ABSTRACT

NGN is the future network model of telecommunication, transport all of information by encapsulation these into packets. The packages will be labeled according to the type (data, voice, etc) and handled by different with traffic management equipment. NGN focus to migration from Time Division Multiplexing (TDM) to packet switch network. It enables unfettered access for users to networks and to competing service providers. It supports generalised mobility which will allow consistent and ubiquitous provision of services to users.

In this final project, miniature NGN implemented in small scale. Circuit and packet network will be integrated and make communication between each terminal. Core network of NGN in this task is MPLS network. Services are accessed by wireless network. After implementation QoS is analysed base on it's parameters with reference ITU-T.

The result of QoS's parameters in NGN miniature for each services is most of them meet with ITU-T and CISCO standart. The largest delay for data is 1.1245 ms, voice is 114.1856 and video is 50.5432 ms. The largest jitter for data is 0.29 ms, voice is 41.37 ms and video 32.15 ms. The largest packet loss for voice is 21.79% dan video is 19.68%. The largest troughput for data is 0.115 Mb/s, voice is 0.086 Mb/s, and video 0.242 Mb/s.

Keyword : NGN, IMS, Quadruple Play, MPLS, Softswitch