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CONGESTION CONTROL FOR A ULTRA-WIDEBAND DYNAMIC SENSOR NETWORK USING AUTONOMIC BASED LEARNING

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Abstract

The physical conditions of the area of interest is being collected at the central location using a set of dedicated sensors that forms a network is referred to as Wireless Sensor Network. A dynamic environment is required for a secure multi-hop communication between nodes of the heterogeneous Wireless Sensor Network. One such solution is to employ autonomic based learning in a MAC Layer of the UWB TxRx. Over a time period the autonomic based network learns from the previous experience and adapts to the environment significantly. Exploring the Autonomicity would help us in evading the congestion of about 30% in a typical UWB-WSNs. Simulation results showed an improvement of 5% using Local Automate Collision Avoidance Scheme (LACAS-UWB) compared to LACAS.

Author Keywords

Autonomic Network Architecture, Dynamic Environment, LACAS, Stochastic Model, Ultra Wide-band, Wireless Sensor Networks

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