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RESEARCH ARTICLE

TIME SYNCHRONIZATION OF NODES USING GENETIC ALGORITHM IN WIRELESS SENSOR NETWORKS

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ABSTRACT:

Wireless sensor network has been a field where node synchronization has been a huge problem from decades to successfully transmit the data from source to destination there have been many research works about time synchronization in Wireless sensor network in the literature and so many methods and protocols are proposed. Many applications of sensor networks required local clocks to be synchronized for precision but different sensor network required different properties. In this paper we proposed a new algorithm in time synchronization which is Genetic Algorithm opt Routing algorithm (GAOR). The problem has been sorted up to a great extent using the global clock concept in which each local clock gets synchronized with the global clock so that the active and sleep mode of nodes does not affect the transmission but it consumes a lot of energy and time .in our work ,we have tried to solve this problem using genetic algorithm as if the current node gets a sleep mode of the upcoming mode ,it select another node on the basis of time consumption .this particular approach reduces the bit errors rate and the end to end delay, power utilization and other parameters also.

Keywords: *Wireless sensor network; Time synchronization; Local clock; Global clock*

Full Text: <http://www.ijcsmc.com/docs/papers/October2013/V2I10201307.pdf>