

DANTE/GEANT update

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INTERNET2 Middle East SIG

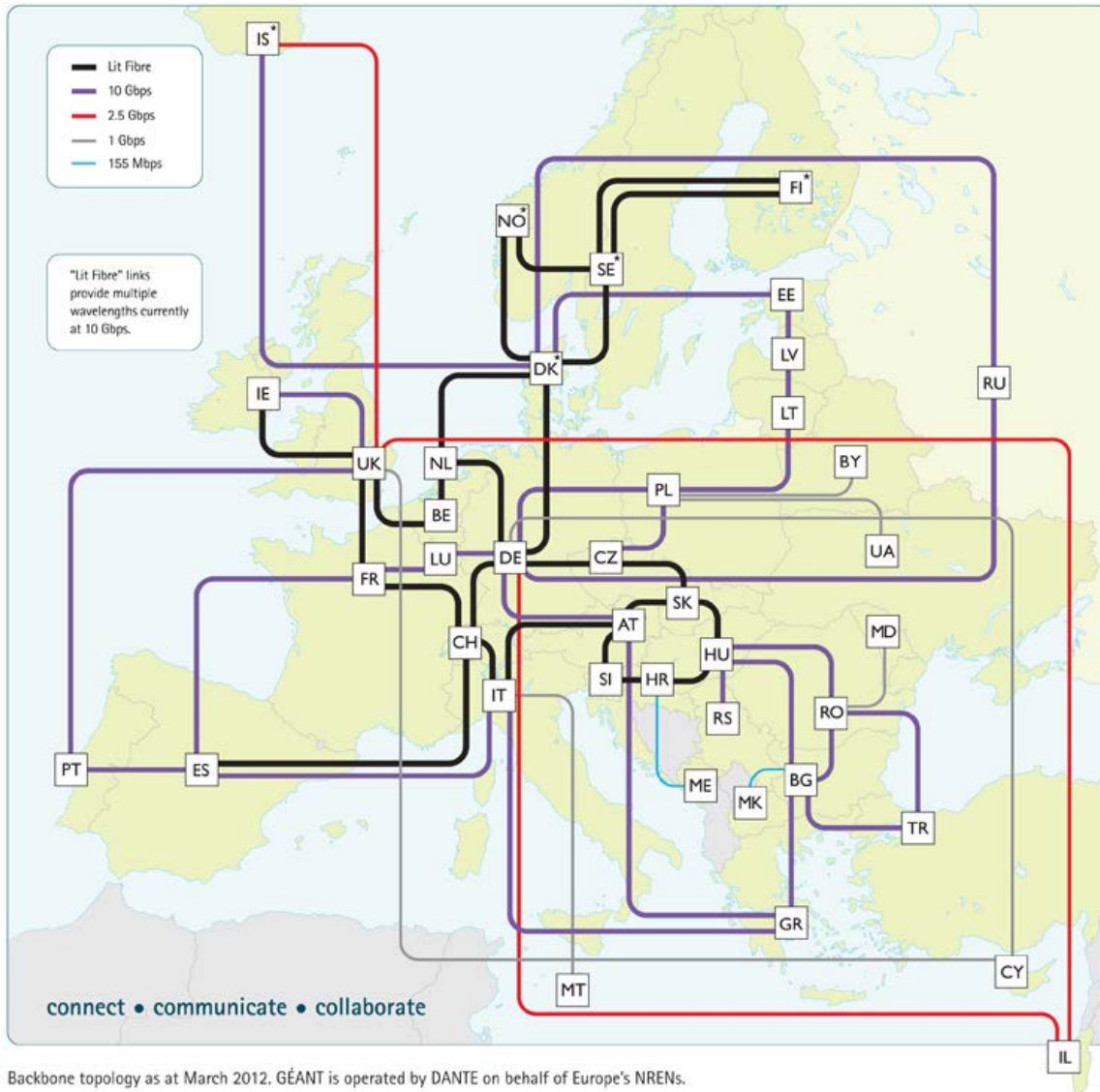
10 September 2013

Doha, Qatar

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Europe's 500Gbit/s Network

- e-Infrastructure for the "data deluge"



Backbone topology as at March 2012. GÉANT is operated by DANTE on behalf of Europe's NRENs.

- Latest transmission and switching technology
- Juniper MX-series routers with 100Gbit/s capability
- Infinera DTN-X optical transmission platform for 500Gbit/s super-channels
- 12,000km of dark fibre
- Over 100,000km of leased capacity (including transatlantic connections)
- 28 main sites covering European footprint

It's very fast 😊



Infinera and DANTE Set
Guinness World Record with
Fastest Provisioning of Long Haul
Optical Transmission Capacity

26.02 Tb/s Per Hour

◦ [Learn More](#)



Also participating ANA 100G tests with INTERNET2, NORDUNET,
SURFNet, CANARIE, ESnet

Creating the global research village

GÉANT (GN3plus)

- vital to the EU's e-Infrastructure strategy



Key Facts	GN3plus
Start date	April 1 2013
Duration	24 months
Total budget	€84.3M
EC contribution	€41.8M
Participants	250+
41 Project Partners: 38 NRENs, DANTE, TERENA, NORDUnet (representing 5 Nordic countries)	

- **GN3plus:** current phase of GÉANT
- **GÉANT vision:** to become the unified *European Communications Commons* - driving knowledge creation as the global hub for research networking excellence
- **GÉANT Mission:** to deliver world-class services with the highest levels of operational excellence
- **Co-funded:** by the EU and Europe's NRENs

GN3plus in numbers

14
Activities

58
Tasks

41
Partners

250+
People



50,000,000 users
10,000 institutions
across Europe



Reaching over
100 countries
worldwide

Delivering world-class services to R&E communities

JRA1: Network Architectures for Horizon 2020

SA1: Core Backbone Services

SA2: Testbeds as a Service

JRA2: Technology Testing for Specific Service Applications

SA3: Network Service Delivery

SA4: Network Support Services

JRA3: Identity & Trust Technologies for GÉANT Services

SA5: Application Services

SA7: Support to Clouds

SA6: Service Management & Operations

NA1:
Management

NA2:
Communication
& Promotion

NA3:
Status & Trends

NA4:
International &
Business Devpt

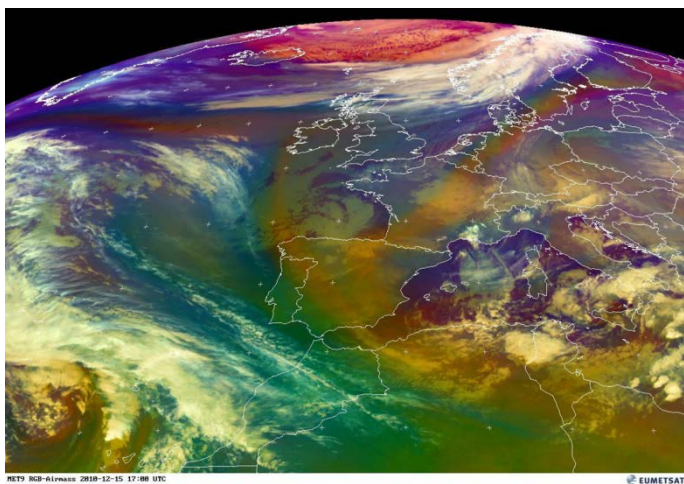
GEANT Research: Open Calls



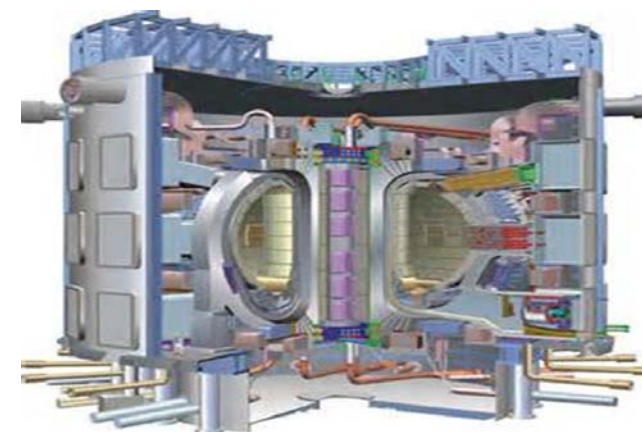
- 50% of JRA funding being spent on 'Open Calls'
- EC funding: €3.3m (total project costs of €4m+)
- Funded projects 16-18 months (Month 1 September/October 2013)
- c30 new projects starting up with academic & private sector partners:
 - Innovative use of GEANT facilities
 - Supporting joint research programmes
 - Innovation

Three New Key Inter-Continental User projects:

1) European Space Agency



2) EUMETSAT



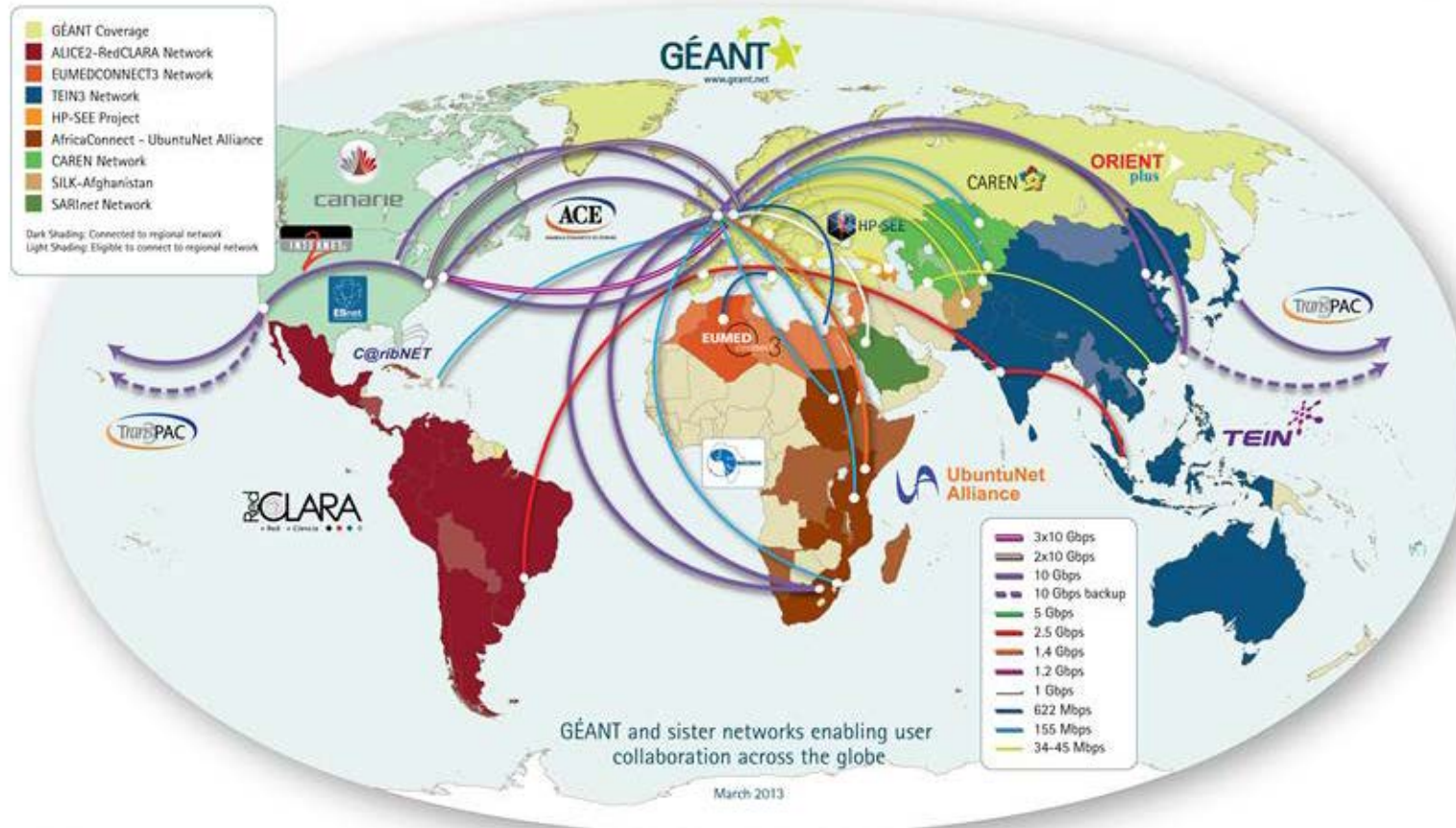
3) ITER / IFERC (Fusion Energy Reactor)

GÉANT Global Connectivity

- at the heart of global research networking

Outside and Inside

GN3plus



GÉANT connects 65 countries outside of Europe, reaching all continents through international partners

Creating the global research village

DANTE projects outside Europe



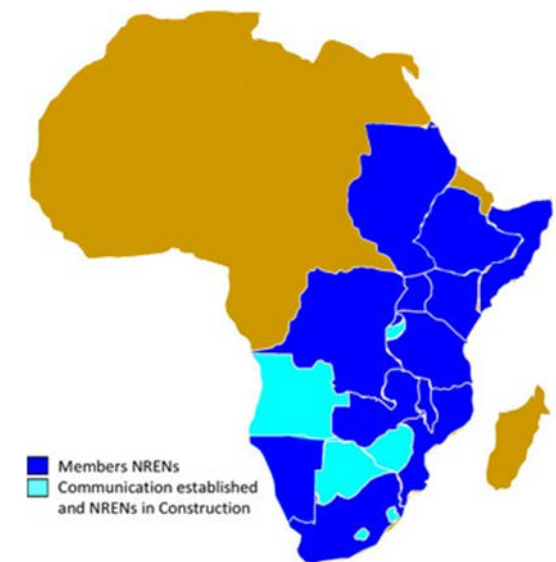
DANTE management completed:

- ALICE Latin America 2004 – 2012
 - *DANTE continues to advise*
- TEIN Asia Pacific 2004 – 2012
 - *DANTE has professional services subcontract with TEIN*CC*

Ongoing DANTE management:

- AfricaCONNECT, SubSaharan Africa 2011 -
- CAREN, Central Asia 2009 -
- EUMEDCONNECT3, Southern Mediterranean 2004 -

- Phase 1 2011 – 2015
- 15M Euro - 80% EC funding, 20% from beneficiaries
- Partners:
 - UbuntuNet Alliance
 - 4 UbuntuNet Alliance member NRENs
 - WACREN and Association of African Universities
 - DFN, GARR, FCCN, HEANET, JANET, SURFnet
 - DANTE as the Coordinating Partner
- PoPs in London, Amsterdam and Mtunzini
- 15 year connectivity contract recently awarded
- Major equipment procurement conducted

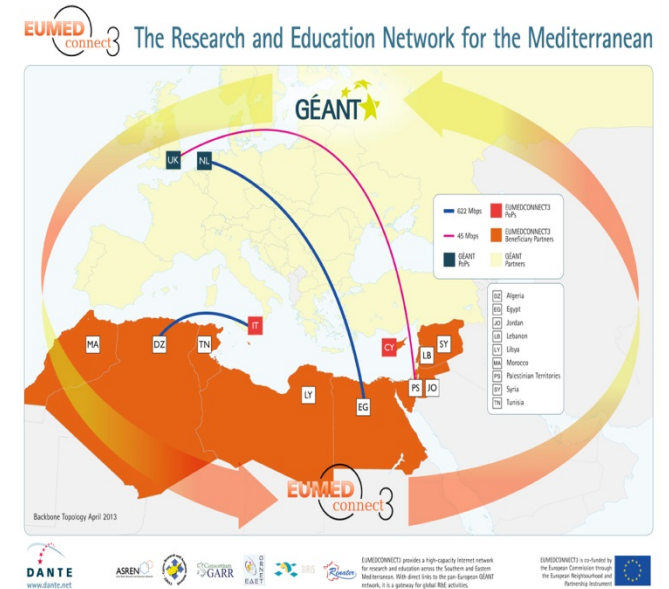


CAREN (Central Asia)

- First phase 2009 – 2013
- Kazakhstan, Kyrgyzstan, Turkmenistan and Tajikistan connected, Uzbekistan eligible
- 2 CAREN PoPs: Frankfurt (DFN supported) and Hong Kong (TEIN supported)
- Applications in solar energy, glacial flooding and seismology
- CAREN/TEIN collaborations developing
- Second phase starting October 2013
- **First CAREN regional conference 21/22 May 2014 Astana, Kazakhstan – please come ☺**



- 3rd phase 2011 – 2015
- 3.2M Euro EC funding at 36 % share
- Challenging Arab Spring issues, however 😊 :
 - Algeria – seeking upgrade
 - Egypt – has own connection to GEANT in Amsterdam, interested in EUMEDCONNECT3 link as well
 - Morocco, Lebanon, Jordan interested in re-connecting
 - ASREN setting up first PoP in London
 - Priority to build relationships and physical connections with Gulf NRENs
 - ASREN Pop
 - Fujairah GlgaPoP
 - Egypt OLE



DANTE is 20 years old 😊



www.dante.net/

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