

A PROTOCOL FOR SIMULTANEOUS REAL TIME PLAYBACK AND FULL QUALITY STORAGE OF STREAMING MEDIA

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ABSTRACT

This research introduces the new problem of simultaneous streaming of a single media bitstream to multiple devices with different Quality of Service (QoS) requirements. In particular, the research addresses simultaneous streaming of a single video stream for both real time playback and full quality storage, where the QoS requirements of the two targets are different. We design a joint streaming protocol to fully exploit the available bandwidth to deliver both real-time and retransmitted packets simultaneously, as bandwidth allows. Preliminary results show that the proposed joint streaming protocol can simultaneously address the requirements of both real-time playback and less time-critical, higher quality storage of streaming media.

We published portions of this research at the 2005 IEEE International Conference on Communications.