The explosive growth of the Internet and the momentum toward voice, video, and data applications, is driving this technology to cope with new realities. These realities are further extended by the increasing interest in mobile computers and the use of wireless networks. There are currently many efforts to support the applications described above in next generation IP-based wireless networks. This talk will present a proposal for a radio access network (RAN) based on MPLS and HMIP suitable for next generation wireless networks. This research work defines an integrated framework where the registration, binding, and tunneling procedures of HMIP are combined with the path setup and modification procedures of MPLS. The MPLS-based Hierarchical Mobile IPv6 integrated framework deals with four major issues:

- Enhance MPLS nodes to support mobility.
- Ensure QoS components can be supported in the radio access network.
- Deal with path and QoS modification.

Provide a supporting signaling protocol for the operations described above.

The proposed framework takes advantage of the benefits of both architectures to lower handoff latency, reduce signaling, enable faster table lookup, provide fast switching, and introduce a platform for the deployment of QoS handling methods like DiffServ or IntServ. The overall goal of the integrated framework is to facilitate efficient and reliable network operations while simultaneously optimizing network utilization and system performance.

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