

ABSTRACT

In the era advancement of wireless technology and many mobile devices that have support such as laptops, smart phones, Personal Digital Assistants (PDAs) that need access to communication can be easily done. In the era of mobility like this, almost everyone wants to stay connected to the Internet wherever and whenever they are, even in a state that is moving. This is what underlies the emergence of Mobile IP technology, which is able to serve users with their mobile devices to communicate and move between different networks while maintaining continuity of communication. This has been supported by Mobile IPv6 protocol (MIPv6) so that when switching from one network to another *foreign network*, the *Mobile node* (MN) can still communicate.

The current MIPv6 protocol is able to serve the displacement *Mobile node* (MN), but the move still requires quite a long time, therefore in this thesis will be to analyze the performance of the mobile ipv6 using SHIM6 and MIPv6 protocol. The analysis conducted in terms performasi on the use of each such protocol.

After implemented this research it can be concluded that the MIPv6 and MSHIM6 a are both protocol that supports mobility. From the test results of the MIPv6 handover delay values obtained by 3.51s for testing without background traffic and the speed of movement of 1 m / s and reaches a maximum value of 5.14s for testing with background traffic of 15 Mbps and movement speed of 5 m / s. As for the protocol MSHIM6 handover delay values obtained by 1.011s for testing without background traffic and the speed of movement of 1 m / s and reaches a maximum value of 1.92 s for testing with background traffic of 15 Mbps and movement speed of 5 m / s. Thus, in terms of handover delay protocol MSHIM6 better than MIPv6 protocol.

Keyword : wireless ,smart phone, MIPV6, SHIM6, protocol, Mobile IP, QoS, handover