ABSTRACT

Implementation of wireless networking technology using standard 802.11 a / b / g that has 'long distance' technology has been widely implemented. In addition to its technology, the WLAN is rapidly growing because it is cheap and easily obtainable. Many vendors are already providing the WLAN instruments where every instruments is interoperable with each others because its following the same standards (IEEE 802.11)

Implementation of wireless networks with long distance and heavy traffic, definitely affect the performance of a network in sending and receiving data. The currently exist wireless connections generally using two traffic that is traffic transmitter and receiver which is incorporated in a single connection path which induce a certain amount of delay time of the transmit and receive, thus the resulting troughput is not optimal, furthermore, in the wireless network connections that has 'long distance' characteristics, packet loss often occurs in the sent packet.

In this final assignment, concept of OSPF Full Duplex Wireless have been implemented. It is a Full Duplex method which uses separated TX and RX interfaces with back-up link or an automatic failover. This method is identical to Dual Nstreme protocol which is Mikrotik RouterOS proprietary. In this implementation, service analysis will be done on aspects of QoS (Quality of Service) with parameters delay, jitter, throughput, packetloss to determine the extent of the role of Full Duplex Wireless OSPF on the network performance when it's running. The analysis is carried out by trials of interactive services such as NetMeeting with some background traffic variance

From the results of the study, showed that the implementation of the OSPF Full duplex on a wireless network is able to provide redundancy capability if one link is down or failover to a link that is still active and the service is still running properly tested. OSPF method full duplex with two separate channels for Tx and Rx are proven to provide better QoS than the method using a single channel for Tx and Rx, which is currently testing a VoIP service.

Keywords : Wireless ospf full duplex, channel, failover, Dual Nstreme, VoIP, QoS