

## Review of network routing in IEEE 802.16 WiMAX mesh networks

### ABSTRACT

The rapid growth of high-speed multimedia services for mobile, residential and small business customers has created an increasing demand for last mile broadband access. Technologies based on 802.16 which called WiMAX (Worldwide Interoperability Microwave Access) promises to deliver high data rates over large distances and deliver multimedia services and are expected to play a major role in high speed broadband delivery. Routing in Wireless Mesh Network (WMN) is challenging because of the unpredictable variations of the wireless environment. Traditional mechanisms have been proved that the routing performance would get deteriorated and ideal metrics must be explored. There are various challenges for the routing in WiMAX mesh such as delay, long transmission scheduling, and increasingly stringent Quality of Service (QoS) support and load balance and fairness limitations. The goal of this paper is to review some routing algorithms proposed by various authors for IEEE 802.16 mesh networks. This paper discusses the problem of routing for providing QoS, for minimizing interference, robustness and fairness in detail.

**Keyword:** IEEE 802.16; Mesh networks; QoS; Fairness; Interference; Robustness; Routing algorithms