

ABSTRACT

Wireless Sensor Network (WSN) is now the hottest topics being discussed by the researchers, for leading smart city. Energy consumption used in WSN network is very large, but it uses a battery as the power supply on WSN becomes a major obstacle that may result in the network will not be able to last a long time. If the network can not survive long, the surveillance of an area will not be optimal.

To solve problems on power consumption in WSN, LEACH algorithm is used as a solution to these problems, which LEACH cluster-based method so as to minimize the distance radio transmissions used in WSN. In addition, this study also used the development of the LEACH , the EEE-LEACH which uses multi-clustering-based.

In this study used three scenarios namely direct transmission, LEACH and EEE-LEACH. From the research, the time required for the direct transmission at an average of 98.037 seconds, while the LEACH average of 9.86 seconds, and for the EEE-LEACH average of 8.06 seconds. As for the energy consumed in the Direct Transmission average of 0.055 Joule, Joule to LEACH 0.0625 and 0.0488 for the EEE-LEACH Joule. Thus EEE-LEACH is able to overcome these problems.

Keywords: WSN, LEACH, received packets, energy consumption