

Lifetime Improvement of IEEE.802.15.6 Sensors in Scheduled Access Mode

Authors : Latif Adnane, C. E. Ait Zaouiat, M. Eddabbah

Abstract : In Wireless Body Area Networks, the issue of systems lifetime is a big challenge to complete. In this paper, we have tackled this subject to suggest some solutions. For this aim, we have studied some batteries characteristics related to human body temperature. Moreover, we have analyzed a mathematical model which defines sensors lifetime (battery lifetime). Based on this model, we note that the random access increases the energy consumption, because nodes are waking up during the whole superframe period. Results show that using scheduled mode access of IEEE 802.15.6 maximizes the lifetime function, by setting nodes in the sleep mode in the inactive period of transmission.

Keywords : battery, energy consumption, IEEE 802.15.6, lifetime, polling

Conference Title : ICITCS 2016 : International Conference on Information Technology and Computer Sciences

Conference Location : Barcelona, Spain

Conference Dates : August 11-12, 2016