MULTIMEDIA REALTIME TRANSPORT PROTOCOL OVER ATM NETWORK

by

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Abstract

As ATM (Asynchronous Transfer Mode) networking switches and access equipment begin to be deployed on a wider scale, the development of applications which utilize high-bandwidth transport services is becoming a focus of research. TCP/IP was not designed to handle the real-time traffic generated by broadband multi-media applications so a broadband transport protocol which supports the development of broadband real-time applications is needed.

We propose a transport protocol middleware which includes broadband-specific transport service functions such as virtual connection setup, bandwidth reservation, and session synchronization, and which provides a development environment that integrates real-time delivery, quality of service guarantee, control and management. This transport service middle-ware is based on RTP (Real-time Transport Protocol) from IETF (Internet Engineering Task Force). The thesis discusses the design and implementation of QRTP (Queen's Real-time Transport Protocol) and evaluates the performance of the software.

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Setting up of Queen's University ATM Multimedia Networking Testbed involved

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