

ABSTRACTION

Developed internet technology such as General Packet Radio Service (GPRS) became popular since it could efficiently give end to end service. Now, GPRS system commonly use best effort delivery. Nevertheless, QoS can attach with control mechanism in core network. Offered Platform Technology for core network usually use IP/Point-to-point Protocol/Synchronous Digital Hierarchy, in the cost manner that ways not too effective to protect from congestion.

Using MPLS(Multi Protocol Label Switching) architecture, as an internet routing technology, able to optimize network and offer value added service. MPLS simplify packet routing and optimize path selection through internet backbone. MPLS also support QoS with bandwidth reservation and traffic priority.

This research is using *Multi Protocol Label Switching (MPLS) Constrain based Route Label Distribution Protocol (CR-LDP)* technology as a platform on *core network Interior Gateway Protocol*.

As a result, this research show that utility improvement on core network GPRS can be obtained since MPLS have load balancing method. Moreover, delay end to end system also improved.

Key Word : MPLS, GPRS, QoS, Distance Vektor