CHAPTER 9

CONCLUSION

9.1 CONCLUSION

The world wide success of cellular technologies has changed the way people communicate. The users access the Internet anywhere, any time even when they are mobile. The NEMO protocol provides limited performance, due to longer path for data transfer, handoff latency and few more issues. MIPv6 protocol has been extended in various versions with some additional features. MIPv6 is compared with 4 more extensions of it and analyzed. The handoff latency, packet loss ratio and bandwidth usage parameters are considered to analyze the protocols.

There is a significant user demand over the reduction of handoff registration delays in ubiquitous wireless communication and the need for mounting NEMO in real time implementation. A precise analysis on sub optimality of present handoff mechanisms is presented. A solution is proposed to curb their drawbacks by projecting incessant handoff mechanism. Based on the analysis of simulated scenario it is proved that the incessant handoff mechanism takes a lead over other mechanisms and provides higher efficiency and performance.

An analysis on a specific routing issue is presented, when a node visits a new network. By implementing a minor change in VMN, we are able to optimize the route for VMN and LMN communication. The routing process remains the same if the destination node is external.
The integration of NEMO Proxy MIPv6 and Simultaneous Binding improves the performance of the vehicular networks in terms of data transfer. The packet loss is minimized to improving the quality of multimedia data transfer, which is frequently used by the consumers.

One of the major concerns in NEMO is providing seamless data transfer for mobile users. This seamless connectivity is very much affected by pinball routing problem and handoff delays that occur in the mobile networks. The solution proposed is effective in reducing the handoff delays in the wireless scenario. The packet loss in the system also shows a considerable difference when compared to NEMO. A minor change in the header is proposed to avoid additional nesting for Nested NEMO, which reduces the packet loss and packet delay. Further the NEMO protocol operation may be affected in rare cases due to security threats in the network. The work is going on to prevent the security threats in the NEMO protocol.

The data transfer in NEMO must be protected with a perfect secured mechanism as it travels through the public network. The threats involved in NEMO have been segregated into four significant types and discussed. The existing solutions to fix the various threats are also analyzed.
9.2 FUTURE WORK

In the future, security problems like authenticating the access points in order to prevent falsifying the table information can be addressed. This new architecture may be implemented in other types of networks, such as wireless sensor and WMAN. Further more it is proposed to concentrate more on NEMO security to resolve the threats involved in the binding update and data transfer. If multiple mobile nodes or networks are under one home agent control, bottleneck issues occur. In such cases, it is highly impossible for the home agent to manage the issues. Problems related to bottleneck issue in NEMO may be addressed.