

CHAPTER 6

Conclusions and Future Work

In this thesis, we present a routing metric, SWEB for static routing and an Admission Control algorithm, TAC, in IEEE 802.16 mesh networks, which provide a cross-layer QoS architecture in IEEE 802.16 coordinated, distributed scheduling mesh mode.

We first propose a modified 3-way handshake in IEEE 802.16 coordinated, distributed scheduling mesh mode, and a bandwidth estimation method by token bucket mechanism. Our routing metric is designed to compromise between delay and throughput and CAC algorithm is designed to prevent starvation and meet the delay requirements of real-time traffics. The correctness is validated by the simulation results.

In the future, CAC on centralized mesh mode can be studied. Since the IEEE 802.16 is used for network backhaul, combining IEEE 802.11 technologies in IEEE 802.16 mesh mode would be an interesting issue. Furthermore, providing QoS in such network environments is more challenging.