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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.

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Editor: Marine Chartois

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\*      HTML version: <http://www.dante.net/pubs/works/46.html>      \*

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#### THE PROJECTS

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\* GEANT (<http://www.dante.net/geant/>):

The pan-European Gigabit research network, GEANT, is now in full service.

Traffic first flowed across the network on 23 October 2001 when EEnet, the national research and education network (NREN) of Estonia was connected. Since then, the NRENS of 30 more European countries have connected to GEANT, all except six of them migrating to GEANT from its predecessor, TEN-155, which was closed down on 01 December 2001.

The transition process between the two networks was at times bumpy, with epic adventures with Hungarian and Polish customs regarding the delivery of material (the first resolved, the second on its way to being resolved thanks to a tremendous amount of help from our Hungarian and Polish NREN partners) and delays in the finalisation of contracts for some circuits DANTE implemented a rehoming of a few TEN-155 circuits to allow continuity of service to the NRENS of Greece, Israel and Portugal until their new GEANT connection was in place; the late rehoming of CARNet's access line from TEN-155 to GEANT however did lead the DANTE team to invoke the contingency plan that had been prepared, with much help from ACOnet. New upgraded circuits to Greece and Portugal will be put in place in January, once the suppliers have rolled out new infrastructure to enable the upgrade. Faster circuits to Croatia and Israel are also expected pending the conclusion of a new tender, the deadline for submission to which was November 30.

Thanks to careful planning which had allowed for plenty of overlap between TEN-155 and GEANT, none of the European NRENS, whether newly connected or TEN-155 partners, did suffer any loss of connectivity when TEN-155 was shut down.

GEANT's European topology will be complemented in January 2002 by the addition of two 2.5 Gbit/s circuits between Europe and North America. The European end points will be Frankfurt and London (both

of which are nodes on the GEANT European Distributed Access). Both circuits will have their other end point in New York; one will be connected directly to Abilene, the other to a router in New York which will in turn be connected to Abilene (giving back-up to the first circuit), CA\*net and ESnet. The two circuits will be supplied by KPNQwest. They will follow separate paths throughout, including the use of two independent cable systems for the undersea component.

The first annual review for the GEANT project was carried out on 5 November 2001 by three independent reviewers appointed by the European Commission. We are still waiting to receive the official review report from the EC but, based on the verbal summary given to us after the reviewers had drawn up a preliminary version of their conclusions, the report will be very positive.

The reviewers felt that the procurement process had been well managed. They also praised the way in which the transition from TEN-155 to GEANT was being handled, as well as the good contingency planning. No technical issues were raised and the downward revision of the project's budget was noted as very commendable.

A revised and updated brochure on GEANT is available on the DANTE web site at <http://www.dante.net/geant/>. Hard copies are also available free of charge and can also be ordered from the web site.

\* SEQUIN (<http://www.dante.net/sequin/>):

Work has focused on validation tests of the architectural model of the Premium IP service, which is based on the DiffServ EF PHB (expedited forwarding per hop behaviour). This will allow GEANT to offer fixed bandwidth transmission with negligible packet loss and bounded delay and delay variation to traffic aggregates.

The first H.323 tests have been set up: they involve physical infrastructure, router configuration, monitoring, liaison with H.323 TF-STREAM task-force members (<http://www.terena.nl/task-forces/tf-stream/>).

A series of presentations were given by Mauro Campanella (GARR), Roberto Sabatino and Nicolas Simar at the 21 September meeting of the GEANT Access Port Managers (APMs). The aim was to get technical feedback from the NRENS on the work carried out so far by the SEQUIN team and on planned future developments. Although not all APMs were able to attend the whole of the meeting, there was an active discussion and many interesting comments will be taken into account in the future steps of the projects.

The first annual review of the project took place in Brussels on 06 November 2001, and although we are still expecting the official report, but the verbal report given to us by the reviewer was positive, with particular success being attributed to the interdomain Premium IP model, the active involvement of Greece and Poland, the long-term loan of the smartbits equipment, and the planned test case scenario with H.323 users. Plans for arranging a

workshop with the interviewees was also viewed positively, and is now being organised.

A revised and updated brochure is available to tell you more about the SEQUIN project. You can order hard copies free of charge by emailing the External Relations Manager at [erm@dante.org.uk](mailto:erm@dante.org.uk) ; an electronic version of the document will also be available from the SEQUIN web pages at <http://www.dante.net/sequin> shortly. More technical information as well as public deliverables are also available on the technical pages hosted by SWITCH at <http://www.switch.ch/lan/sequin/>

#### \* EUMEDCONNECT

The European Commission is expected to award a contract to DANTE in conjunction with four European NRENs (GRNET, INFN-GARR, RedIRIS, RENATER) to prepare proposals regarding the improvement of connectivity for research and education within the Mediterranean region by providing additional international IP infrastructure and by connecting EUMEDIS partner countries to GEANT (the pan-European network for the research and education community).

EUMEDCONNECT aims to foster research collaboration between Europe and the Mediterranean region and to assist the pilot IP applications being funded through EUMEDIS Strand 2. The study will be co-ordinated by DANTE in conjunction with 4 European NRENs and with the co-operation of the EUMEDIS partner countries' research network organisations. Once the first phase is complete, it is intended that a subsequent step will be to tender, implement and operate the services that are proposed.

The signature of the contract by the commission's DG/EuropeAid should take place next week (3 - 7 December 2001), making the official starting date of the project 1 January 2002.

#### \* 6NET

The contract for 6NET has been signed by all the project partners and now just needs the EC to sign before coming into effect. (This is standard EC procedure; it always signs contracts which provide funding for R&D projects only after all the other parties have signed.) We are expecting the EC signature in time for the commission to make an official announcement during the IST 2001 Conference in Dusseldorf on 3 - 5 December 2001. The official starting date of the project will then 1 January 2002 (the first day of the month following the EC signature).

#### \* 6LINK

DANTE is a partner in a proposal which was submitted to the European Commission under the name 6LINK. The EC has accepted the project proposal, the aim of which is the co-ordination of the European IPv6-related projects. The members of the 6LINK consortium are now in the final stages of negotiating a contract with the EC for the concerted action project.

DANTE LIFE

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\* PRESENTATIONS AND CONFERENCES:

A series of presentations on SEQUIN were given at the GEANT APM meeting in Paris on 21 September by Nicolas Simar, Roberto Sabatino and Mauro Campanella, some of which are available on the SEQUIN technical pages hosted by SWITCH at <http://www.switch.ch/lan/sequin/>. Roberto Sabatino also presented the work done by the SEQUIN project members at the QofIS conference in Coimbra (Portugal) on 26 September, and Mauro Campanella gave a similar presentation to the participants in the Internet2 members' virtual meeting which took place from 2-5 October.

A number of presentations on GEANT were also given over the past three months: Dai Davies gave presentations at a Grid projects meeting in Italy on October 9, at the Colt optical networking seminar in London on 19 October, at the TERENA General Assembly on 25 October and at the HEAnet conference on 15 November.

Janos Mohacsi also gave a presentation on the work carried out on IPv6 at the cluster meeting which took place in Barcelona on September 12.

DANTE will be taking part this year again in the annual IST event, taking place in D|sseldorf from December 3-5, 2001. We will be giving visitors an insight into the life of the network. If you're in the area, please come and visit us at the GEANT stand, number T405 in the IST projects area, Technology section!

\* STAFF AT DANTE:

Sabine Kuehn (DE) joined the DANTE Operations team on 1 October 2001 while finishing her PhD which she concluded by a thesis on 'Resource management and admission control of time-shifted reservations'. Sabine has specific expertise in the fields of DiffServ, IntServ and IP protocol suite.

David Harmelin will be leaving DANTE as of 11 December 2001 and will go on to work as an engineer for the Integration of Systems of CS in Paris from January onwards.

Marine Chartois will also leave DANTE on the same day to go to Israel, where she plans to study, become fluent in Hebrew and take lots of photos!

Howard Davies, joint General Manager of DANTE since the company's creation in 1993, has announced that he will be retiring at the end of the year. Howard has been involved with pan-European research networking for over ten years and has made a major contribution to its development and success. All of us at DANTE would like to thank him for this and wish him well in his retirement.

Join us! DANTE is always on the lookout for good Network Engineers.  
More information is available on the "Working at DANTE" web page at  
<http://www.dante.net/jobs/>.