**IoT based Interactive Industrial Home wireless system, Energy management system and embedded data acquisition system to display on web page using GPRS & SMS**

**Abstract**

The Concepts of Internet of Things (IoT) are applied to a number of applications ranging from home automation to industrial IoT, Where connecting physical things, from anywhere through a network. Let them take an active part in the Internet, exchanging information about themselves and their surroundings. This will give immediate access to information about the physical world and the objects in it leading to innovative services and increase in efficiency and productivity. The proposal of system is to develop an IoT based Interactive Industrial Home wireless system, Energy management system and embedded data acquisition system to display on web page using GPRS, SMS & E-mail alert. This device is essential for sensor data collection and controlling of the industrial Home Wireless Sensor Networks (WSN) in the Internet of Things (IoT) environment. It is planned to style a re-configurable sensible device interface for industrial WSN in IoT atmosphere, during which ARM is adopted as the core controller. Thus, it will scan information in parallel and in real time with high speed on multiple completely different device information. Intelligent device interface specification is adopted for this style. The device is combined with the most recent ARM programmable technology and intelligent device specification. By detecting the values of sensors it can be easily find out the Temperature, Smoke, and Fire present in the industrial environment on the Website and we can handle any situation from anywhere in the world through IOT. So that critical situation can be avoided and preventive measures are successfully implemented.

INTRODUCTION

This Embedded systems are electronic devices that incorporate microcontroller with in their implementations. The main purposes of the microcontroller are to simplify the system design and provide flexibility. Having a microcontroller in the device means that removing the bugs, making modifications, or adding new features are only matters of rewriting the software that controls the device. Or in other words embedded computer systems are electronic systems that include a microcomputer to perform specific dedicated applications.

An emerging technology brought about rapid advances in modern wireless telecommunication, Internet of Things (IoT) has attracted a lot of attention and it is expected to bring benefits to numerous application areas including industrial WSN systems, and healthcare systems manufacturing .Wireless sensor networks (WSN) have been employed to collect data about physical phenomena in various applications such as habitat monitoring, and ocean monitoring, and surveillance . WSN systems are well-suited for long term industrial environmental data acquisition for IoT representation [6]. Sensor interface device is essential for detecting various kinds of sensor data of industrial WSN in IoT environments . It enables us to acquire sensor data. Thus, we can better understand the outside environment information.

This paper presents the application requirements, the exploration of possible solutions, and the practical realization of a full-custom, reusable WSN platform suitable for use in low-cost Smart Blinds and Energy Conservation System for industrial home in IoT Environment.

**REFERENCES**

1. Y. Fan, Y. Yin, L. Xu, Y. Zeng, and F. Wu, “IoT based smart rehabilitation system,” IEEE Trans. Ind. Informat., vol. 10, no. 2, pp. 1568–1577, 2014.
2. W. He, G. Yan, and L. Xu, “Developing vehicular data cloud services in the IoT environment,” IEEE Trans. Ind. Informat., vol. 10, no. 2, pp. 1587–1595, 2014.
3. S. Li, L. Xu, X. Wang, and J. Wang, “Integration of hybrid wireless networks in cloud services oriented enterprise information systems,” Enterp. Inf. Syst., vol. 6, no. 2, pp. 165–187, 2012.
4. Q. Li, Z. Wang, W. Li, J. Li, C. Wang, and R. Du, “Applications integration in a hybrid cloud computing environment: Modelling and platform,” Enterp. Inf. Syst., vol. 7, no. 3, pp. 237–271, 2013.
5. L. Wang, L. D. Xu, Z. Bi, and Y. Xu, “Data cleaning for RFID and WSN integration,” IEEE Trans. Ind. Informat., vol. 10, no. 1, pp. 408– 418, Feb. 2014.
6. M. T. Lazarescu, “Design of a WSN platform for long-term environmental monitoring for IoT applications,” IEEE J. Emerg. Sel.

Topics Circuits Syst., vol. 3, no. 1, pp. 45–54, Mar. 2013.