

End to End QoS in Wireless Networks

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Abstract

Nowadays, on the one hand, high competition enforces service providers to provide multiple, high quality network service. QoS factors, e.g. guaranteed access rate, reliable and high speed transmission rate impact choice of end users. On the other hand, with the demands of multimedia services and end users increased, service providers need monitor network behavior, guarantee network performance, keep current users and attract new users via offering new services.

The challenge is in providing QoS simultaneously to services with very different characteristics. QoS support in wireless networks is a much more difficult task than in wired networks, mainly because the characteristics of a wireless link are highly variable and unpredictable, both on a time-dependent basis and a location-dependent basis. In wireless environment, unpredictable spectrum competition, unpredictable user demand and network load and unpredictable interference are main factors to impact QoS providing.

Understanding wireless access network technology is the first step to know end to end QoS solutions. In this report, we introduce UMTS, HSDPA and WiMAX network architecture elements and relevant technical parameters.