



## **Europe to build the world's highest-capacity IPv6 Research NETWORK (6NET)**

Europe's largest Internet research project, 6NET, has completed negotiations with the European Commission to deploy and to test under realistic conditions the Internet Protocol Version 6 (IPv6). This is a major upgrade to the Internet's basic transmission format, required to allow vastly larger numbers of connected devices and innovative styles of Internet application.

- \* The 31 project partners represent a rich combination of research and industrial organizations. They will enable IPv6 technology to be transferred from 6NET into production equipment and services in industry and academia across Europe, strengthening Europe's position for future economic growth.
- \* The 6NET project consortium will provide a native IPv6 network on an international scale, spanning to North America and the Asia-Pacific region, for test and demonstration purposes.
- \* The 6NET infrastructure will connect more countries at a higher capacity than any other native IPv6 network deployed to date. 6NET will install, operate and support a pan-European native IPv6 network, initially spanning nine countries, with links of up to 2.5Gbit/s.
- \* The total consortia investment in 6NET will be close to 17 M€ requiring 1100 person-months. The potential contribution from the EC's Information Society Technologies Programme is over 9.5 M€ over a period of three years.

The industry partners in the project will make specific contributions. Cisco, the project coordinator, is providing high-end routers for the nine core nodes, with further edge devices in at least nine universities. IBM (France) will supply Edge Servers with WebSphere e-business and Grid software adapted for IPv6. Sony (Europe) will bring to the project exciting new IPv6-oriented applications.

During its three-year duration, 6NET will bring IPv6 services to at least eleven National Research and Education Networks (NRENs), which have a strong interest and skills in IPv6 and which will make available some of the resources of the GÉANT and NORDUnet networks to support 6NET. The NRENs, together with DANTE, TERENA and the university partners will supply 800 person-months to support the investigations, developments, testing and demonstration activities.

"The adoption of the IPv6 technology will have profound implications and cause major transformations to the existing network infrastructures", says Graça Carvalho, the 6NET Technical Coordinator. "The 6NET partnership between the most advanced research institutions in Europe and leading market vendors brings together a powerful combination of highly specialised engineers and implementation capabilities that will enable the test and deployment of the evolving protocols, and the identification of missing features."

"Communication networks in general and the Internet in particular are the life-blood of the information society," says Frans de Bruïne, a director in the Information Society Technologies Programme of the European Commission. "The 6NET test-bed is at the heart of European funded advanced networking experiments. Through its unique composition this consortium intends to widely deploy advanced IPv6 technology across the European research community and beyond. In

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making these advanced Internet technologies widely available 6NET has the potential to enhance European competitiveness in this vital sector."

The 6NET consortium will closely cooperate with the Euro6IX consortium.

6NET partners are Cisco, Sony International (Europe), IBM France, NTT Communications Corporation, DANTE, TERENA, RENATER, UKERNA, NORDUnet, DFN-Verein, SURFnet, SWITCH, AConet, GRnet, INFN-GARR, UNINETT, FUNET, Université Libre de Bruxelles, University College London, University of Southampton, University of Lancaster, Westfälische Wilhelms-Universität, Danmarks Tekniske Universitet, University of Oulu, Université Louis Pasteur, Oulu Polytechnic, Invenia Innovation, Telematica Instituut, Computer Technology Institute, Fraunhofer Gesellschaft and INRIA.

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