COST 264: Enabling networked multimedia group communication

The work carried out within various projects including COST237 has demonstrated the importance of multimedia group communication for enabling high-performance networking and new emerging applications. One can mention multiparty conferencing, Internet telephony, collaborative work or distributed interactive simulation. They are characterized by interactivity, real-time constraints, and various number of participants.

Obviously, all these applications require multi-peer functionalities that are not currently available as a basic service. It has been recognized that providing both multi-peer capabilities as well as quality of service in various forms is not achieved no matter what technology is considered, i.e.: ATM, IP, mobile networks, satellites, etc. Moreover, it was shown that there is a lack of practical understanding and experience in this area, mainly because no experimental network is available in Europe. The only existing infrastructure is the experimental Mbone (overlay multicast network on the Internet); but it is not satisfactory as it does not provide any transmission control facility (congestion/flow control, reliability, Quality of Service, group and address management, etc.). Nowadays, there exists an increasing demand and a large potential market for multimedia multi-peer applications that justify the development of an efficient European multicast network infrastructure.

The objective of this action is to build up on the COST 237 results (Multimedia Telecommunications Services) to bring together European research teams involved in group communication both from the infrastructure and application perspective. They will cooperate in order to identify solutions for the improvement of the multi-peer communication architecture, including application, communication mechanisms, and infrastructure. This area is becoming of utmost strategic importance both from the research and industrial perspective. An incredible amount of work is done in this domain in the USA and Japan. Some work is also visible in Europe but with a lack of coordination and dissemination of results to the academic and industrial world. This is enforced by the need of experimentation on a multicast network to develop and assess solutions.

For more information visit COST 264 web site.