

Adaptive Routing Tree Construction for Achieving Optimal Throughput in WiMAX Mesh Networks

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Abstract— This paper explores the trade-off relationship between a spatial diversity gain and a control overhead with regard to the number of hop count in WiMAX mesh networks. The effective gain or overhead with the number of hop count is influenced by the density of SSs and traffic load. So this paper proposes the algorithm adjusting the depth of routing tree according to the time varying number of SSs and traffic load for achieving optimal throughput performance. The simulation results show the proposed algorithm can have throughput performance enhancement in the time varying traffic load environment.

Keywords— WiMAX, mesh mode, routing tree construction.



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