A survey of routing mac techniques for wireless sensor networks routing protocol

ABSTRACT

A Wireless Sensor Network (WSN) contains a random number of sensors distributed in the environment to monitor physical conditions. In the following, a survey of MAC routing mechanisms in WSN is presented and discussed. One of the most important issues in WSN is the issue of energy efficiency of the routing protocols. The importance of this issue stems from the fact that the nodes have usually a life time and this life time can be extended by saving more energy by using efficient routing techniques. In the following, we present a survey of the MAC routing mechanisms in WSN. Firstly, an outline of the architecture challenges for routing protocols in WSN is given according to the system tradeoffs between the power and communication overhead savings in different routing techniques. Secondly, advantages and disadvantages for each routing protocol are presented and discussed. In this survey, we will concentrate only on some protocols like Data Centric, Hierarchal and other related energy saving protocols. In addition, we will discuss some of the surveyed protocols results, comparisons and conclusions.

Keywords: WSN; MAC; Routing protocols; Low energy; Energy efficiency