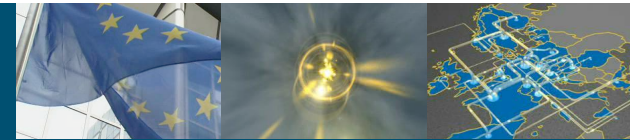
- **NA2** Joint Dissemination & Outreach
- **NA3** Status and Trends
- **NA4** Liaison & Support
- **NA1** Management



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SA1 - GÉANT Network

- Network Planning/Architecture study
- Procurement
- Provisioning and Operation



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JRA1 – Future Network

- Carrier Class Transport Network Technologies: PBT and T-MPLS
- Photonic Switching and experimental Photonic Facilities, Capacities (100+Gbps), interoperability, control and management and OAM&P
- Federated Network Architectures : Per-domain aspects in order to optimise the implementation and operation of multidomain services
- Current and Future uses of Virtualisation techniques at L1, L2 and L3 and how virtualisation services from GEANT and NRENs can be aggregated.

SA2 – Multidomain operations



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SA2 Multi-domain Service Delivery Workflow



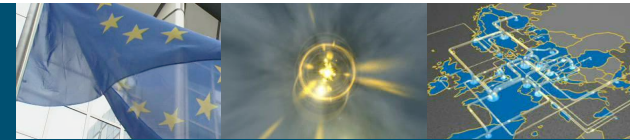
JRA2 – Multidomain Resources and Services



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- Control and Management: harmonisation and integration of the control and management functions required in a multi-domain environment.
- Hybrid Network Provisioning : AutoBAHN the IDC protocol (jointly developed with Internet2-ESnet)
- Monitoring: new concepts to foster the provisioning and operation of the multi-domain services portfolio.
- Security: create a knowledge base information system to help security teams (eventually automated tools)
- Network Factory: An infrastructure independent of the production environment to perform tests

SA3 – end user services in a federated env.



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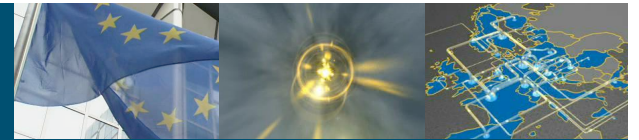
- European PKI Coordination
- Operation of the eduRoam Confederation
- Development and Operation of eduGAIN

JRA3 Enabling Communities



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- Roaming developments :Federated network access (new protocols (RadSec, authenticated DHCP))
- Identity Federations: New identity architectures (such as OpenId) and new ways to implement protocols (like simpleSAMLphp)
- Composable network services: A framework to enable users to create and request services for resources (HD videoconference, physical space to store data for a certain period, etc) on demand in an easy and manageable way.



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SA4 – SW governance

- Software Best Practice
 - policies and guidelines for SAs (and JRAs)
- Quality Assurance
- Development and Support Infrastructure