

Survey on Application based Wireless Communication

R.S. Sidharth Raj and Dr.B. Karthik

Abstract: *In the trend of wireless communication, the growing engineers are in position to aware various technologies existing in the global application. The modules which are integrated with wireless communication for home, Industrial, medical and Industrial secured air applications and surveillances concept based survey discussed in this article.*

Keywords: *RASPBERRY PI, Wireless Sensor Networks, Surveillance System*

AUTHORS “Aburva Poongundran. A, Jeevabharathi. M” discussed about the title **Vehicular Monitoring and Tracking Using RASPBERRY PI.**

Design of Vehicular monitoring and tracking system using RASPBERRY PI is proposed. The vehicular module is used to track, monitor, and surveillance and finds the accident spot and intimate to the monitoring station. The proposed design provides information regarding vehicle Identity, speed, and position on real time basis. This information are collected by the RASPBERRY PI by using different module and dispatch it to the monitoring station where it stores the information in database and display it on graphical user interface (GUI) that is user friendly. GUI is built on Microsoft Visual Studio 2010. This design provides information in real time using $\mu\text{C}/\text{OS-II}$.

AUTHORS “T. NARASIMHA SWETHA1, A. SHANKER

” discussed about the title. **Fabrication of Robot using Raspberry Pi with Android Wi-Fi Controlled for HUMAN AND FIRE DETECTION ALERTS**

Present generation utilizes the modern electronic equipment, the modern electronic equipment will failure some time, that failure may causes fire incident. To detect and prevent the fire accidents and its incidents to identify in this paper will propose approach as “Fabrication of Robot using Raspberry Pi with Android Wi-Fi controlled for human and fire detectionalerts”. The proposed equipment will fixed and tested in some simulation it will show effective results

AUTHORS “Mrs.Reena P. Shinde1, Mr. Yogesh N.Gatlawar2

” discussed about the title. **Automated Environment monitoring and control system**

For agro-based industries using Wireless Sensor Networks

The aim of this paper is to develop a automation system agro-based industries using Wireless Sensor Network and also analyses and compare data using fuzzy logic. To design automated Monitoring and Controlling system which will monitor the analog parameters and transmit these values to the other side where they

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can be read and control with the set points. If these values exceed their corresponding set points, the system will start the controlling devices and set back the exceeded values back to normal. The Communicate uses ZigBee to implement this application. The analog parameters like PH, Temperature and Humidity are read by the respective sensors and these values are transmitted by the transmitter node. The receiver section; host computer, The ARM based computer named Raspberry-Pi receives these values and compares these values with the fixed values and if they exceed the set points, the ARM controller will send commands to controlling devices which will lower the exceeded values to normal

AUTHORS “S Akash Senthamizh Selvi S” discussed about the Multi-Powered GSM based SMART Surveillance System

In this paper, we implement a system that monitors an authorized area that makes use of live video streaming technology only at the time any intrusion thus, eliminating huge hard disk requirement. The system is built using Raspberry PI, Arduino, GSM modem, an IR Camera, and also PIR sensors. To make it smarter we make use of multiple power sources to provide power for the entire system working. It immediately gives alert to the user during a threat. To make it still smarter we have made the system to store the.jpeg format for each 5secs from the start time of video capturing.

AUTHORS “G. Lakshmi Prasanna1, S. Rajendra Prasad2, Dr. C.D Naidu3, D. Ramesh Reddy” discussed about the Water Quality Monitoring And Controlling Irrigation Using Zigbee Technology

Irrigated agriculture is dependent on an adequate water supply of usable quality. Water used for irrigation can vary greatly in quality depending upon type and quality of dissolved salts. Salts are present in irrigation water in relatively small but significant amounts. The problems that result very both and kind, degree and modified by soil, climate and crop. The aim this paper is to monitor the quality of water and control the water in irrigation field. Here in this project we are monitoring the conductivity of the water. Controlling is done by using moisture sensor. If the moisture decreases, automatically the motor will be ON and if the moisture reaches to its threshold level then the motor will be automatically OFF. This data will be collected from every node and sends to central station using zigbee technology

AUTHORS “Madhavi N. Shrikhande Prof. Dipali K.Shende” discussed about the embedded web technology in traffic Monitoring system

With rapid economic development and transportation has increasingly become an important component in the national economy and daily life. So it is necessary to build a modern intelligent traffic control system in order to resolve the traffic congestion on roads and reduce accidents. It contains embedded Linux operating system, design of embedded web server, transplantation of database and implementing method of main functions. Remote monitoring is realize to monitoring traffic conditions, traffic control, information published and communication of traffic data by using combining embedded web server (EWS) technology with Internet. The results specify that the intelligent traffic control technology based on embedded web technology can accomplish the integration of a wide range of information collection and it breaks through the established traffic monitoring technology for designing traffic monitoring system.

AUTHORS “Amol A. Dharmapurikar1, R.B. Waghmare” discussed about the design & implementing a secured wireless communication system by using raspberry pi in automation

Wireless technologies are being more and more used in automation & the field of wireless communications is diverse. The advancement in wireless technology offers a good opportunity in the area of communication. When the embedded devices are provided with internet access the demand will rise due to the remote accessing capability of these devices. Users can monitor & control remote systems by using embedded Web server. This paper is focused on design & implementing a secured wireless communication system of ARM embedded web server based on Raspberry Pi. For effective designing & implementing a system we use GPRS technology. This GPRS technology along with GSM makes the system Accessible from anywhere in the world. Various Sensors are interfaced with microcontroller. Parameters like Light, pressure, motion & angle are measured & real time sensed data is available on the remote pc as well as on the android Smartphone. Due to the use of GPRS technology we can achieve super speed transmission of large amount of data in very less time. As the overall system is based on generating of dynamic IP address every time, we can say that the system is much secured than all the previous systems. Thus Proper use of wireless sensor networks (WSNs) lowers the rate offailures, overall cost of the system, & increases the productivity, efficiency of overall industrial operations.

AUTHORS “Satish Palaniappan” discussed **Home Automation Systems - A Study**

With the increase in consumption of energy and population, there is a grave need to conserve energy in every way possible. The inability to access and control the appliances from remote locations is one of the major reasons for energy loss. A web or an android application is used by the users to give instructions to these systems. This system can make use of a host of communication methods such as Wi-Fi, GSM, Bluetooth, ZigBee. Different controlling devices and configurations can be found in existing systems. Such systems have been found already in many places for a wide variety of applications. This paper presents a survey of all such systems.

AUTHOR Ashish Sharma.MICRO CONTROLLER BASED LPG GAS DETECTOR USING GSM MODULE Ideal gas sensor is used to detect the presence of a dangerous LPG leak in your car or in a service station, storage tank environment. This unit can be easily incorporated into an alarm unit, to sound an alarm or give a visual indication of the LPG concentration. The sensor has excellent sensitivity combined with a quick response time. The sensor can also sense iso-butane, propane, LNG and cigarette smoke. If the LPG sensor senses any gas leakage from storage the output of this sensor goes low. This low signal is monitored by the microcontroller and it will identify the gas leakage. Now the microcontroller is turn on LED and Buzzer. After few milliseconds delay, it also turn on exhaust fan for throwing gas out and continue send messages as „GAS LEAKAGE“ to a mobile no., written in c-code. Wireless Automatic Water Level Control using Radio Frequency Communication.

AUTHOR: Muktha Shankari K1, Jyothi K2, Manu E O3, Naveen I P4, Harsha Herle5 Water scarcity is the serious issue in major cities. It is a common problem which is faced by every house owner, that when his tank is empty he has to switch on the motor and switch the motor off when it is full. Due to the busy life it is common that the tank usually overflows without notice. One has to keep on observing his tank water level to switch off the motor once it is switched on. And sometimes this also can happen that the motor coil burns because of absence of water in the sump. So these are the everyday problem that motivated us in coming up with an affordable, wireless automatic water level control system that doesn't need any attention once it is installed. In this paper we have discussed about design and implementation of water level control system which is wireless, automatic, cost effective and reliable. It

uses two Radio Frequency transceivers along with a controller each installed at the tank and sump. Radio Frequency transceivers are used for wireless communication. It is completely automated with the help of a micro controller. The system doesn't need any attention of the user unless the sump is empty. Installation cost is reduced since the system is wireless. It is reliable because it has no problems arising after installation such as breakage of wire [4].

CONCLUSION

Based on this survey we came to know the technology is same but the methodology for research is varying based on quality and Quantative analysis. The research methodology carries parameter of dependent and Independent variable based on population.

ACKNOWLEDGEMENT:

We would like to thank our esteemed Bharath University Research and Development dean Dr.M. Sundararajan and Dean Engineering Dr. Hameed Huasain and my guide Chennai and Department of Electronics and Telecommunication Engineering for their support.

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