



RESEARCH ARTICLE

Optimized Rapid Data Collection in Tree Based WSN

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Abstract— Fast and energy efficient data collection in an energy constraint ad-hoc sensor network is always a challenging issue. The network topology and interferences causes significant effects on data collection and hence on sensors' energy usage. Various approaches using single channel, multichannel and convergecasting had already been proposed. Here in this paper we have shown data collection performance using multi-frequency in channel assignment, and effect of network topology, for moderate size networks of about 50-100 nodes. For the study we have used some realistic simulation models under many-to-one communication paradigm called convergecast, a single frequency channel and TDMA technique to have minimum time slots for convergecasting.

Key Terms: - Convergecast; Multi-channel; Topology; Energy; TDMA
