

Saranyu Hantrakoon 2010: Multimedia Real-Time Support on Wireless LANs.  
Master of Engineering (Computer Engineering), Major Field: Computer Engineering,  
Department of Computer Engineering. Thesis Advisor:  
Associate Professor Anan Phonphoem, Ph.D. 88 pages.

IEEE 802.11 Wireless LANs are widely adopted. The IEEE 802.11e, a task group for QoS support, defines 2 working modes: EDCA for distributed access and HCCA for centralized control. Real-time application such as voice and video are targeted application for HCCA. However, the original standard itself still provides limited QoS supports. In this paper, the simple queue management and admission control, called PHCCA, have been proposed and analyzed. The proposed mechanism can provide priority based QoS with starvation protection for the less priority queue. The results reveal that the proposed PHCCA significantly outperforms the regular HCCA. The PHCCA can accept more session for high priority class while the other lower classes still got served with high acceptance rate.

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