

Designing the Packet Protection Scheme Based on Statistical Analysis

Caixia Chi, *Bell-Labs Research China, Lucent Technologies*

Dawei HUANG, *Bell-Labs Research China, Lucent Technologies*

Peng Zhang, *Bell-Labs Research China, Lucent Technologies*

KEY WORDS: Real Time Protocol, Packet Protection, Application QoS

Abstract: Real time applications on the IP networks, such as Voice over IP (VoIP), Video on Demand (VOD) and video conference become much popular recently. TCP/IP protocol can not be relied on to provide the real time service because of the possible delay of TCP packets. Real Time Protocol (RTP) with packet protection scheme should be used to guarantee the quality of service (QoS) of these applications. According to such a scheme, a user sends redundant packets to protect the raw data so that if some raw data are lost, the receiver can still recover the transmitted information on the basis of received raw and protection packets. Then a problem is how to decide the minimum protection packet number so that with certain probability we can recover the information under certain traffic situation. We design the protection scheme under different assumptions on the IP networks. Real data are collected to test and confirm our methods.

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