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\* \* A bi-monthly electronic news bulletin  
\* \* reporting on the activities of DANTE,  
\* the company that organises international  
\* network services for the European  
The Works of D A N T E research community.

No.45, July-August 2001

Editor: Marine Chartois

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\* HTML version: <http://www.dante.net/pubs/works/45.html> \*

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## THE PROJECTS

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### \* GEANT:

The Network Management Contract for GEANT was signed on 21 August 2001 with the Paris-based company "Communication & Systemes" (CS). CS will be operating the IP NOC for GEANT. Besides the routing services, the contract provides for advanced services such as Quality of Service, multicast etc.

Dimension Data was chosen as a result of the tendering process to provide and install Juniper M160 routers on GEANT.

The migration from TEN-155 to GEANT is now under way: the first site surveys for the GEANT PoPs were carried out, and the first site installations are now complete. Further installations should continue at a planned rythmn of two per week. A total of 15 Juniper M160's will be installed in the GEANT PoPs, while five PoPs will host Cisco 7507's as an interim measure until the TEN-155 M40's can be rehomed.

The speeds at which the 27 National Research and Education Networks would connect to the backbone and the existence or not of a back up for each connection has been agreed.

### \* SEQUIN:

Four SMB600 were received as a long-term loan to DANTE from SPIRENT in August and SEQUIN members have begun using them on their national testbeds with the aim to test the DiffSERV model at high speeds and under various loads.

An international test has also been set up between the University of Bern (Switzerland) and the PNSC testbed in Poznan (Poland), using the TEN-155 Managed Bandwidth Service. Its goal is to test the behaviour of an IP Premium service over various technologies and long distances.

The first results are expected by the end of September.

\* 6NET:

In April 2001, a consortium led by CISCO Systems which now includes 10 NRENs and 14 Universities as well as DANTE, IBM, NTT, Sony and TERENA submitted a proposal for the creation of a native IPv6 pilot network and for the testing and validation of systems and applications based on IPv6 in response to an EC call. The proposal was evaluated positively and the consortium is in the final stages of negotiating a contract with the EC for the project, now named 6NET. The likely starting date for the project is January 2001.

DANTE's primary role will be to provide the network infrastructure needed to support the activities of the project. CISCO Systems will provide IPv6-capable routers and DANTE will make use of GEANT resources as far as possible to provide the necessary connectivity.

The initial topology will be specified as part of the work to be done in the early stages of the project but will include at least eight international STM-1 circuits. Encapsulation techniques will also be used to extend the topology, making use of part of the circuit capacity installed within GEANT for the production service.

From the beginning of the second year of 6NET, four 2.4 Gbit/s circuits will be provided by GEANT in order to test IPv6 implementations operating at high bandwidth.

The lessons learnt from 6NET will be fed back into the technical development programme of GEANT itself and, it is expected, will lead to the first steps in the transition of GIANT to an IPv6 base.

THE SERVICES

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\* TEN-155 UPGRADES:

The access speeds to TEN-155 of three NRENs were upgraded over the past couple of months. On July 16, IUCC (Israel) upgraded from 34 to 45 Mbps on an ATM circuit, and on the following day, BELNET's connection (Belgium) went from 45 to 155 Mbps, also on ATM. On September 3, AConet (Austria) upgraded their access speeds from 45 to 90 Mbps on an ATM STM-1.

The TEN-155 backbone was also upgraded on August 14, when a POS STM-1 between the PoPs of Frankfurt and Vienna doubled the existing ATM STM-1 circuit.

\* EUROPEAN TRANSIT:

It is expected that the total capacity in Amsterdam will be upgraded from 155 to 622 Mbps in the weeks to come, bringing the total interconnection of TEN-155 with the commercial Internet to 1,065 Mbps.

DANTE LIFE

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\* PUBLICATIONS:

"A first step in the world of IP QoS", Number 43 in the DANTE in Print series, is now available.

In this paper, Nicolas Simar sets out to explain the benefits of Quality of Service (QoS) in comparison with a basic service, such as Best Effort. You can find an electronic version of this document on the DANTE web site at <http://www.dante.net/pubs/dip/>; hard copies can also be ordered from the web site.

\* PRESENTATIONS AND CONFERENCES:

Roberto Sabatino will be giving a presentation on the SEQUIN project on September 25 at the QoFIS conference in Coimbra (Portugal) as well as another presentation on GIANT at the Internet2 members meeting, which will take place in Austin, Texas (United States) between October 1 and 4.

This year again, DANTE will be present at the European Commission's IST event, which will take place in Duesseldorf (Germany), December 3-5 2001.

\* STAFF AT DANTE:

David Sutherland (UK) joined the Operations team at DANTE on 17 July for 6 months as a Project Manager for the implementation of GEANT. David previously worked for a consultancy, where one of his tasks was to project manage the implementation of TEN-155 for KPN in 1998-1999. His first contact with DANTE was during TEN-34, at which time he worked for BT on the pan-European ATM network trial (project JAMES). During his earlier career in BT he researched local network transmission systems and led teams designing Frame Relay and ISDN networks.

Janos Mohacsi (HU) joined DANTE on 23 August 2001 as a Network Engineer in the Network Engineering and Planning team. After graduating from the Technical University of Budapest as a computer engineer in 1993, Janos worked for the same university, where he was project leader in the TIPSTER6 project (IKTA 009/2000), the Hungarian IPv6 test deployment project for HUNGARNET. He worked on the IPv6 security project in Hungary (IKTA 0021/2001) and maintained the Hungarian 6bone service and connection point. He is an active member of the GTPv6 subgroup of the TF-NGN taskforce, where he deals with IPv6 filtering, IPv6 monitoring and IPv6 applications.

Ioannis Kappas (GR) joined the NEP team as a Network Engineer on September 12. Ioannis graduated in July 2000 from the University of Essex with a BSc degree in Computer Science and went on to follow

an MSc degree in Distributed Systems and Networks at the University of Kent at Canterbury. His thesis was an industrial project which he performed at DANTE between May and August of this year.

\*\*\* JOIN US! \*\*\* DANTE is currently recruiting more Network Engineers and will soon start looking for an External Relations Managers. More information is available on the "Working at DANTE" pages at <http://www.dante.net/jobs/>.