Abstract

IEEE 802.11 WLAN in some medium access mechanism is introduced to guarantee the QoS in the network for real-time audio and video traffic. Some are the EDCF (*Enhanced Distributed Coordination Function*) and AEDCF (*Adaptive* EDCF), EDCF is a mechanism that moves the layer 2 on the network. EDCF general duty to guarantee QoS on the network. In the process having an EDCF *Access Category* (AC) and using a priority scheduling where high-priority AC will first be transmitted over low-priority AC. But there are shortcomings in the EDCF where the condition of a network may not be always stable, if the current network conditions is very high then low-priority AC may be very unlikely for processing or transmission, this is due to parameter CW (*Contention Window*) EDCF has not changed change or be static. Hence the EDCF parameters can not adapt to network conditions. AEDCF a similar mechanism of his duties as EDCF, but AEDCF is a mechanism that is used to cover the shortages that occurred in EDCF, where CW (*Contention Window*) AEDCF not static so it can adapt to network conditions and protected from discrimination a priority.

At the end of our task, we conducted a study to compare the quality of service to the mechanism of 802.11 EDCF (*Enhanced Distributed Coordination Function*) and 802.11 AEDCF (*Adaptive Enhanced Distributed Coordination Function*) with varying traffic conditions. In this simulation tools used NS-2 network simulator that runs on a 2:28 version of Linux Ubuntu 8.04. This study aims to prove that the mechanism AEDCF will give better results than the EDCF.

The result of this research by using NS-2 with the network conditions are heavy laden AEDCF provide better performance in QoS metrics, namely *throughput, delay and packet loss* on networks overburdened compared with EDCF mechanism.

Keywords: QoS(Quality of Service), CW(Contention Window), AC(Access Category), EDCF(Enhanced Distributed Coordination Function), AEDCF(Adaptive Distributed Coordination Function)