

{tag}

{/tag}

International Journal of Computer Applications

© 2013 by IJCA Journal

Volume 79 - Number 16

Year of Publication: 2013

Authors:

V. Chandrasekaran

S. Anitha

A. Shanmugam

10.5120/13942-1588

{bibtex}pxc3891588.bib{/bibtex}

Abstract

The success of Wireless Sensor Networks lies in the fact that the tools available for detecting the failures are demonstrated in many long term implementations. WSNs are scarce or limited resources, delicate, difficult in analysis and prone to mistakes easily by nature. With the ease of tools installations increases, nowadays the causes of failure identification in such a network becomes efficient. Due to the high cost and increased time consumption of deployment of WSNs, almost in all the fields, many experimental tools are used before real environment implementation. From 2005 onwards, these tools are rapidly increased in number and performance proportionately with the emerged new technologies. In this survey, many tools are discussed and compared with several features for implementation. Even though many tools are developed for different applications, still there exists open challenges regarding its reachability, suppleness, simplicity, locality of nodes and protection. To avoid these issues, WSNs platforms and operating systems has to be matured by having improved diagnostic capability. The key objective of this work is to review various tools available for the emerging Wireless Sensor Network and its services suitable for different categories of applications by performing different functions thus paving the way for changes in Information and

Communication field in the upcoming years.

References

ences

- A. K. Dwivedi¹, O. P. Vyas², "An Exploratory study of Experimental Tools for Wireless Sensor Networks", doi:10. 4236/wsn. 2011. 370, July 2011 (<http://www. SciRP. org/journal/wsn>), pp. 215–240.
- Abdelrahman A, Fayez Al-Fayez, Tariq A, Mohammad H, Andrew N, "Simulation Issues in Wireless Sensor Networks: A Survey", SENSORCOMM 2012, The Sixth International Conference on Sensor Technologies and Applications, IARIA, 2012,ISBN: 978-1-61208-207-3, pp. . 222-228.
- Fei Yu, "A Survey of Wireless Sesor Network Simulation Tools", <http://www1. cse. wustl. edu/~jain/cse567-11/ftp/sensor/index. html>, April 2011, pp. 1-10.
- Andre´Rodrigues,Tiago Camilo,Jorge Sa´ Silva,Fernando Boavida,"Diagnostic Tools for Wireless Sensor Networks:A Comparative Survey",,Springer Science+Business Media, LLC 2012,DOI 10. 1007/s10922-012-9240-6,pp. 1-45.
- B. Musznicki and P. Zwierzykowski, "Survey of Simulators for Wireless Sensor Networks", International Journal of Grid and Distributed Computing, ISSN: 2005-4262, Vol. 5, No. 3, September 2012, pp. 23-50.
- Qutaiba I. Ali, "Simulation Framework of Wireless Sensor Network (WSN) Using MATLAB/SIMULINK Software",,
- D. S. Hira,"System simulation",,published by S. Chand & Company Ltd. ,Reprint 2009,ISBN 81-219-2059-0,pp. 1-296.
- Saba S, Ajay Kumar G, Rinku-B, "Network Simulation Tools Survey",, International Journal of Advanced Research in Computer and Communication Engineering, June 2012,ISSN : 2278 – 1021,Vol. 1, pp. 201-210.
- S. Mehta, Niamat Ullah, Md. Humaun Kabir, Mst. Najnin Sultana, and Kyung Sup Kwak, "A Case Study of Networks Simulation Tools for Wireless Networks",, Third Asia International Conference on Modelling & Simulation,IEEEComputerSociety,2009,pp. 661-666.
- Xiang,Rajive,Mario, "GloMoSim:A Library for Parallel Simulation of Large-scale Wireless Networks",,pp. 1-8.
- P. Levis,N. Lee,M. Welsh,D. Culler,"TOSSIM:Accurate and Scalable Simulation of Entire TinyOS Applications",,SenSys 2003,pp. 1-50.
- http://www. isi. edu/nsnam/ns/doc/ns_doc. pdf
- Punit Rathod, QualNet Tutorial, 10th Sep 2005.
- http://j-sim. cs. uiuc. edu/drcl. inet/ex_echoer. html
- <http://www. omnetpp. org/pmwiki/index. php?n=Main. OmnetppInNutshell>

Index Terms

Computer Science

Wireless

Keywords

Wireless Sensor Networks Experimental tools Information and Communication
field