Abstract

The flexibility of WMNs affords their usage to provide broadband and communications services in many environments including rural domains. Routing protocols are central to the design of rural networks to ensure data availability and efficient performance especially under dynamic conditions of resource-constrained rural areas. In this paper, we review four routing protocols utilized for rural deployments namely AODV, OLSR, OSPF and BATMAN vis-à-vis the most critical metrics for rural requirements. Specifically, the comparative analysis shows the need for an objective evaluation of protocols for rural WMN scenarios. We also noted that metrics such as protocol overhead, convergence time and topology control remains critical for the performance of rural WMNs. Consequently, we argue that an objective performance evaluation offers a reliable selection criterion regarding the most efficient routing protocol when deploying WMNs. The study will further conduct simulation experiments to advocate the modification and synthesis of reliable protocols that will meet varying stringent requirements of remote settings.
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**Index Terms**

Computer Science  Wireless

**Keywords**

AODV  OLSR  OSPF  BATMAN  Objective Evaluation.