Low-level communication time analysis in real-time wireless sensor networks

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Studying the time components and delays introduced by the lower level communication protocols in real-time wireless sensor networks, as well as taking them into consideration at the design phase of such protocols, still remains an open issue in the field. This paper addresses this problem through a detailed analysis of the communication times and their implications in providing a predictable low-level support for real-time sensor networks. A measurement framework is proposed specifically on this purpose and then used in an extensive set of experiments to validate this timing analysis.

Published in:
Robotic and Sensors Environments (ROSE), 2014 IEEE International Symposium on

Date of Conference:
16-18 Oct. 2014

Page(s):
83 - 87

Conference Location :
Timisoara

Print ISBN:
978-1-4799-4927-4

DOI:
10.1109/ROSE.2014.6952988

INSPEC Accession Number:
14775981

Publisher:
IEEE