MBS Developments as reported in the works of DANTE

(February 1999) MBS - ALPHA PHASE SUCCESSFUL

More and more co-operative development activities in Europe are based on the use of multi-media services, which are only effective if they can rely on high Quality of Service which cannot necessarily be provided in a "best effort" IP network. The TEN-155 Managed Bandwidth Service (MBS) addresses this issue by allowing the definition of Virtual Private Networks with committed bandwidth between national research networks. This service is offered to universities and research institutions connected to a participating national research network, as well as to organisations participating in EC supported research and development activities with sites in countries of a participating national research network. The MBS is being introduced in three successive phases.

The associated contractor ERCIM (European Research Consortium for Informatics and Mathematics) has chosen the MECCANO project to be alpha tester of the MBS. MECCANO and DANTE have successfully set-up the interconnection of three MECCANO sites across Europe. MECCANO is using 4 Mbps dedicated VCs between their sites for their interactive research cooperation. The beta test phase of the Managed Bandwidth Service will commence by the end of March 1999. It is expected that the MBS will be fully operational by mid-1999.

(APRIL 1999) MBS - NOW IN BETA PHASE

The TEN-155 Managed Bandwidth Service (MBS) allows the definition of Virtual Private Networks (VPNs) between sites of specific user groups at universities and research organisations connected to a participating national research network, as well as to organisations participating in EC supported research and development activities with sites in countries of a participating national research network. The TEN-155 MBS is being introduced in three successive phases with the alpha test coming to a successful end at the end of February.

At the beginning of March the beta test phase started. The objective of the MBS beta test is to extend the scope of the MBS to more users in more countries and to verify the MBS procedures. For the moment three user groups have successfully made use of the MBS as beta testers. The beta test phase will continue until the end of May. The MBS is expected to become fully operational by mid-99.

(JUNE 1999) MBS - BETA PHASE SUCCESSFUL

The beta test phase of the TEN-155 Managed Bandwidth Service (MBS) will be completed at the end of June 1999. During the alpha and beta phases the MBS was successfully tested between sites in ten out of the 18 participating countries.

The first tester of the MBS in the beta phase was the EC/ACTS co-funded SUSIE project. The aim of the SUSIE project is to investigate, implement and demonstrate charging schemes for a "Premium" (better than best-effort) IP service and to enable "Virtual Classroom" sessions between school classes in Canada and Europe. The first two SUSIE Virtual Classroom events connected schools in Dublin, Basel, Berlin, Ottawa and Edmonton and were carried out successfully on two occasions in March and May. The MBS was used between the schools in Germany and Switzerland with network extensions to Ireland and Canada using national circuits and the CANTAT-3 transatlantic link with the kind co-operation of Deutsche Telekom, Deutsche Telekom Berkom, Teleglobe and CANARIE.

The TEN-155 MBS allows the definition of Virtual Private Networks (VPNs) between sites of specific user groups at universities and research organisations connected to a participating

national research network, as well as to organisations participating in EC supported research and development activities with sites in countries of a participating national research network.

(SEPTEMBER 1999) Managed Bandwidth Service Beta Phase Reaches a Successful Conclusion

The beta test phase of the TEN-155 Managed Bandwidth Service has now been successfully completed. The eight projects that participated in the beta tests were EDISON, TF-TANT MPLS, TF-TANT diffserv, SUSIE, ENCART, RCnet,DYNACORE, and a collaboration between the Czech physicists and CERN. Altogether 11 countries took part in the alpha and beta tests. A meeting with Group Network Managers has been organised for 15 September in preparation for an interim report on the MBS due to be submitted to the EC in October.

The TEN-155 Managed Bandwidth Service allows for the definition of Virtual Private Networks, with committed bandwidth, between sites of specific user groups and research organisations connected to a participating national research network. The service is also available to research organisations taking part in EC co-funded research and development activities at sites in a country which has a participating national research network.

The TEN-155 Managed Bandwidth Service External Procedures is now available and provides a step-by-step guide explaining how a project can qualify for, and make use of, MBS.

(OCTOBER 1999) TEN-155 MBS SUCCESSFULLY SUPPORTED THE IDC 99

The TEN-155 Managed Bandwidth Service(MBS) supported the Third International Distributed Conference in Madrid from 22-24 September 1999. To connect interactively participating sites, a Virtual Private Network was established between the conference site in Madrid and sites in Switzerland and Portugal.

(DECEMBER 1999) TEN-155 MBS SUPPORTED AWARD-WINNING PROJECT AT SUPERCOMPUTING '99

At the SuperComputing'99 "HPC Games", an intercontinental team consisting of computational scientists, networking and systems specialists in Stuttgart (Germany), Manchester (UK), Pittsburgh (USA) and Tsukuba (Japan) was awarded the top prize for the most challenging scientific applications. During this exhibition, a molecular dynamics simulation with over two million particles ran concurrently on a Hitachi SR8000 at ETL (Tsukuba), and on CRAY T3E's at the Pittsburgh Supercomputing Center, CSAR (Manchester) and HLRS (Stuttgart), with the TEN-155 Managed Bandwidth Service providing a Virtual Private Network between Stuttgart, Manchester and the DANTE New York PoP. This Teracomputer spanning more than 10,000 miles had a total peak performance of 2.2 Tflops.

(FEBRUARY 2000) TEN-155 MANAGED BANDWIDTH SERVICE

Several projects have been using MBS in the past couple of months, both "old" (SUSIE, EDISON...) and new: METODIS, a French project using distributed computing, is active between France and Germany; COIAS, which started at the end of February, is also involving France, this time with the United Kingdom, while a VPN has been set up between the Japanese physics laboratory KEK and CERN in Switzerland.

(JANUARY/FEBRUARY 2001) TEN-155 MANAGED BANDWIDTH SERVICE

The TEN-155 MBS successfully supported the IPv6 Conference which took place from January 29 to February 1 in Madrid. This project interconnected sites in Portugal, Austria, Slovenia and Spain with two intercontinental connections to Canada and Japan.

Other projects using the MBS in January and February included LONG, a collaboration project between Spain, Portugal and Denmark, and a connection between France and Italy in the framework of the EC-funded project DSE.