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### **RESEARCH ARTICLE**

# **MOBILITY REACTIVE FRAMEWORK AND ADAPTING TRANSMISSION RATE FOR COMMUNICATION IN ZIGBEE WIRELESS NETWORKS**

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### **Abstract**

*ZigBee is based on the IEEE 802.15.4 standard and was designed to be used in wireless control and sensor networking. ZigBee provides self-organized, multi-hop and reliable networking facility with long battery lifetime. ZigBee standards have been developed to provide simple, low cost and battery efficient wireless devices. Mobility is part of ZigBee vision and it is difficult to provide to/from connections to mobile end-devices. Due to movement of end-devices, data delivery failures occur in ZigBee wireless network. So, to locate the misplaced end devices, the Broadcasting method is used to lessen the effects of mobility. But it consumes large amount of resources in terms of bandwidth and power consumption. Recently ZigBee Node Deployment and Tree construction (ZNDTC) framework is proposed to reduce such resource consumption and provides efficient data transmission between coordinator and mobile end devices. Further adaptive transmission rate and bandwidth utilization technique is then introduced to improve network throughput. Adaptive transmission rate is used to improve the network throughput by increasing the transmission rate i.e. the rate of flow when there is no data loss in the flow. Thus transmission rate is managed based on network traffic.*

Keywords: - ZigBee wireless network, IEEE 802.15.4, Mobility, Adaptive Transmission Rate

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