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"Arquiteturas de Redes para Aplicações Multimídia de Tempo Real"

Videoconferencing in a data network involves the transmission between the participants of different traffic flows, including such real-time flows as audio and video. In an IP internet without QoS support, the performance of real-time applications can be greatly impacted by network congestion, making them impractical. In this work it is described the main problems of transporting multimedia applications with real time requirements on the current data networks with package switching technology, mainly at congestion time. However, recent advances in router technology (IntServ, DiffServ and MPLS) now make it possible to protect real-time applications from the negative consequences of congestion, permitting the peaceful coexistence on the same internet of real-time and best-effort applications. These solutions are being specified and standardized by the IETF working groups and they are conceptually described here. Finally we present an experimental study of the use of DiffServ technology to protect videoconferencing traffic from the congestion caused by best-effort traffic. The results are immediately applicable to the use of videoconferencing in a corporate network.