

Analysis of MS power saving scheme to BS with finite buffer in IEEE 802.16e networks

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Abstract

This paper analyzes effects of power saving of mobile station (MS) to Base Station with finite buffer in IEEE802.16e class type I network. IEEE802.16e standard accept MS to switch to sleep-mode to minimize power when MS processing load is reduced. However, when packets destined to MS appear into BS buffer, they should be stored until end of MS sleep window. Although the sleep-mode designed in effort to conserve environment but it risks loss of packets once BS buffer overloaded with accumulated packets. This paper designs numerical analytic model to measure risk of packet drop. Through asymptotic analysis the effect of packets destined to sleeping MS into BS finite buffer is measured and analysed.