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RESEARCH ARTICLE

Various Approaches to Detect Wormhole Attack in Wireless Sensor Networks

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Abstract— Wireless Sensor Network (WSN) is an emerging technology that shows great promise for various futuristic applications both for mass public and military. These small, low-cost, low-powers, multifunctional sensor nodes can communicate in short distances. There is currently enormous research potential in the field of wireless sensor network security. The major challenge for employing any efficient security scheme in wireless sensor networks is created by the size of sensors, consequently the processing power, memory and type of tasks expected from the sensors. Among various attacks in wireless sensor networks, In a wormhole attack, a pair of attackers forms 'tunnels' to transfer the data packets and replays them into the network. This paper provides a survey on wormhole attack and its counter measures and a proposed scheme has been described that can detect and prevent wormhole attack in wireless sensor networks.

Keywords— Wireless sensor network; Security; Low latency link; Wormhole attacks; Wireless Sensor Node

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