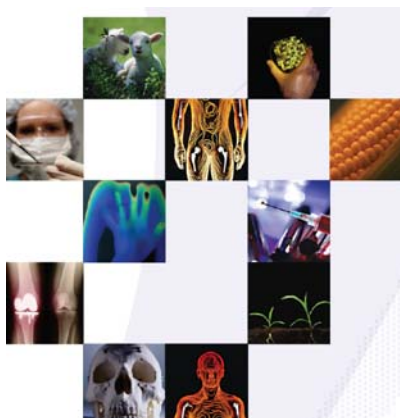




- High bandwidth for fast and reliable data transfer.
- Safe and secure links for data and application sharing.
- Extensive geographical reach to create global research communities.
- Providing access to a large variety of geographically distributed biological databases and bioinformatics tools.
- A medium of high-quality videoconferencing and high resolution visualizations.
- Delivering powerful ICT resources to researchers in the field.
- Dedicated, high-performance networking resources for researchers in fields such as genome sequencing, functional genomics and systems biology.



www.geant2.net

★ Connect ★ Communicate ★ Collaborate



Q&A Materials

What is GÉANT2?

GÉANT2 is the seventh generation of pan-European research and education network, successor to the pan-European multi-gigabit research network GÉANT. The project within which the network is funded began officially on 1 September 2004, and will run for four years.

How is GÉANT2 funded?

GÉANT2 is co-funded by the European Union's Sixth Research & Development Framework Programme. Matching funding will be provided by the project's NREN (National Research and Education Network) partners. The overall co-ordination and management of the project is performed by DANTE.

Who are the project partners?

There are 32 project partners in GÉANT2 - 30 European National Research and Education Networks, DANTE and TERENA (Trans-European Research and Education Networking Association). In total 34 countries are connected.

How many users are connected to the GÉANT2 network?

The network has the potential to reach over 30 million users in 34 European countries connected to the network.

Why do we need GÉANT2?

Research networks have become an essential part of many research and education activities. The networks provide the data communications connectivity needed to allow researchers and academics to collaborate together in their work. The technical advances undertaken for GÉANT2 are vital to the development of future research networks. Internet technology is not efficient nor delivers service availability levels required by current and future projects. Moreover, because GÉANT2 is a switched and routed network, it is paving the way for next generation, high performance, low-cost communication networks.

How is it organised?

Research and education networking in Europe is organised in a hierarchical fashion. GÉANT2 will provide the pan-European backbone to interconnect Europe's National Research and Education Networks (NRENs). Together, GÉANT2 and the NRENs will provide advanced communications services to Europe's research and education community.

How is the GÉANT2 network constructed?

The network will have a total of 44 routes, using a mixture of dark fibre and leased circuits. 18 routes will be connected with dark fibre and 26 links use leased circuits initially.

Does GÉANT2 interconnect with other world regions?

GÉANT2 connects European researchers with colleagues in North America, Japan, Latin America, Asia-Pacific rim, North Africa the Middle East, and South Africa, to create a global research community and to meet their communication and collaboration needs. In addition there are plans being developed to extend direct connectivity to India and China.

How long will it run?

GÉANT2 is scheduled to run until 2008.

How successful do you think the GÉANT2 network will be?

The GÉANT2 network will be the first trial hybrid network on a truly international scale – particularly the provision of point-to-point services where a path is guaranteed on an end-to-end basis.



What advantage does GÉANT2 have over its competitors in the commercial sector?

GÉANT2's implementation of a hybrid network is the first on a truly international scale. Moreover, our emphasis is on quality of service and usability. To this extent we have a comprehensive programme of research activities and service developments. This includes a team of specialists whose specific role it is to monitor network performance and proactively investigate any issues pertaining to this.

What applications will use this network?

These are currently mostly science based applications but some arts and social science researchers are also embracing this technology. These applications include weather forecasting, earth observation, radio astronomy, high energy physics, the new Large Hadron Collider at CERN and the growing number of distributed/Grid applications which rely on network performance. This said, with 30 million potential users, the applications of the network are almost limitless.

What are the financial returns of the GÉANT2 network?

GÉANT2 will contribute to Europe's economic competitiveness by serving as a seedbed and proving ground for technologies and services that will be adopted in the commercial marketplace in the future.

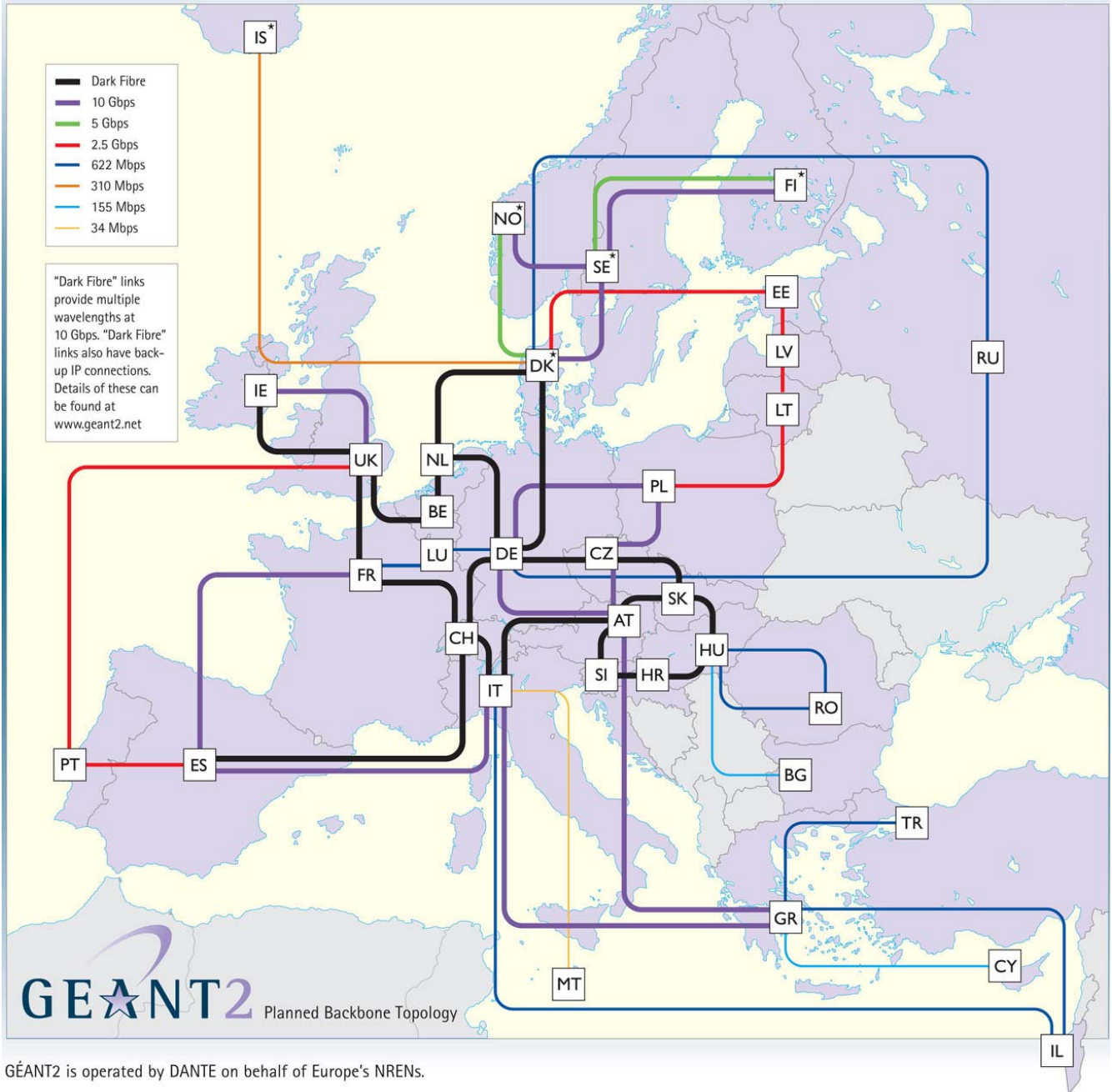
What network developments are in the pipeline?

We are always working on new ways to improve quality of service and usability. In addition, we are currently implementing a new remote access solution that will give researchers the ability to roam across Europe – much in the same way as you currently do with a mobile network provider. Researchers will be able to work as easily in any connected institute across Europe as at their own desks. The development of a universal system of identification and authorisation will make working boundaries disappear.

How will GÉANT2 tackle common network problems such as data security?

One of the key programmes being undertaken by GÉANT2 refers specifically to network security. The original GÉANT network made significant advances in addressing security threats whilst activities within GÉANT2 will provide improved defence strategies and protection systems. In particular, the project aims to facilitate a joined up approach to network security by applying a common security policy across multiple networks.

TEIN2 Topology Map



GEANT2 is operated by DANTE on behalf of Europe's NRENs.