

Application and Network Level Arbitration for Development of Quality of Experience Metric

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ABSTRACT

This paper examines an arbitration mechanism where redundant video packets are selectively removed, resulting in an improvement in the video quality whilst freeing up resources for other interactive traffic. The interaction between multimedia streams is investigated, where video and a still image are apparent simultaneously, and the effects of transmitting these media over the same channel examined. Network and application level arbitration policies are examined for a simulated and real network. The relationship between the objective quality of service metrics available from the network & application, and the subjective perception of quality of experience are considered, and used to develop the end-user's quality of experience metric. The findings are consolidated and used to derive policies for network and application level arbitration, to provide maximum quality of experience to the end-user.

Keywords: QoS, QoE, Multimedia Streams Interaction, Video coding, arbitration.