

ABSTRACT

The work contains 98 pages, 35 figures, 3 tables. Used 64 references.

Purpose: definition of energy saving methods for wireless sensor networks.

Object of research: speakers are wireless sensor networks.

Subject of research: development of energy saving methods in WSNs.

In this paper, the basic concepts of wireless sensor networks were considered, all possible approaches that could be used to increase the energy efficiency of WSNs were identified and described, methods of energy saving of wireless sensor networks using routing protocols, and various MAC protocols were considered. The mathematical modulation of the modified hierarchical routing protocol D-LEACH was performed and the comparison with the already existing LEACH protocol was performed.

Key words: Wireless Sensor Network, WSNs, MAC protocol, cluster, node, sensor, routing, energy saving, D-LEACH.