

Routing protocols in wireless sensor networks and simulation using NS2

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Abstract: This topic focuses on researching efficient routing protocols in wireless sensor networks, an important field aimed at optimizing energy and communication performance. The practical context shows the necessity of deploying sophisticated routing solutions to support large-scale sensor networks. The objective of the topic is to develop and analyze new protocols, while applying NS2 simulations to test performance under real-world conditions. The research methodology includes synthesizing existing knowledge, designing experiments, and evaluating through simulations. The expected results of the topic not only provide advanced routing solutions but also contribute to the understanding of energy optimization in sensor networks.

Keywords: routing, wireless sensor network, NS2, simulation, energy