Ad Hoc WLAN Throughput Improvement by Reduction of RTS Range

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***Abstract*— In this paper, we evaluate a novel method for reducing exposed nodes in IEEE 802.11 ad hoc WLANs using asymmetric transmission ranges for RTS and CTS frames. The RTS/CTS handshake communication control mechanism used in IEEE 802.11 networks solves the hidden node problem but causes the exposed node problem. Our proposed method uses asymmetric transmission ranges for RTS and CTS control frames to solve the exposed node problem. Simulations using the Network Simulator 2 (NS-2) show that asymmetric transmission of RTS and CTS frames improves overall network throughput compared to the standard RTS/CTS method.**

***Keyword*— IEEE 802.11, ad hoc, RTS, CTS, transmission range, asymmetric, NS-2, AODV**

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