

Adaptive Routing Protocol for Dynamic Wireless Sensor Networks

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Abstract : The main issue in designing a wireless sensor network (WSN) is the finding of a proper routing protocol that complies with the several requirements of high reliability, short latency, scalability, low power consumption, and many others. This paper proposes a novel routing algorithm that complies with these design requirements. The new routing protocol divides the WSN into several sub-networks and each sub-network is divided into several clusters. This division is designed to reduce the number of radio transmission and hence decreases the power consumption. The network division may be changed dynamically to adapt with the network changes and allows the realization of the design requirements.

Keywords : wireless sensor networks, routing protocols, AD HOC topology, cluster, sub-network, WSN design requirements

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