Abstract

The level of information conveyed to the sink in a wireless sensor network is very vital to the correct operation of the ongoing application. In WSN, Using the absolute throughput, the number of data packets delivered to the sink, is not accurate. Since many packets are resulted from the aggregation process of many "raw" packets collected from the concerned sensed area. In this paper, we propose an entropy-based throughput metric to measure the performance of the hierarchal routing protocols for WSN. In the proposed metric, the information delivered to the sink is calculated instead of the number of data packets delivered to the sink. This method will lead to fair comparison and evaluation of different routing protocols as well as more informative decision by the sink. We use the proposed metric to compare the performance of two well-known routing protocols; LEACH and EAD.