



International Journal on Recent Researches In Science, Engineering & Technology

(Division of Computer Science and Engineering)

A Journal Established in early 2000 as National journal and upgraded to International journal in 2013 and is in existence for the last 10 years. It is run by Retired Professors from NIT, Trichy. It is an absolutely free (No processing charges, No publishing charges etc) Journal Indexed in JIR, DIIF and SJIF.

Research Paper

Available online at: www.jrrset.com

Chief Editor : Dr. M.Narayana Rao, Ph.D., Rtd. Professor, NIT, Trichy.

ISSN (Print) : 2347-6729

ISSN (Online) : 2348-3105

Volume 3, Issue 4,
April 2015.

JIR IF : 2.54

DIIF IF : 1.46

SJIF IF : 1.329

ZigBee Based Open-Flow Architecture adopting SDN concepts for Tactile Application

Muni Vamshi M and Dr. B AMUTHA

M.Tech Department of Computer Science and Engineering,
SRM University,
Tamil Nadu, India

Abstract: Wireless Sensor Network (WSN) senses the data and sends to the destination through different intermediate nodes. WSN have many constrains and challenges like power, reliability and data storage capacity. To overcome these constrains, we are integrating WSN with Software Defined Network (SDN). The nature of military introduces additional requirements on sensor and ad-hoc networks such as reliability and operating in real-time. Although there had been many techniques providing reliability in real-time data communication exists, their implementation challenge with resource limitations peculiar to WSN is not yet solved so far. Real-time data demand and reliability challenge with the objective of minimization of energy consumption is quite an issue when it is utilized in data centric warfare networks. These techniques require topological information of deployed network, which introduces communications and processing overhead. This research aims to present an energy-efficient and reliable data acquisition approach for time-critical and real-time traffic in WSN applications adopting SDN concepts. Real-time data is carried over in multiple paths to provide reliability in data communications. The ZigBee networks could be versatile, flexible and easy to manage by a dynamic control operation. Therefore it is decided to design a ZigBee based open-flow architecture separating data and control packets adopting a dynamic SDN controller for tactile applications.