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RESEARCH OF QOS CONTROL TECHNOLOGY FOR AATELLITE ATM SWITCHING SYSTEM

Abstract

Abstract: Communication satellite system designers are proposing the use of on-board fast packet switching. Typical satellite communication channels have high bit error ratio and high-latency due to changing channel conditions. To support multiple QoS classes, a new QoS scheme is proposed aiming at such channels. The delay and loss control strategy is to assign both delay and loss priorities to different services. Loss-sensitive cells are given a higher priority to access the buffer to ensure a smaller cell loss probability; while delay-sensitive cells are given a higher priority to access the output link to meet the shorter delay requirement. Meanwhile, analysis and comparison are conducted to show the feasibility of the new QoS strategy via ATM protocols, CAC algorithms, congestion control.