

Abstract

At the Medium Access Control (MAC), IEEE 802.11e wireless LANs are schemes that support Quality of Service (QoS) that takes into account the contention window (CW) and distribution services on a priority basis. EDCF is a basic scheme in MAC layer, the resulting performance of EDCF is not good because the value of CW directly converted into Cwmin after each transmission. This resulted in unfair, resulting in a high collision rate and small throughput. Looking at the characteristics of EDCF, developing a new scheme namely AEDCF each successful transmission the CW value is not directly converted into Cwmin but performed calculations with the calculation of the value of CW MF (multiplicate factor) produced better performance than EDCF.

In this final proposed scheme by using ad-hoc mode which allows an increase in better service differentiation. The scheme is a scheme DSPQ (Service Differentiation based on Per Access Queue Categories). This scheme adopts the traffic conditioning and Adaptive Multiple CW Decrease Increase the updating rules queue per service differentiation based on priorities set by adjusting the size of the CW in each traffic class taking into account the network conditions

The results of this thesis research showed that the proposed scheme has better service quality than EDCF scheme and the scheme AEDCF in the utilization of QoS by using the parameters of throughput and collision rate.

Keywords: MAC, QoS, Ad-Hoc, CW, EDCF, AEDCF, DSPQ.