

ABSTRACT

The massive growing of internet technology and user demand to get the access in mobile environments has brought to the evolution of wireless technology. Those technologies have some disadvantages at their service in mobile environment, especially when entering a new subnet, thus it is introduced the Mobile IP protocol which is well suited with user mobility, but at high velocity the unstable handover process occur which give rise to high signalling load, high handoff latency, and packet losses micromobility protocol. The network is interrupted especially when user at handover condition due to the high latency process (blackout time).

*To compensate the blackout time occurrence of Mobile IP, some extensions are introduced. The **Hierarchical Mobile IPv4 (HMIPv4)** and **Fast Handover Mobile IPv4 (FMIPv4)** are two kind of example. **Fast Handover Mobile IPv4 (FMIPv4)** is used to shorten the delay and packet loss when handover occur by detecting the addresses; IP address configuration and location update latencies.*

*In this final project, it is to be discussed and simulated the topology of Mobile IP network with **Hierarchical Mobile IPv4** and **Fast handover Mobile IPv4** extension protocol. The parameters which are taken into account are handover latency and Qos which represent both conditions of network protocols. The simulation results show that the **Fast handover Mobile IPv4** is more stable than **Hierarchical Mobile IPv4** in condition high traffic and high speed.*

*Index terms : **Mobile IP, Hierarchical Mobile IPv4 , Fast handover Mobile IPv4, latency handover,Qos.***