Abstract

Wireless Sensor Networks (WSNs) is an emerging area of research. With the increase in applications for sensor networks, data manipulation and representation have become a crucial component of sensor networks. These networks have typically no means of visualizing their internal state, sensor readings or computational results. Visualization is therefore a key issue to develop and operate these networks. Data emitted by individual sensor nodes is collected by gateway and forwarded to a machine called base station/sink. It can then be passed via Internet connectivity to the visualization software (tool) on a potentially remote machine. Visualization plug-ins can register to different data types, and visualize the information using a flexible multi-layer mechanism that renders the information on a canvas. Developers can easily adapt existing or develop new custom tailored plug-ins for their specific visualization needs and applications. The objective of this contribution is to present a detailed survey on various data visualization tools for WSNs.

Reference
- MSR Sense - MSR Networked Embedded Sensing Toolkit
- José Pinto, Alexandre Sousa, Paulo Lebres, Gil Manuel Gonçalves, João Sousa, “MonSense - application for deployment, monitoring and control of wireless sensor networks”, Poster in ACM RealWSN’06
- Webpage of Moteiv Corporation: http://www.sentilla.com/
Data Visualization Tools for WSNs: A Glimpse

http://www3.interscience.wiley.com/journal/122525552/abstract?CRETRY=1&SRETRY=0
- UC Berkeley TOSSIM website: www.cs.berkeley.edu/~pal/research/tossim.html

Index Terms

Computer Science

Wireless Networks

Key words

Wireless Sensor Networks

Data Visualization Tools

Data Gathering

Stream Data

Motes