

GÉANT: Enabling European Collaboration

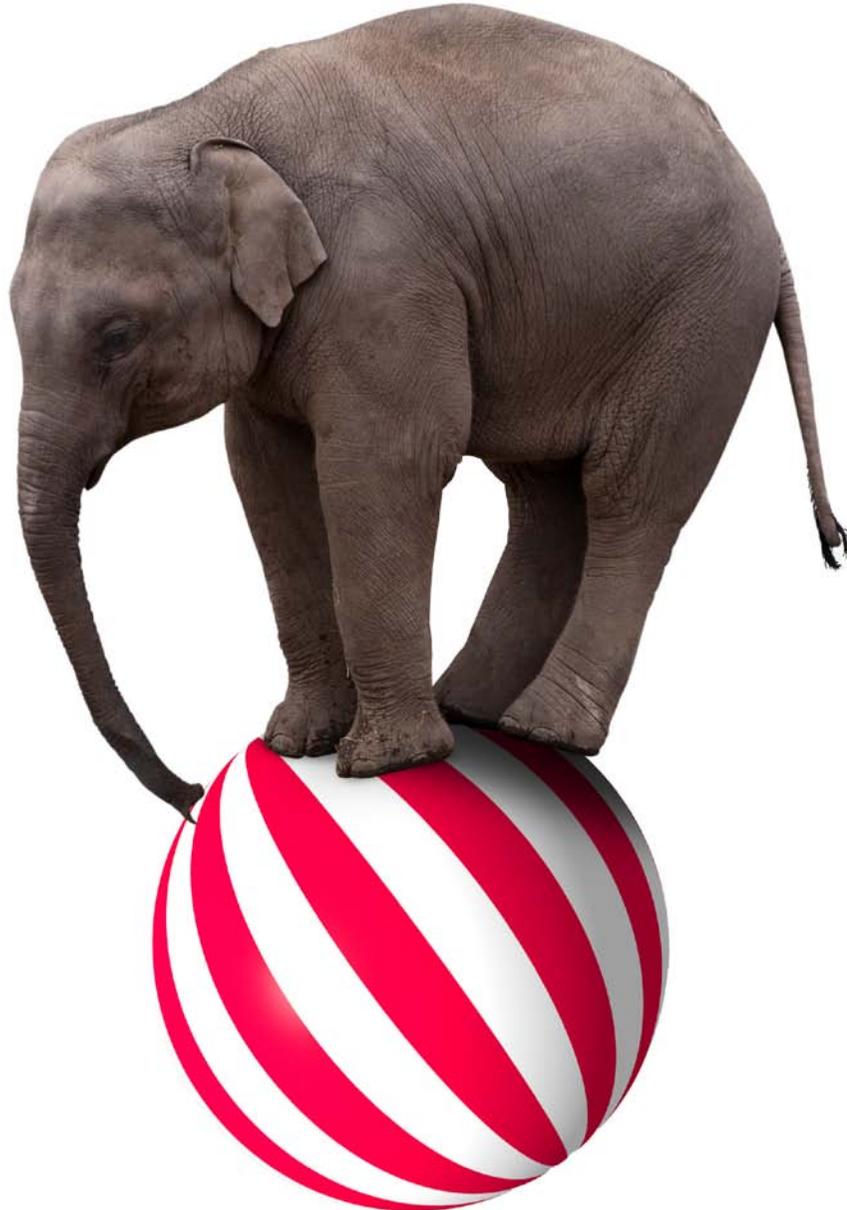
Valentino Cavalli
Acting Secretary General

TERENA

Courtesy of John Chevers, Chief Business Development Officer at DANTE for the original slidest

CEENGINE NRENs Users Workshop
Kiev, 22nd May 2013

What is GÉANT?



Quite a BIG Project...

- New project GN3plus for 2 years
- Approximately 50% EC funding
- *Circa* 300 person years over 2 years for service development, research, and networking
- GÉANT is now 12 years old!

The GÉANT partnership



- Now 41 project partners (NRENs + DANTE + TERENA + NORDUnet) representing 43 European NRENs
- DANTE operates the network backbone and coordinates the project
- TERENA contributes significant effort focusing primarily on activity management, outreach and support, community building and training
- CEENet/TERENA Third Party collaboration on Disseminating Campus Best Practice & Support R&E Networking in Eastern Europe
- New Eastern European partners:
 - ASNET AM (Armenia)
 - AZRENA (Azerbaijan)
 - BASNET (Belarus)
 - GRENA (Georgia)
 - RENAM (Moldova)
 - URAN (Ukraine)

Why GÉANT?



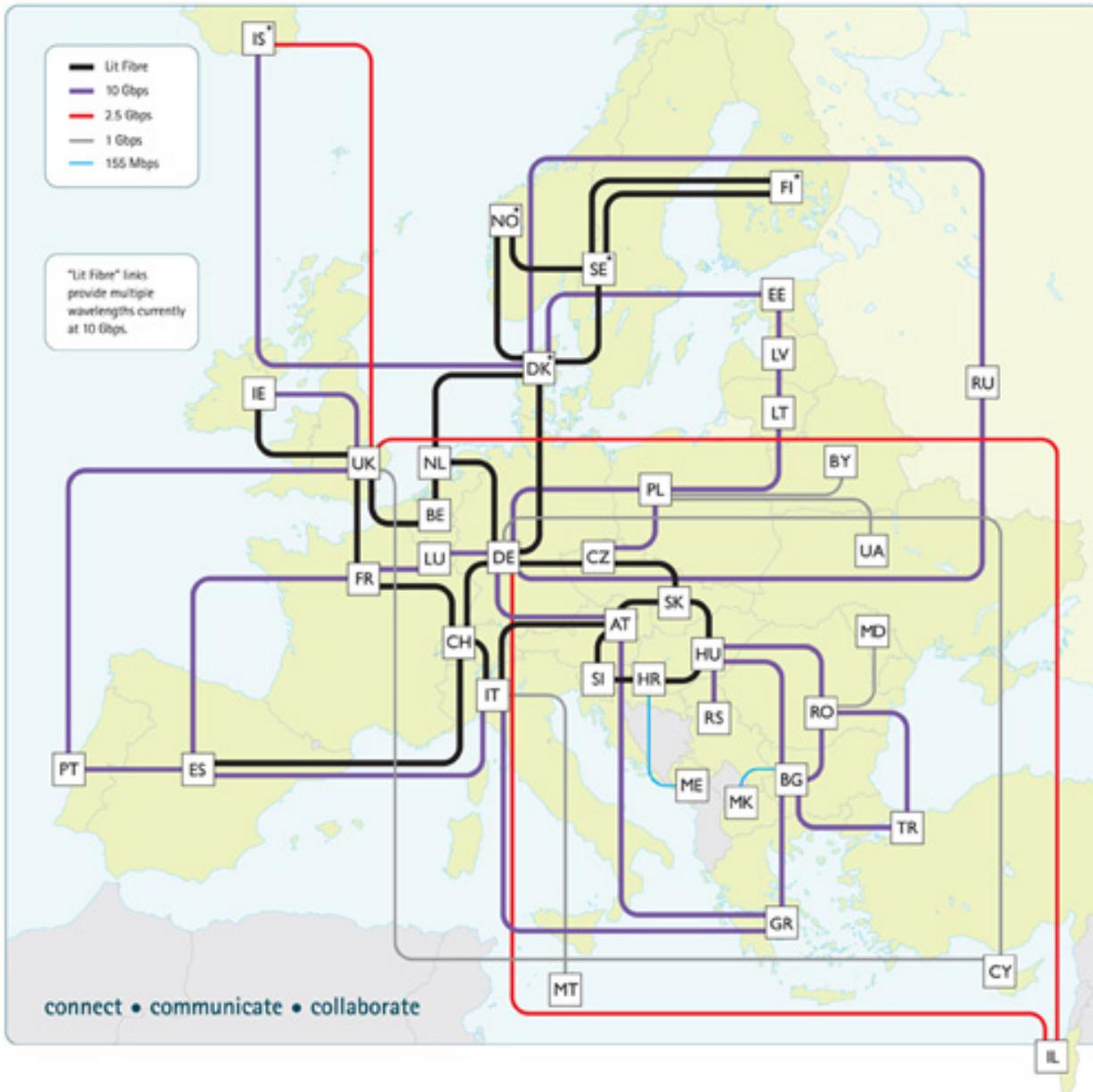
- GÉANT forms an important part of EC research and education strategy and is fundamental to the EU's vision of a European Research Area (ERA): a border-free zone for research
- GÉANT connects together **ALL** EU member states and many other countries –its value is universally recognised
- GÉANT connects countries to the world of research- opening opportunities to participate in international projects and access international research facilities

"The power and scope of GÉANT ensure that Europe is a central hub for research and education, bringing together the brightest minds in the world. GÉANT not only benefits Europe's competitiveness, but is also boosting collaboration between researchers on a global scale. Through GÉANT the European Commission is committed to enable worldwide research collaboration that tackles some of the biggest challenges that society faces and to get Every European Digital."



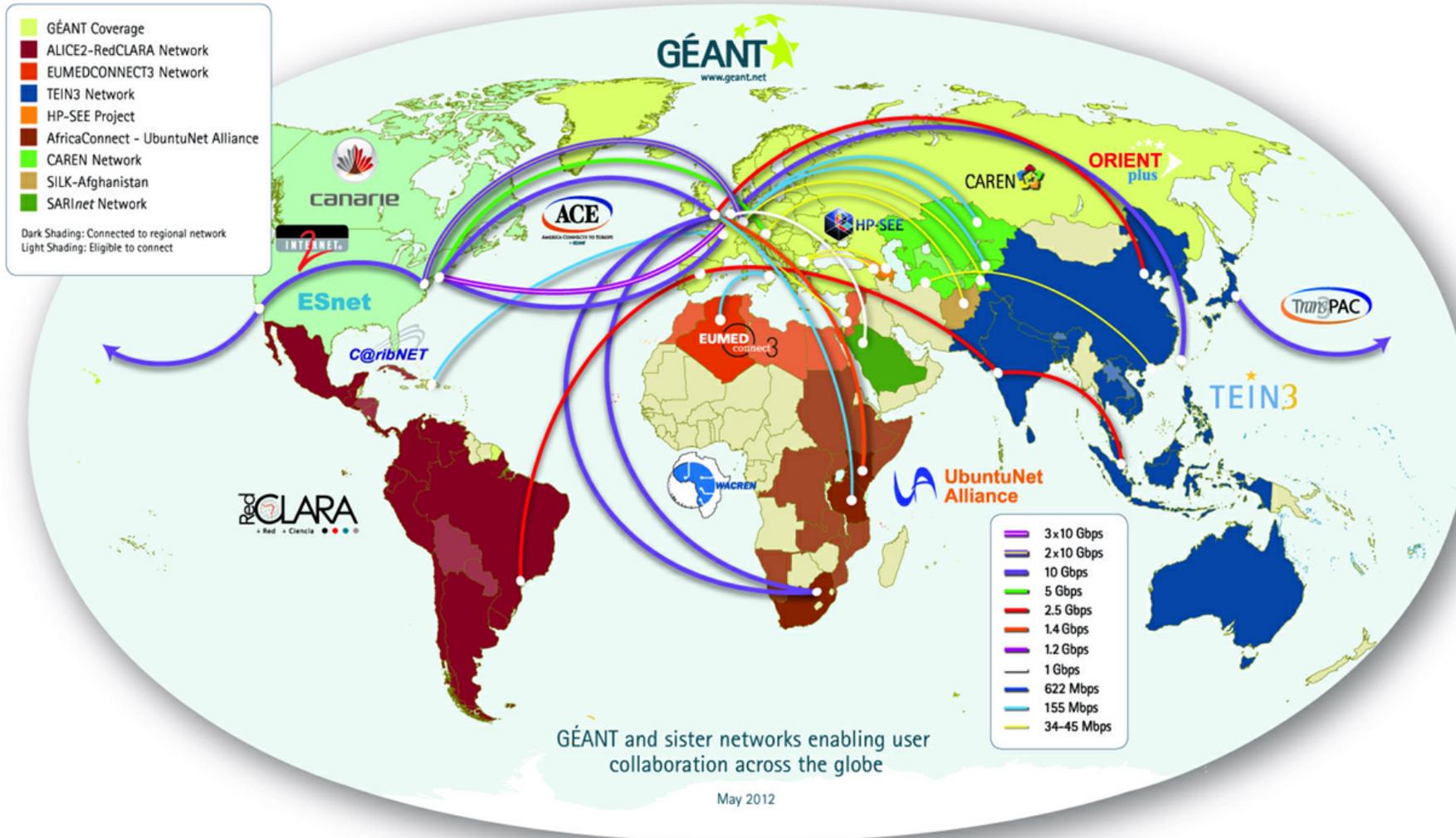
Neelie Kroes, Vice-President of the European Commission for the Digital Agenda

About GÉANT: Backbone Network



- Data transfer speeds of up to 500 Gbps across 50,000 km of network infrastructure
- Hybrid network
 - **GÉANT IP**: packet routed –and VPNs
 - **GÉANT Plus**: switched point-to-point circuits
 - **GÉANT Lambda**: dedicated wavelengths
- Unrivalled connectivity to academic institutions
- User Services: eduroam, eduGAIN, eduCONF ...
- Over 40 million users across connected NRENs

.....and around the World



- ESFRI Roadmap identifies new Research Infrastructures (RI) of pan-European interest corresponding to the long term needs of the European research communities, covering all scientific areas, regardless of possible location. Projects include:
 - Earth Observation,
 - Climatology,
 - Space and Fusion,
 - Life Sciences,
 - Arts and Humanities
- GÉANT is liaising with large international scientific projects, identify requirements and exploring new services, use cases
 - An updated list of Research infrastructures is http://ec.europa.eu/research/infrastructures/index_en.cfm?pg=preparatory_phase_projects

Three New Key Users

1) CERN: the first 100Gbps Lambda service



- Connecting CERN data centre in Geneva to the new remote data centre at the Wigner Centre in Budapest
- Now Operational!

**CERN data centre,
Geneva,
Switzerland**

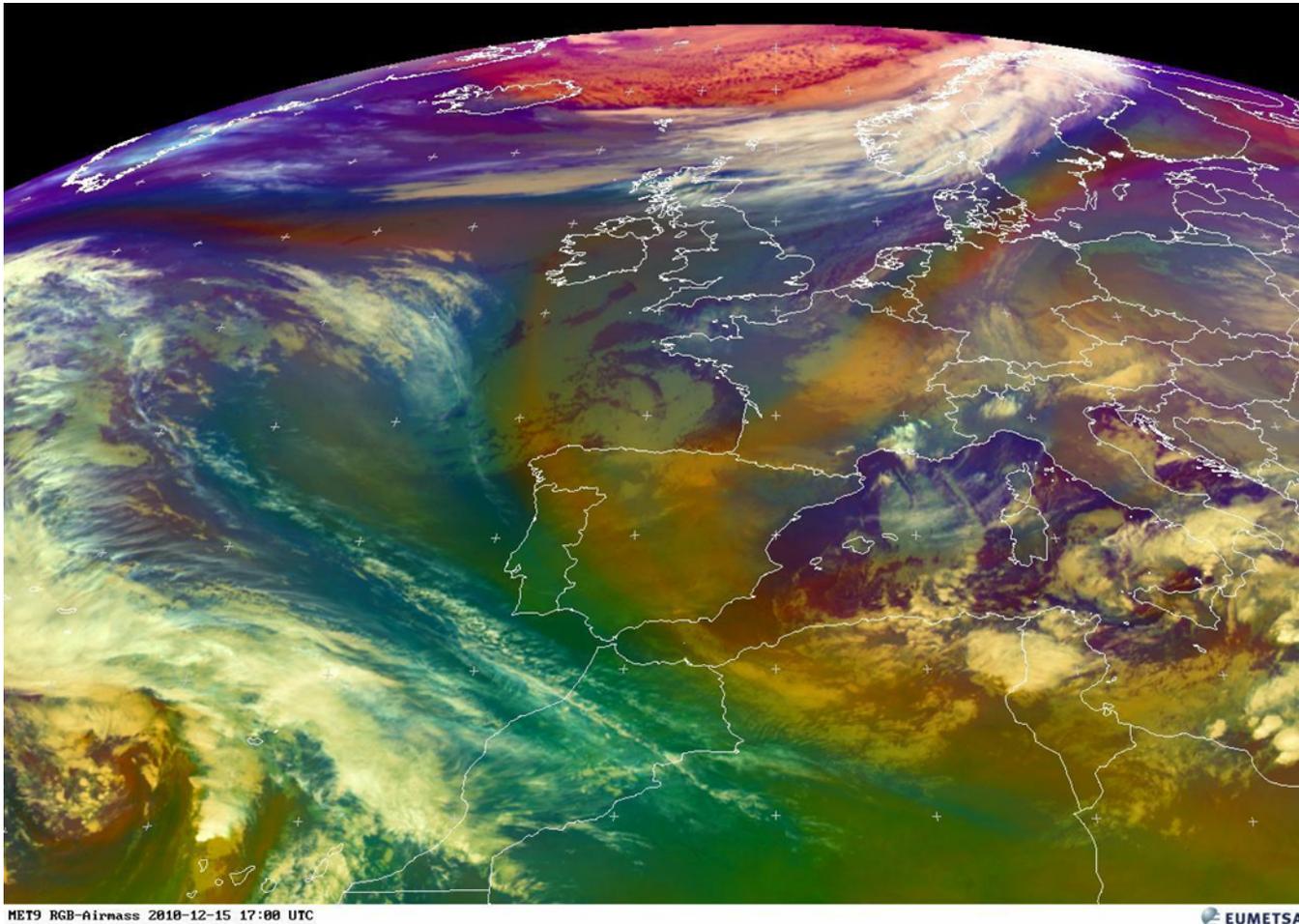


**Wigner Centre,
Budapest,
Hungary**



Three New Key Users:

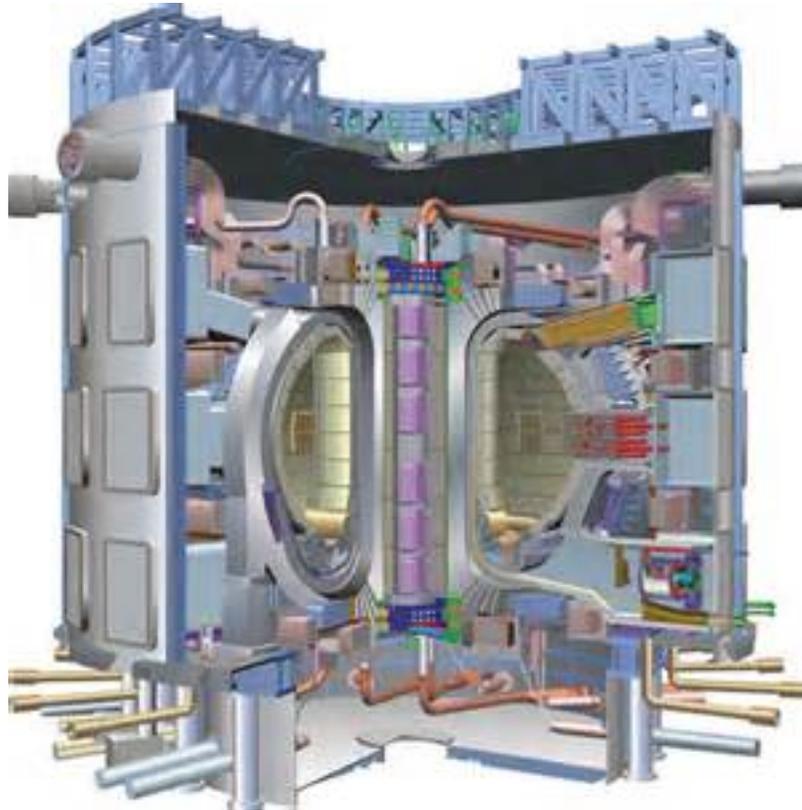
2) EUMETSAT



- DANTE working to provide connectivity for 5 sites in Asia (via GÉANT /ORIENT-Plus/ TEIN), with the prospect of connecting 26 sites across Europe
- **Benefit** - distributing weather images to Metrological agencies across the world for forecasting, disaster prediction etc. Faster and cheaper data delivery than satellite broadcast.

Three New Key Users:

3) ITER / IFERC (Fusion Energy Reactor) GÉANT



- Fusion is essential to clean, secure energy supply post-fossil fuels
- Via SINET (JP) GÉANT connects IFERC to leading European sites and planning a dedicated network topology comparable with LHCOPN for later in 2013
- ITER project involves Europe, India, Japan, China, Russia, South Korea and the US
- **Benefit** – Providing high-capacity connectivity between the experimental site in France and the computer facilities in Japan.

What's new in GÉANT? New business approach



- Focus on user needs:
 - Technical
 - Operational
 - Contractual
- Business development team
- Cross-domain working processes
- One-stop shopping across the GÉANT consortium

- GÉANT is the world's best-connected research and education network
- NRENs and GÉANT have unique reach to academic institutions worldwide
- GÉANT is migrating to a 100Gbps platform, providing almost unlimited capacity –and flexible delivery
- Added-value services include monitoring, identity management and AAI, one-stop-shopping
- GÉANT takes user needs seriously and will provide services in a coordinated way
 - ... and is extending its reach in Eastern Europe

Your input is most welcome!

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