



e-Infrastructures in the Mediterranean: The EUMEDCONNECT network success story

Fotis Karayannis, GRNET, Greece

Eumedgrid workshop @ EGEE '07:
Grids and their role in sustaining development
1 October 2007

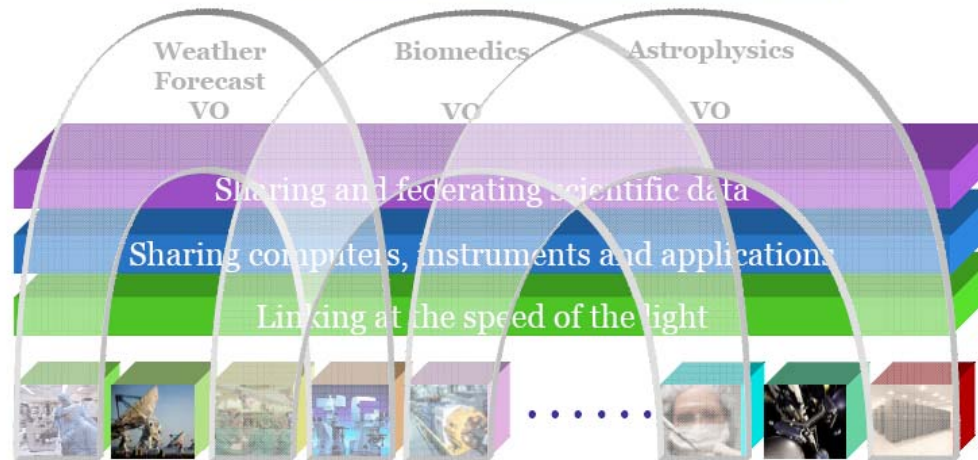


The eInfrastructures vision

International Research Networking

e-Infrastructures: strategy

Connecting the finest minds
Sharing the best scientific resources
Building global virtual communities



Mario Campolargo, EC, DG INFSOM, Head of e-Infrastructures Unit

http://cordis.europa.eu/fp7/ict/programme/events-20070524_en.html

European Commission
Information Society and Media



EUMEDCONNECT Overview



International Research Networking

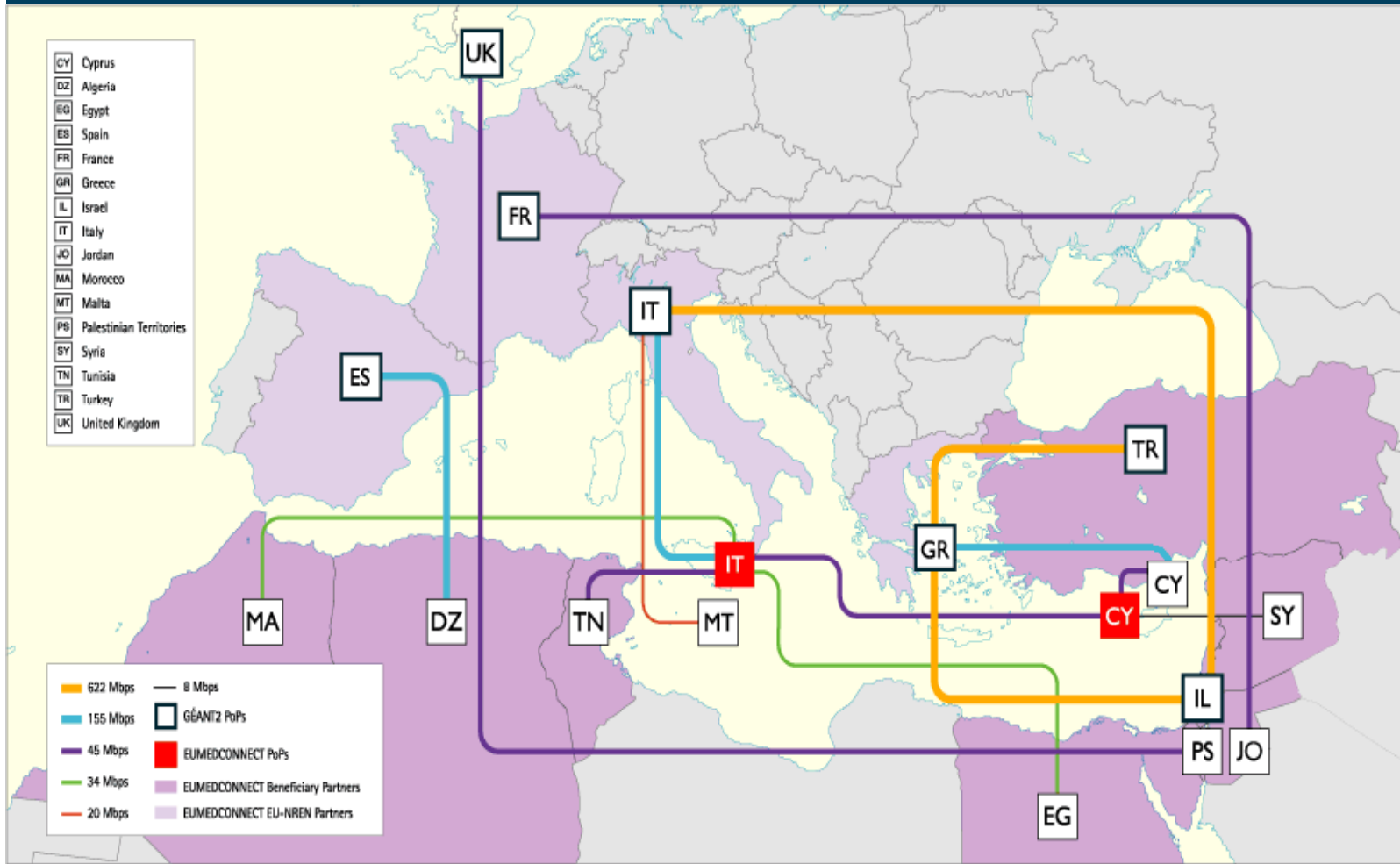
- Coordinating Partner - DANTE
- MED partners/beneficiaries:
 - Algeria, Cyprus, Egypt, Israel, Jordan, Lebanon, Malta, Morocco, Palestinian Authority, Syria, Tunisia, Turkey
- EU partners:
 - National Research and Education Networks (NRENs) of France, Greece, Italy and Spain
- Funded up to 10 M EURO / 80% by European Commission – DG RELEX/AIDCO EUMEDIS programme
- Remaining 20% funding - from beneficiaries
- Contracted - extended to December 2007



EUMEDCONNECT Network Status



International Research Networking



•Morocco link Upgraded to 155 Mbps

•Network reasonably stable

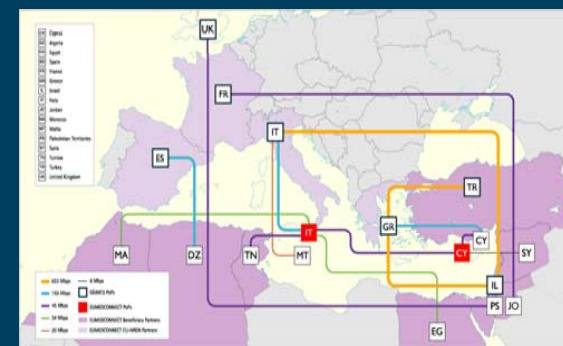


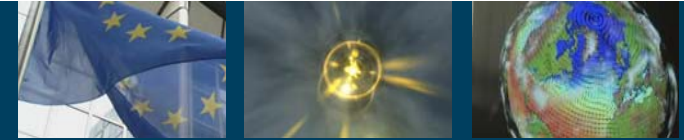
Connected

- 11 out of 12 partners
- 1.4M + users
- 400 + institutions
- c50% of EUMEDIS project sites



International Research Networking

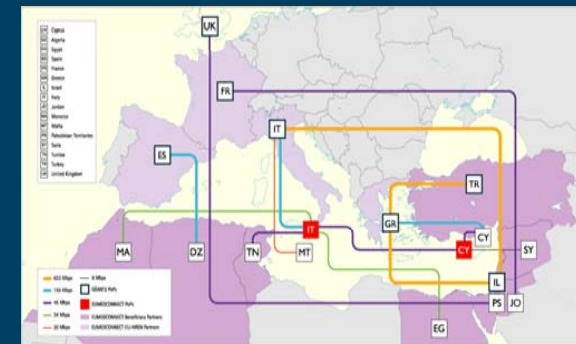


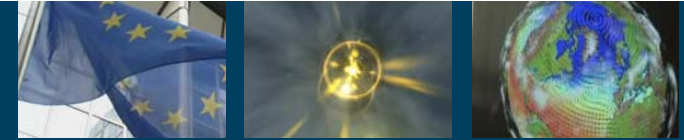


International Research Networking

Users

- EUMEDGRID (the leading user community)
- MedGeNet
- Many FP6 projects e.g. 63 in Morocco connected
- Many Tempus projects e.g. 77 in Algeria connected
- Opportunities for FP7 projects

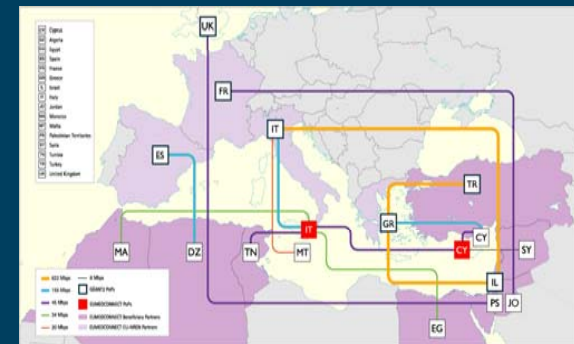




After Dec 2007

International Research Networking

- EUMEDIS programme finished
- All EUMEDCONNECT EC funding used
- EUMEDCONNECT2 planned
- Sustainability remains a key issue



EUMEDCONNECT2: the positive signs



International Research Networking

- Ministerial letters of support from Algeria, Jordan, Morocco and Syria...
- ...Positive response from Commissioner Ferrero Waldner
- Rome Declaration: CAMREN
- EUMEDIS Final Review recommended continuation with further EC funding
- Some further EC funding for 2008 and 2009 being discussed



EUMEDCONNECT2 situation



International Research Networking

- EC funding not committed yet
- Other external funding sought:
 - MEDIAN proposal not successful
 - NATO funding request not agreed
 - World Bank funding being requested
- Plan to re-tender the network once EUMEDCONNECT2 partners commit to proceeding
- EUMEDCONNECT project meeting 7 Sept
- EUMED event 23/24 October planned to raise priority with stakeholders



Eumedconnect importance

Technical reasons (1)



International Research Networking

- Eumedconnect provides a **direct** international connection from the Med country involved to the European Research Network **GÉANT**
 - Relatively high bandwidth connection
 - **Guaranteed bandwidth**, not multiplexed with multiple other connections
 - The provided line is a dedicated line usually at layer 1 (PDH, SDH) with guaranteed bandwidth.
 - It is not local connection (inside the country) multiplexed with multiple other connections using the same international line, as with commercial ISPs



Eumedconnect importance

Technical reasons (2)



International Research Networking

- **Low latency (delay) and jitter** (inter-packet delay or variation of delay in time) connection, since it is not routed through other countries or continents
 - ISPs peer with other ISPs to reach a desired network, which has unpredictable throughput (packet loss can be the case), delay, and jitter
- The aim is to provide a next generation network, one step ahead of the commercial ISPs, offering advanced services, as is currently the case in Europe
- The internet connection on top is in most cases provided and managed by the NREN and Eumedconnect



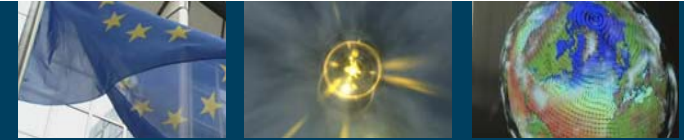
Eumedconnect importance: Other reasons



International Research Networking

- Eumedconnects stimulated the creation of MED NRENs
 - Developing technical expertise, building capable engineers
 - Developing next generation services
 - IPv6, QoS, Multicast, Advanced Video conferencing..
 - Acquiring knowledge and skills on running European Commission funded projects
 - MED NRENs enable regional, as well as collaboration with their European and world-wide counterparts





Observations

- Most NRENs, do NOT have a license from the National Telecom Regulatory Authority
 - The network is only for Research / Science, non-for profit aim, not in competition with ISPs
- Eumedconnect would have been much more affordable if MED Telecom Operators offered national and international connectivity in lower prices (as in Europe)
 - Telecom Operators have the right to offer big discounts compared to commercial prices. Lobbying with telecom operators (especially incumbent ones) is a must for MED NRENs!
 - Retendering the Eumedconnect2 network will make it much more affordable
- Eumedconnect and NRENs are a **platform of cooperation**:
e.g. Eumedconnect led to the EumedGrid creation





Thanks!

International Research Networking

- <http://www.eumedconnect.net>
David.West at dante.org.uk
fotis at grnet.gr

