

Abstract

Wireless Sensor Network is an wireless network infrastructure that use sensor to physical monitoring or environmental conditions, such as temperature, sound, vibration, and others. One of the problems of Wireless Sensor Network (WSN) raised in this thesis is the determination of the routing protocol algorithm that will affect the performance and reliability of WSN. In this thesis the purposed methodis Protocol for Unified Multicasting Through Announcement (PUMA) routing Protocol

Currently has a lot routing protocol are used in WSN. PUMA Routing protocol chosen because it is based multicast routing protocol, which multicast based routing protocol have a high level of performance when compared with unicast based routing protocol.

By using PUMA, the purpose of the effectiveness and efficiency will be achieved. And to achieve this it will be calculated by reference to the parameter Average end-to-end Delay, Packet Delivery Ratio, Packet Loss Ratio, Routing Overhead and which are described in section 4.

For comparison of PUMA will do a comparison with the MAODV routing protocol, which both have a common routing protocols in the multicast transmission.

PUMA is considered good because it has a routing protocol Packet Delivery Ratio above 95 x 100 % and Pakcet Loss below 5 x 100 % , below 0.5 Overhead Routing bit , and Average end-to -end delay under 42 ms.

Keyword : *Wireless Sensor Network, PUMA, MAODV, Routing Protocol.*