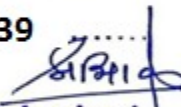


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Efficient Energy Attentive and Fault Recognition Mechanism in Distributed Wireless Sensor Networks: A Review

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Abstract. A recent modernization in wireless sensor networks (WSNs) has played a remarkable role to track and control the physical world. This technology is exhilarating with countless potential for many enormous applications like biomedical, industry, defence and so on. Despite of their benefits, design of energy attentive and fault recognition steering protocol is a key challenge. Plenty of research works has been proposed in past by many researchers based on multipath, query and location aware sensor network. However still there is a scope for enhancement in the performance of sensor network by finding efficient energy aware solution. Comprehensive analysis of existing methodologies in view of two challenges, energy management and fault recognition mechanism for scalable network is the main objective of this paper. This broad survey helps researchers to aware about technical concern and challenges in energy efficient fault recognition mechanism for WSNs.

Keywords: Wireless sensor network · Clustering · Energy efficiency · Fault tolerance · Load balance

1 Introduction

Advancement in the field of micro system has motivated the researchers to design smart wireless system which will monitor and run the physical world. From last few decades tremendous development has been done in sensor network. It is used for enormous application like defence, marine life monitoring, ecosystem monitoring, industrial sensing & diagnostics, disaster management and so forth. In catastrophic circumstances where human involvement is unsafe, wireless sensor network is able to run the target [1]. Implementation of real time application using sensor network is very popular because of their unique characteristics like self organized, self structure, flexible in nature etc. It is deploy randomly in hostile environment and difficult to replace. Advantages of wireless sensor network is seems to be more but it having least significant duo to their limitation like small batteries, limited storage space and less communication range, hence restricting the worldwide acceptance of sensor network. Energy management is a key challenge in WSNs [2]. The sensor battery can be charge by the solar energy, but it is not always possible and replacement of batteries is not the

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Efficient Energy Attentive x

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Efficient Energy Attentive and Fault Recognition Mechanism In Distributed Wireless Sensor Networks: A Review


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Abstract

A recent modernization in wireless sensor networks (WSNs) has played a remarkable role to track and control the physical world. This technology is exhilarating with countless potential for many enormous applications like biomedical, industry, defence and so on. Despite of their benefits, design of energy attentive and fault recognition sleeping protocol is a key challenge. Plenty of research works has been proposed in past by many researchers based on multipath, query and location aware sensor network. However still there is a scope for enhancement in the performance of sensor network by finding efficient energy aware solution. Comprehensive analysis of existing methodologies in view of two challenges, energy management and fault

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Priyadarshini College of Engineering, Nagpur

Amit Raut , Sachin Kadam , Roshan Pawade , Mayur Gawande , Harshal
Ramdham, Dr. (Mrs.) N. M. Thakre

Department of Computer Technology A Survey on Control and Monitoring of Home Appliances using Internet
of Things (IOT).

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Abstract: The main goal of this paper is to describe the systems which automatically control the devices through mobile through Internet. The various implemented systems are used to control appliances in the house like fan, light, and water tank or tap by just turn ON or OFF the switch from mobile phone. Internet-of-Things (IoT) is elaborate by the internet services. IOT Applications and Uses of new technologies in IoT environment are increasing rapidly. It has been already developed in Industrial Wireless Sensor Network (WSN). A smart home is also one of the applications of IoT. Rapid growth in technologies and improvements in architecture comes out many problems that how to manage and control the whole system, Security at the server, security in smart homes, etc. This paper presents the architecture of Home Automation using IoT. Digital homes are those where home appliances/devices could monitor and control remotely. When these household devices in digital homes connect with the internet using proper network architecture and standard protocols, the whole system can be called as Digital Home in IoT environment or IoT based Digital Homes. Digital Homes ease out the home automation task. This paper presents not only the problems and challenges come in IoT and Digital homes system using IoT but also some solutions that would help to overcome on some problems and challenges.

Keywords : Internet of things (IOT), Node-MCU, Relay circuit , Sensors, Web services, Arduino

I. Introduction

In the recent years various technologies are developed which helps people to get self control systems. These systems first sense the data from the sensor and by processing on that provide output for controlling. And this control action is taken by the mobile application as it provides a much faster alternative than mobile web browsing. It has made human life more easier and comfortable. Now we are going to familiar with these technologies.

Internet has changed human's life by providing anytime, anywhere connectivity with anyone. As many advancement in technology has been come the sensors, processors, transmitters, receivers, etc. are now available very cheap rate. Hence these all things can be used in our day to day life [4]. If anyone wants to expand the services of internet then Internet of Things can be said as the expansion of internet services [1]. Today's internet is now expanding towards Internet of Things (IoT).

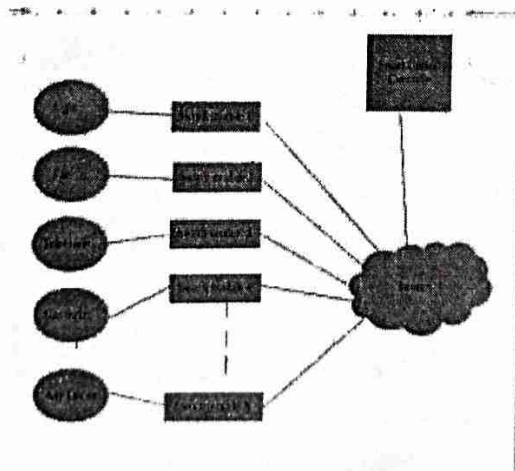


Fig. 1.1: Basic idea for Smart Home System using IoT

Efficient and Searchable ABE Scheme in Cloud Computing

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ABSTRACT

Searchable Attribute based encryption is a promising technique that achieves flexible and fine-grained data access control over encrypted data, which is very suitable for a secure data sharing environment such as the currently popular cloud computing. However, traditional attribute-based encryption fails to provide an efficient keyword based search on encrypted data, which somewhat weakens the power of this encryption technique, as search is usually the most important approach to quickly obtain data of interest from large-scale dataset. To overcome this issue, the fundamental way is to do encryption of data. So, a secure user can have imposed with data access control system must be given before the users store any data to the cloud for storage. Attribute Based Encryption (ABE) system is one of the asymmetric key based cryptosystems that has received much focus that provides fine-grained access control to data outsourced on the cloud. In this paper, we propose a more proficient and most important type of Attribute Based Encryption technique that not only considers the Outsourced ABE construction but also address the issue of revocation in case of user leaving the group or organization; once a user is removed from the group, the keys are updated and these updated new keys are shared between the existing users also our system supports the keyword search over encrypted data in the mobile cloud storage. In multi keyword search; users and data owners can establish the keywords index and search trapdoor, respectively, without relying on the online trusted authority. Experimental results show that the performance of the proposed system is better than existing system in terms of security, data availability, time consumption and memory utilization.

Keywords : Attribute-Based Encryption, Cloud Computing, Searchable Encryption, Attribute Revocation.

I. INTRODUCTION

Cloud Computing is received as another option to conventional data innovation due to its intrinsic resource-sharing and low-maintenance attributes. In cloud computing, the cloud service providers (CSPs, for example, Amazon), can provide different services to cloud clients with the assistance of intense datacenters. By combining the local data management

frameworks into cloud servers, clients can appreciate top notch services and recovery huge speculations on their nearby infrastructures. Data storage is a basic service provided by cloud system. By making use of the cloud, the users can be completely released from the troublesome local data storage and maintenance. Also, it also has a significant risk to the confidentiality of those stored files. Specifically, the cloud servers managed by cloud providers are not trusted totally by

Smart Electricity Board Android Application

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Abstract: Smart Electricity Board Android Application suggests a mobile based system to collect, process and notify consumers about consumption. This system will be reliable, efficient and accurate to suit the requirements of the providers. Meter reading, even though looks simple, is far from simple and involves processes which are not expedient. Calculation errors and delays in system updating are the major problems involved. Here we aim to eliminate the manual processes involved in the electricity meter reading system and eliminates the need of a user. It measures and monitors the electricity consumed by consumers in a locality and forwards the consumed power to the board which in turn notifies the power consumption with the help of GSM, GPS and Android. Our system reduces the cost of labor involved, increases the accuracy of meter reading and saves a large amount of time.

I. Introduction

Smart Electricity Board Android Application is basically a software for the electricity board which suggests a mobile based system to collect, process and notify consumers about their consumption. Electricity is one of the vital requirements for the sustainment of comforts of daily life. In our country, there are localities where we have surplus supply of electricity while many areas do not even have access to it. The current techniques for meter reading in India are not fully automated. The meter readings obtained from the energy meter are used to calculate electricity bill. The energy providers hire people who visit each house and record the meter readings manually. These meter readings are input to the system at the office by the back entry officer. The consumers are not pleased with the services of their providers. They have complaints regarding the statistical errors in their monthly readings.

Smart Electricity Board Android Application aims to receive monthly energy consumptions from remote locations to the board. It aims to minimize the technical errors and reduce human dependency at the same time. Our system helps to reduce the workload of the meter readers. Our project involves the use of a GPS which continuously monitors and records the energy meter readings. The system also makes use of a GSM modem for remote monitoring and control of energy meter. Short Messaging System (SMS) cell broadcasting feature to send the meter readings to the server.

Android is used as a means to notify the consumers about their monthly consumptions and perform monthly calculations at the electricity board. Thus the system is an effective way for collection of data. This reduces the need for a meter reader. It also provides consumer greater accuracy, improved billing, reduces cost etc. It offers better customer services, by sending alert of power cuts and consumption updates. It is very useful for remote areas or small villages which are not connected by any means of transport.

Further reading includes various sections describing the project work in detail. Section two gives an idea about the related work done and researches done in the area of automated meter reading. Section three gives an overview of the system which includes the study of the existing system and detailed discussion and design of the proposed system. Section four discusses about the implementation and the results obtained. It also deals with the various approaches taken to make the architecture 'something better'. The last section finally concludes the research work and discusses the future scope of the research in relevance to the further study.

Related Work

Traditional metering methods for retrieving the energy data is not convenient and the cost of the data logging systems are high. There are many projects that works with the aim of eliminating the manual processes involved, from the time the meter reader starts reading the meter until the system is updated with the current reading. Automatic Meter Reading system (AMR) is a boom for remote monitoring and controlling domestic energy meter. AMR system gives the information of meter reading, power cut, total load used, power disconnect and tempering on request or regularly in particular interval through SMS. The providers could get any information about the meter once a request is issued from their consumer GPS location.

Projects like, Smart Energy Meter Using Android Application and GSM Network 'has been

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A Survey on Energy Monitoring System using Internet-of-Things

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Abstract-The energy audit may range from a simple walk-through survey at one extreme to one that may span several phases. These phases include a simple walk-through survey, followed by auditing of energy use in the industries, and then analysing usage of computer representation of industrial operations. The complexity of the audit is directly proportional to the stages involved in the energy management program and the cost of the audit exercise. Remote monitoring and control refers to a field of automation that is entering a new age with the development of wireless sensing devices. Different industries sensors, machinery, energy in the power plants are the most demanding products and hence many organizations are in requirement of remote monitoring system. Keeping both the important points in consideration, proposed has been designed to implement the remote energy parameter monitoring system for energy audit and analysis. The proposed hardware modules are device with inbuilt functionality to work as a web client to communicate directly with web services. Providing microcontroller web functionality through GPRS protocol and reading meter parameter over MODBUS protocol is most challenging part of the system.

Keywords- Internet of Things (IoT), MODBUS, GPRS protocol, Automation, Energy Audit.

I. Introduction

In 2017, average electricity consumption in India is 1149 kwh per capita, in which industrial consumption is 41.48%. This number can be reduced by decreasing energy waste through the Internet of Things (IoT). According to researchers, "The IoT is a system of interrelated computing devices, mechanical and digital machines, objects, animals, or people that are provided with unique identifiers and the ability to transfer data over a network without requiring human-to-human or human-to-computer interaction" [2]. Significant progresses can be made in conservation of energy by using field data obtained from intelligent devices installed in substations, feeders, and various databases and models across the utility enterprises. Information acquisition is a key for timely data sensing, processing, and knowledge extraction. So far, the most talked-about information about power network operations is from data collected from intelligent electronic devices installed in substations and various parts of the transmission and distribution networks [3]. In recent years, smart meters are being installed in homes and other premises in many regions of the world [3].

Monitoring System Functions have been logically grouped in four layers that are presented with a top-down approach, starting from the end users' specifications to the low-level data acquisition requirements [4]:

- A. Information Presentation
- B. Data Correlation and Analysis
- C. Data Classification, Transformation and Storage
- D. Data Acquisition, Collection and Adaptation

A. Information Presentation

A suitable Software Layer for Information Presentation is required on top to provide appropriate and value added information to several involved responsibility levels in the organization and even to external stakeholders [5].

B. Data Correlation and Analysis

The Monitoring System Software for Data Correlation and Analysis, that feed the upper layer presentation software with value added information, should be modular and scalable to allow a progressive introduction of the needed functions in accordance with the priorities and the growing knowledge and awareness of the Organization [4].

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A Survey on Smart Self Issuing System

M-80

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Abstract—Issuing is a tedious task involve sorting, lending, returning, tagging, eyeing of every item. In addition, users encounter problems for finding, borrowing, localizing, renewing the borrowing, queuing, and so forth. To overcome these obstacles, this paper proposes a smart self product issuing system based on an RFID technology. Using low-cost passive tags in libraries, stores to reduces the cost of modernization significantly. As such, integrating RFID into product management system makes both the users and admin's task easy, smart, convenient, and practice.

I. Introduction

It is found in every store that the searching of items is tedious task. Self-issuing system provides a fast and easy way to issue or return items during store opening hours. By using our software as a technology the item can be issued after the user or customer enters the store. And if the store is closed for any particular time so at that time the person can reissue that item from anywhere. But if any other user wants to issue the same item then our software will send an SMS on the registered contact number of that borrower. The typical functions of the store management like fine calculation , user status will be provided with the additional functionality like the theft detection and the runtime machine generated SMS, etc.

Many of our current stores for example libraries use "bar code" and "magnetic" mode to manage items, and the librarian use a laser scanner affixed with a bar code on the item to scan the statistics of the item and update and input the information[5-8].By making the use of Radio Frequency Identification (RFID) system which is a new generation of Auto Identification and Data collection made easy through Smart Self Issuing System is presented in this paper. It helps to automate business processes and allows identification and management of large number of tagged objects like items, using radio waves.

II. Existing Systems Disadvantages

- 1.Manual product issue and check in / check out system.
- 2.Long queue for purchasing and issuing.
- 3.Separate staff required to manage issuing of products.
- 4.Barcode can only be used to scan one item at a time.
- 5.Barcode is not good option for security verification.
- 6.The consumer finds it difficult to locate the specific item.
- 7.No option to self-check in / check out and individual profile management.
- 8.No notification system if user delayed product re-issue or return.
- 9.The main idea is to "design and deploy an intelligent self-product issuing system" to improve productivity and reduce labor cost.
- 10.Providing self-product issue, re-issue and return mechanism.
- 11.Provide stock management including inventory monitoring, identification of missing or lost items, and locating items on shelves.
- 12.Eliminate time-consuming processes when checking items out of the items
- 13.Implement item security measures against possible thefts often occurred using RFID technology.
- 14.Easy profile tracking and notification management for product return or re-issue status.

III. System Overall Design

The system mainly uses the RFID technology to locate the items [13-15]. The hardware of the whole system is modularized, and the whole system is composed of the upper computer, the reader module, the antenna module and the electronic tag. The reader module comprises a controller module, a radio frequency

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Visual Positioning System in 3D Space

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Abstract: This paper is reviewed on Visual Positioning System in 3D space with the growing accuracy of Geo-tracking devices Geo-location based services are at its maximum demand. By combining the location tracking system with mapping technologies one can get the real-time live location tracking over the map and application of these can be extend at different verticals. Google map is one of the best examples of Geo-location based tracking, but still Geo-location services are working in 2D plane where user can see the map from satellite view and find the path or spot on map and not the directional information from specific location. Along with GPS technology digital compass and the positioning sensor can be better utilized to have details information from current hanging location. Proposed system is Visual positioning based local directional and geo-location based information extraction system. Where system utilized the digital compass, position sensor and GPS device to get the users position over plane and get the information matching the position.

Keywords: VPS, GNSS, GPS, Geo-Location.

1- INTRODUCTION

With AR on, a future version of the Maps app will merge its traditional interface with a live camera view. With well-known problems about user must deal with when navigating an unfamiliar locale, even if you do have your smart phone on you. That's why the Google is presenting an updated version of its Visual Positioning System (VPS): A way for folks to avoid getting lost when out and about. Rather than craning over your phone and hoping you're walking in the same direction as the blue Global Positioning System (GPS) dot, the camera can look at your surroundings and work it out for user. In the example, if a person walks out of a subway stop and they don't know where they're going, they simply hold up the phone and launch the camera. Lens

will then identify where you're standing and compare it to Google's database of Street View images in the region. Once the system has your position, an arrow overlay will pop onto the screen, telling you if you need to venture left or right. Proposed system is to Design and Developing VPS (Visual Positioning System) where a mobile app guide user with the help of dynamic pop-up information about view user is seeing using mobile camera currently.

The proposed system is inspired by Google technology for visual positioning system where with the help of geo-location, directional compass and accelerometer mobile application will show location information over camera frame about focused direction. Over the past ten years, Global Positioning System (GPS) has found widespread use in consumer vehicles. However, due to the satellite links required for obtaining a positional fix, accuracy and robustness are sensitive to environmental factors such as tall buildings, mountainous terrain or adverse weather. Recently, efforts have been made to improve on these issues by adding ground-ground communication channels, as used in Assisted GPS and Differential GPS. However, even these improvements are of limited use in difficult situations such as parking lots, and still rely on outside communication. A rudimentary calibration of the camera is required, consisting of both the intrinsic camera parameters and the extrinsic parameters, which define the mounting point and orientation of the camera relative to the place. There is no stringent accuracy requirement on this extrinsic calibration, as the algorithms are designed cope with the additional pitch. Augmented reality (AR) is a hot topic in mobile apps today. Smartphones and tablets have the power and the hardware capable of enabling developers to write interesting new applications that incorporate live camera and video feeds, hyper-accurate sensor

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Survey Of Security Mechanisms For Atn Based Transactions

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Abstract— In the past few years' robbery of ATM card has increased, in the present system pin number is used for ATM transaction security, which can be easily phished, guessed or misused by many ways, with this person can lose money from his/her account without the person's authorization. The main objective of this work is to propose a system, which is used for ATM security applications. Here authorized bank officials will register the customer details such as Mobile Number with their Official Bank Database while opening the accounts then customer can access the ATM machine with the help of the QR-Code generated and the OTP sent on the registered mobile number. When the customer enters ATM he must scan the QR code generated on ATM screen from his mobile phone, wherein he automatically gets a Randomly generated 4-digit code (OTP). Every time this code is sent as a message to the mobile of the authorized customer through GSM module connected to the particular ATM. The code received by the customer should be entered by pressing the keys on the keypad, after that he will be able to do for further transaction from the mobile app. If someone try to physically damage the system or try to evade the system without authorization, then the ATM shutter gets shut and locked down automatically till the Security officials arrive. This proposal will go a long way to solve the problem of ATM transactional Security.

Keywords— ATM, GSM module, QR-code card, OTP, Mobile

I. Introduction

In today's fast life no-one wants to stand in long queues for banking operation, they don't want to wait for too long thus many of us use ATM machines. Fast development of banking technology has various advantages and Disadvantages to banking activities and transactions are the advent of automated teller machine (ATM). ATMs are electronic banking machines located in different places and the customers can make basic transactions without the help of bank staffs. With the help of ATM, the user can perform several banking activities like money transfer, cash withdrawal, credit card payment, paying various domestic bills like electricity, and phone bill.

The rapid development of banking technology has changed the way banking activities are dealt with. One banking operation that has impacted positively or negatively to banking activities and transactions is the advent of Automated Teller Machine (ATM). It is a computerized machine designed to dispense cash to bank customers without need of person-to-person interaction. Today the ATM users are increased in number. They use ATM cards for banking transactions like deposits, transfers, balance enquiry, mini statement, withdrawal, fast cash, etc. The ATM machine has card Reader and keys as input devices and display screen, cash dispenser, receipt printer, speaker as output devices. (Available present day security) Account information of user is stored on the magnetic strip present at the back side of the ATM card. When a person enters this card in the card reader, the card reader captures the account information and the data that is required for the transaction. The person has to insert the ATM pin for security authorization by use of keys / touch- pad present on the system. The pin is the unique 4-digit number registered with particular ATM card given to the Account holders. The number is verified by the bank and allows the customers to access their account. The password is the only authentication required so anyone with this 4-digit pin can access the account when they have the combination of both the card and Pin. Once the card and the Pin is stolen by the culprit they withdraw money from the account with the Account Holders Authorization, it may bring huge financial losses to the Card holder.

In this paper discusses some of the techniques that involves use of QR code to prevent the fraud at the time of ATM transaction. The QR code measure is an attempt for enhancing the current security loophole of the banking.

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Women Safety Application

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Abstract: In today's world it is very unsafe to travel alone, especially for women. Since lots of unexpected, and shameful incidents are happening around the globe. Problems may come from anywhere and anytime, as women are also growing equally like men so for that purpose they have to travel alone at night where ever they go, they have to travel alone in public transport as well, and for that reason we need to understand and solve this problem of women so they also should not feel any fear regarding their safety. This report represents an android application which will serve the purpose to rescue the women from unsafe conditions. As we all know that nowadays every individual carry their own smartphones and the uses of android applications have been increased rapidly so it is better to have such an android application which will provide a safe environment in public transport.

Keywords: Android, Database Management, PHP.

I. Introduction

If we are to fight discrimination and injustice against women we must start from the home, for if a woman cannot be safe in her own house then she cannot be expected to feel safe anywhere. A recent article in India claimed that India is the fourth most dangerous place for women's to take public transport and the second worst for safety while travelling at night.

The most awful Delhi bus gang rape in 2012 is just the tip of the iceberg when it comes to the dangers of taking public transport as a woman. This rape incident occurred on 16th December 2012 at a place Munirka, a neighborhood in south Delhi which was a fatal assault. A 23 year old woman a physiotherapist was hit by a gang while she was travelling in a public transport (bus) with a male friend. Another such incident of TCS software engineer took place at Bhandup where the body has been found after two days near Kanjurmarg suburb, this incident was parallel just to the one evoked by Nirbhaya case in Delhi. One more case taken place in Mumbai where woman was travelling to her native place and she got kidnapped and killed. This is the small contribution taken which will provide safety android app for women.

Users will allow to scan the QR code placed inside the vehicle and the number plate of it will be sent in the text message format to the contacts which user selects. It lets your family and friends know your current via GPS tracker if your android device is connected to the network.

II. Literature Survey

The existing system of others application provides the user alerts to your closed ones or by standers with your location in a situation of distress or emergency. And will inform and update your closed ones if you are stuck in an unsafe place.

Sauver: An Android Application for Women Safety:

This app can be activated by a single click when the user feels the danger. This application sends the user's location to the registered contacts for every few seconds in the form of message. Thus, it acts like a sentinel following behind the person till the user feels safe. The key features of this application are along with the user's location, one of the registered contacts gets a phone call. Also, the registered contacts and GPS location are saved in a database. This app continuously fetch the location for interval of every 30 secs and send it to saved contact. So we can easily track the user and it will also send the location in form of URL or latitude and longitude coordinates of location.

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Priyadarshini College Of Engineering, Nagpur Online Staff/Student Web Crawler

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Abstract: PCE Staff/Student Portal provides a simple interface for maintenance of student-faculty information. It can be used by scholastic institutes or colleges to maintain the lettering of students readily. The creation and management of rightly, update tidings regarding a student's academic career is critically vital in the university as well as colleges. Student vital system deals with all kind of student details, alumni student data, college details, course details, batch details, placement details and workshop attended other resource related details too. All these will be achievable through a safe, online alliance embedded in the college's site. The Staff / Student Portal is the commonly used phrase to describe the login page where student can provide a user name and password to gain access to an scholastic organization's programs and other learning related materials. For sample a novice who has enrolled in an online certification program may utilization a student portal to ingress online course parent materials, such as articles, lectures and videos hosted on the college's server. Staff/student portal is also used to provide vital about the college, special events, course details, calendars, academic resources and contact material.

Keywords: Database, HTML, PCE Staff/Student Portal, College Portal, SQL.

I. Introduction

The PCE Staff/Student Portal is a web portal where all information and all services that students need can be found in one place. The Portal can be used by all student registered at PCE Staff/Student and all faculties of PCE portal. This venture is an online portal for students and faculty. This system conceded college faculty of important data gathered. It consists of a faculty login along with student login. In this application all data available such as Alumni student, T&P data, Paper Publication data and Workshop Attended. All the data stored on the portal. The impingement of computers on our lives today is probably much more than we are actually known to. Confiscating good information and transforming it swiftly into products than consumers craving to closeout is the cardinal key to staying in business and this all is done coeval using Computers and Application Software. College Portal defines as an application (more likely web-based), that endow abilities for multiple users with different permission levels to manage (all or a section of) content, data or information of a website project, or internet / web application. The software scheme Managers to plan and control the organizational operations and to respond to changing market conditions. It endow a regular flow of vital for managerial decision-making and control.

A) Objective

The main objective of this system, is to reduce the regular use of time during maintaining the records of college. Separate divisions are providing to maintain the records of teachers students students. Our System also endow an foolproof way not only to automate all functionalities of a college, but also to endow full functional reports to top management of college with the finest of details about any facet of college. In other words, our college portal has, following objectives: Simple database is maintained. Easy operations for the operator of the system. User interfaces are user friendly and tempting; it takes very less time for the operator to use the system. The aim is to design a college website which contains update vital of the college that should improve efficiency of college record management.

B) Problem Statements

There are many case found in the todays portal system. The problems created in the existing system enforced us to develop the new system which minimize the problem of the existing system. Now a days the

Secure Social Media

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Abstract: Social networking websites such as Facebook, Twitter, Google+, and LinkedIn are the popular social sites. Privacy and security are the main concern of any social media network sites such as Facebook, Twitter, and LinkedIn etc. The primary purpose of these sites is to allow people to share interests, activities, real-life connections. Facebook is most popular social networking site. Social sites are most common platform to communicate with their other friends, family and share thoughts, photos, videos and lots of information. Social networking websites have become platforms for cybercriminals for cybercrime; cybercriminals exploit sensitive and personal information through social engineering and reverse social engineering. It is usual for the users of social websites to share information; however they lose privacy, while sharing information with strangers, they can fall in honey trap made by them. Privacy has become an important concern in online social networking sites. Users are unaware of the privacy risks involved when they share their sensitive information on the social network sites. The default settings share everything, users have to change their default privacy setting options to make their accounts and personal information more secure. Security attacks continue to be a major concern of all users. How to keep social networking sites more secure and more private are the challenges that have been concern for every user. It is difficult for social networking sites and users to make and adjust privacy setting to protect privacy without practical and effective way to identify measure and evaluate privacy. Maximum numbers of users are not aware of the security risk associated whenever they shared sensitive data on the social sites, so that privacy concern will be raised among those online communications if their personal data has been shared to other users. The users should be aware of their privacy quotient and should know where they stand in the privacy measuring scale. Unfortunately many users are not aware of this and become victim of privacy and identity breach. So we conducted a survey to find users view regarding security and privacy of social networking sites and regarding.

Keywords: Social network privacy issues, social media security, confidentiality, security issues, privacy awareness, social networking sites.

I- INTRODUCTION

Cyber is a common term used for the computers interconnected in a network and we can say a cyber is related to a computer network. As the number of users in the network is increased which give rise to our concern about the security which we called as "cyber security". Cyber security is defined as the security of data on cloud from theft, damage or unauthorized access. Now the questions arise from where the maximum security breaches occurs in the network? The more ambiguous is the users, the more there curiosity of accessing the information some may do knowingly and some unknowingly, from all this facts obviously our mind will drift towards the social networking sites. "Social networking sites" is an online medium that allows users from different background to create a profile and interact with the other users on the same websites. Social networking sites such as Facebook, twitter, etc. have become so popular among the people that they have started to share every single moment of their lives on these sites. Social networking sites are one of the easiest forms of communication these days and have become an unavoidable thing for youth. Every sectors of The system which already exists in the environment is there is no mechanism to stop peoples from creating fake IDs.

- 1) Users can share posts which may cause violence
- 2) Users can share vulgar posts, morph images.
- 3) User can comment on anyone's post.
- 4) User can send abusive message.

II- METHODOLOGY

System to Analyze the Credibility of user on social media Like Twitter using WSRI

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Abstract – Today, social media provide the means by which billions of people experience news and events happening around the world. However, Data generated on social media has become a rich source for various data mining tasks. Those data analysis tasks that are dependent on the post semantics, such as sentiment analysis, emotion mining, and rumor detection. Information credibility on Social media has been a topic of interest among researchers in the fields of both computer and social sciences. Social media has made it increasingly possible to offer near-real-time transfer of information in a very cost effective manner. This is a platform which delivers timely content in a tailored manner that makes it possible for users to obtain news regarding their topics of interest. Consequently, the development of techniques that can verify information obtained from social media has become a challenging and necessary task. In this paper, we propose a new credibility analysis system for assessing information credibility on social media to prevent from fake or malicious information. The proposed system consists of three integrated components: Credibility analysis, sentimental analysis, WSRI algorithm. The components operate together in an algorithmic form to analyze and assess the credibility of social media, post and users. Using certain pre-processing technique -Replace Negations with Antonyms, Handling Negations, Remove Stop words, Remove Punctuation.

Keywords- Social media, Credibility, fake information

I- INTRODUCTION

Now a days access to social media is widely available, and has evolved to share the information that they want to share a medium social media platform just like twitter acts as source of news and medium for activities to share information twitter is on web service that allow user to post short message, known as tweets which has become popular because information can be received much faster than conventional media. They propose three factors which can help in assessing the credibility of textual claims: (i) the reliability of the web sources talking

about the claim, (ii) the language style of the articles reporting the claim And , (iii) their stance (i.e., support or refute) towards the claim. [1] They perform an extensive Analysis on credibility of Arabic content on Twitter. They also build a classification model (CAT) to automatically predict the credibility of a given Arabic tweet. [2] They make a practical approach to automated credibility assessment on Twitter. They describe the process behind the design of an automated classifier for information credibility assessment. [3] They propose a credibility analysis approach enhanced with event graph-

Prepaid-Postpaid water distribution controller over IOT

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Abstract – Cost recovery is a key element for sustainable water supply. Currently most water service providers are experiencing problems with cost recovery from community water supply schemes. Many are considering introducing prepayment systems or other innovative ways of cost recovery. Prepayment water metering systems are already available in India although historic and practical performance reports in a 'real' environment are in many cases still lacking. Although proposed system is by no means the final word on this subject, it predicts that both water service providers and their customers are likely to welcome these systems as cost effective and user friendly. The report also explains how water payment and administrative support systems can be selected and introduced in a manner which promotes effective cost recovery. Metering, prepayment, and the accompanying systems should never be viewed as technical solutions to the problem but instead a holistic approach should always be adopted. For this very reason proposed system address a whole range of options and not a single system. Secondly the costs of 'cost recovery, and especially the administration costs, are also included as this must be taken into account for affordability and sustainability. The water billing, monitoring and controlling of water supply in Municipal Corporation is manual. To overcome the problem, proposed system is developed as Prepaid and Post-paid Water Distribution Controller which can control there usage according to their payment. The system is capable of two payment modes prepaid and post-paid and can block the supply after consumption amount limit or failure of bill payment.

Keywords- IOT, Water distribution, Controller, Consumption.

I- INTRODUCTION

Municipal Corporation Water Distribution System is manual system and have no system to monitor the consumption of water. Each individual have their own capacity for usage of water but everyone have to pay same amount for their consumption. And if any person fails to pay water bill then there is not any system which can restrict the water supply to their houses. According to study, there is a case where one family gets water supply for 1 hr./2 days and another family gets 24 hours water supply.

There is no system that can monitor the flow of water and consumption of water. The "Prepaid and Post-paid Water Distribution Controller" has been developed to override the problems prevailing in the existing manual system. This system is designed for the municipal corporations to carry out drinking water operation in smooth and effective manner.

In this system the user has two modes of payment. In prepaid mode the user has to pay predefine amount of bill which consist of water consumption limit. After consumption of water the system blocks the supply and notify user for that. After recharging, the system starts water supply again.

Online Parking System

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Abstract: With the increase of economical behavior and the upgrade of living standard of people, the ratio of people who own cars and motorcycles have recently increased giving a boost to Metropolitan Traffic. This result in the increase of the personal vehicle usage. People prefer personal vehicles to commute than depend on public transportation. Now a days parking issues will be a big challenge to facilitate traffic network and ensure the urban life quality. Finding a parking space in most metropolitan areas, especially during the rush hours, is difficult for drivers. The difficulty arises from not knowing where the available spaces may be at that time or not; even if known, many vehicles like two wheeler and four wheeler may pursue very limited parking spaces to cause serious traffic congestion. Due to this there is a need to provide sufficient parking places coupled with plenty of slots to help the user park his vehicle safely, also to ensure the user does not end up parking on non-parking area and cause discomfort to pedestrian. Online parking system provides user an easy way of booking the parking slots through an application. To avoid the problem of traffic conjunction in commercial areas that unnecessarily consumes time, this paper provides the easy reservation system for parking. This application relieves the user from the hassle of manually searching and waiting for empty slots to park the vehicle.

I- INTRODUCTION

Android is an operating system, developed for mobile devices like Smartphone's and tablet computer, which is based on Linux operating system. It was developed by Google in the year 2005. It is the Smartphone platform. Searching for the vacant parking space in a metropolitan area is the daily concern for most the drivers, and it is time consuming. It commonly results more traffic congestion and air pollution by constantly cruising in certain area only for an available parking space. For an instance, a recent survey shows that during rush hours in most of big cities, the traffic generated by cars searching

for parking spaces takes up to 40% of the total traffic on that particular road. To alleviate such traffic congestion and improve the convenience for drivers, many of smart parking systems aiming to satisfy the involved parties (e.g., parking service providers have been deployed. The current smart parking or parking guidance systems only obtain the available information of parking spaces database which is managed by reservation authority and simply display the parking information to direct drivers or user. However, since these type of systems cannot guide the drivers to their particular parking destinations, even sometimes make the situation worse, they are not "smart" enough. For instance, when the number of vacant spaces in an area is limited, most of drivers, who obtain the parking information, are heading for these spaces. It will cause server congestion. It is, therefore important, strongly desired to provide an effective strategy to address these concerns. In this application the user can view various parking slots and check for the availability of slots. Whenever a user books a particular slot it will be marked red and all the available slots will be green. By periodically learning the parking status from the host parking database management in parking lot, the reservation service is affected by the change of physical parking status.

II- METHODOLOGY

The slot allocation method follows a sequence as stated below:

Step1: Initially the slot selection is made by the user from his mobile phone. He checks for the availability of a parking slot that is nearest to his location. If it is available, he moves to the next stage or else go to the initial state.

Step2: Transfers request for parking slot from the mobile using Android application.

Online Event Management System

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Abstract: Online event management system is a project (Website) that serves the functionality of an event manager. it is a crucial factor and fast growing concept need to manage all type of events such as Wedding Event, Corporate Event and Birthday Event etc. In this project we are installing X amp server on a machine, All the machines in the LAN can access this server to use this website.

Registered user can login and new user can register easily. The system helps in the management of events, users and the aspects related to them. This project provides most basic functionality required for an events. Various types of events such as Wedding, Dance Shows, Birthday Parties, College Festivals, etc. can be managing in one website. When user login the system allows user to select date and time of event, place and the event equipment. All the data stores in the databases and the user getting booking event receipt with booking number. After that administrator (website owner) and their team going to interact with the user as per booked event. **Keywords-** User, Admin, Events, Book, Event Management, Databases.

I- INTRODUCTION

Event management is an application to manage and celebrating events. Proposed work involves study of identifying the target of budget, cost and analysis. Post event analysis and ensuring a return on investment have become significant drivers for the event industry. Online event management system is a software project that serves the functionality of an event manager. User can select event from event list. Event Management System is very helpful for celebrate events. User have to register, after registering, user can login, after login, event details including name ,contact, address, venue of the event, date, event conducting time, cost of events etc. these all process should be follow for event booking.

II- LITERATURE SURVEY

We have studied several papers based on event management system. First paper which we have studied is named as " Special Event Management And Event Marketing: A Case Study Of TKBL all-star 2011" which was published by L. McCathie and K. Michael,Lung-Chuang Wang, RoozbehDerakhshan. In this paper aims to understand the how to manage and market the events successfully satisfied participants[1].

The second paper named as "Event Management System" Which is published by Prof.Lee, M. J., & Back, K. J. (2005).This paper is introduced the Event Manage and development of festivals, events and conferences. The system allow registered user login and new user are allowed to register on application[2].

The third paper named as "Smart Event Management System" which is published by Assistant Prof Neuendorf, K. A. (2002). and Getz, D. (2012). This paper introduced a system which will be computerized and developed using advanced language as Content Management System[3].

III- PROPOSED SYSTEM:

The proposed system is computerized and has been developed using advance language i.e. Content Management System therefore it gives more facilities than existing system. Also it providing bootstrap facilities which means user can open website on their cell phones too. It provides quick access to any data. In this system user have to fill the information only once and then it get linked with all files.

This reduces the workload of user and it is also a time saving process. The proposed system consists of

Mining Health Examination Records—A Graph-Based Approach

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Abstract – The trend of application of data mining in health care today is increase because the health sector is rich with information data mining has become a necessity. Identifying the participant at a risk is important to early warning and preventive intervention. The fundamental challenge of learning classification model for risk prediction lies in the unlabeled data that constitutes the majority of collected data set. A large volume of information is collected on daily basis by healthcare organizations. Use of information technology enables automation of data mining and knowledge that helps to bring some interesting patterns which means eliminating manual task and easy data extraction directly from electronic records, electronic transfer system that will secure medical record, save lives and reduce the cost of medical service as well as enabling early detection of infection diseases on the basis of advance data collection. In this paper, we propose graph based, semi-supervised learning algorithm call SHG health (semi-supervised heterogeneous graph on health) for risk predications to classify progressively developing situation with the majority of the data unlabeled.

Keyword - Data Mining, Big data, Semi-Supervised learning, Health Examination Record.

I- INTRODUCTION

Today health organization are capable of collection and generating large amount of data. Information Technology are implemented increasingly often in health care organization to meet the need of physician in their daily decision making. Computer system use in data mining can be very useful to control human limitation such as subjectivity and error due to fatigue and to provide guidance to decision making process[2]. Identifying participant at risk based on their current and past HERs (Health Examination

Record) is important for early warning and preventive intervention. By "risk", we mean unwanted outcomes such as mortality and morbidity[1]. The goal of risk prediction effectively classify 1) whether the health examination participant is at risk, and if yes 2) predict what the key associated diseases category is. In other word good risk prediction model should be able to exclude low risk situation and clearly identify the high risk situation that are related to some specific diseases [3]. Thanks to this technique, it is possible to predict trend and behavior of patients or diseases. This is done by analyzing data from different perspectives and finding connection and relationship between seemingly unrelated information. In the process of data mining

Smart Vertical Garden Statistics, Monitoring And Controlling Using IOT Servers

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Abstract: Interconnection of number of devices through internet describes the Internet of things (IOT). Every object is connected with each other through unique identifier so that data can be transferred without human to human interaction. It allows establishing solutions for better management of natural resources. The smart objects embedded with sensors enables interaction with the physical and logical worlds according to the concept of IoT. This proposed system is based on IOT that uses real time input data. Real time sensed data handling and demonstration on the server is accomplished using web based graphical user interface. Wireless monitoring of vertical gardening system reduces human intervention and allows remote monitoring and controlling on phone. An automated watering method for efficient water supervision has been proposed. Soil Parameters like soil moisture, pH, Humidity are measured and the pressure sensor and the sensed values are displayed in LCD. The GSM module has been used to establish a communication link. In this gateway sensor is used to handle sensor information and helps to transmit data to user, Wireless through moisture, Humidity and Temperature sensors is programmed with microcontroller based gateway. The master node with Wi-Fi enabled so that it will receive data from all sensor nodes, store data on storage device and it will get displayed on smart phone and web portal on PC in tabular and graphical format

I- INTRODUCTION

Presently, everybody leads a hectic and busy life. As the technology is advancing, the nature is ignored more and more. Half of the land of forests and wildlife is already used to benefit humans. All the natural resources are being used as if there is no tomorrow. Many projects

are coming up with various ideas as to how to conserve nature. But the revolution can be brought with small steps and not overnight. Every house, every person is required to look after the nature. This is high time to balance the equation between humans and nature lest the end is disastrous. Today, we all live in concrete gardens. No interaction with the nature. In order to contribute to ecosystem, the least we can do is maintain a garden. The garden does require a lot of care and nourishment to stay green all the time. The garden requires water daily (except monsoon). Moreover, when the gardener (user) goes out on a vacation there is no means to water the garden. This constant ignorance towards the garden can ultimately lead to its death. And as said earlier, nobody has enough time to nourish garden manually. People can automate stuffs to keep their gardens alive. The gardens are ought to be in an open area and outside the house. This system proposes an idea to have a garden vertically. It will neither consume a lot of space in the house nor it would be too clumsy to maintain. The basic idea of vertical garden is to dedicate a wall of the apartment for gardening. The issue still remains the same; how to water it daily. To fix this problem, the proposed system allows us to water the garden from any place. The garden is designed in a manner that pipes are tucked to wall and there is a hole in a pipe for every respective pots (plants). The pipe is then dipped into a tank of water. The system also has the ability to alert about the moisture level of the soil. It is designed to be operated from a phone call. The user can call the system and command it to start flow of water. The system is very smart to notify the user about any kind of mismatch constraints. Ex-Water level is low in the tank.

II- DESIGN

An Efficient Data Replication and Disaster Recovery Technique for Cloud Data

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Abstract – Salesforce is one of the largest cloud computing technology, which is available on cloud, no need to install any software for it. Now a day's cloud computing is fastest growing technology. It is observed that businesses and individuals are moving their data to the cloud because fault-tolerant data storage is becoming more important. As large number of data nodes used in the cloud storage system, the probability of some data nodes failure increases. In our paper we use data replication strategies to increase the availability and reliability of data in cloud. For this we integrate the Salesforce environment with the Amazon Web Service (AWS) cloud where we stores the replica of the particular data for reliable access.

Keywords- Salesforce, Cloud computing, Data replication, AWS cloud.

INTRODUCTION

Salesforce is a fastest growing and very demanded emerging technology, that provided services like Infrastructure for organization that service comes under IaaS (Infrastructure as a Service) as well as it provides PaaS (Platform as a Service) for building an Application. Also for online service we don't need to install particular software because this cloud provide a SaaS (Software as a Service). Salesforce make CRM easy to use for small business as well as large business. That

approach makes Sales Cloud so much popular in the world. The CRM is not only one service they provide; they also provide platform for building fully native business to business (B2B) application as well as business to customer (B2C) application. Salesforce provides different cloud for setup and management of business the clouds are: Sales Cloud, Service Cloud, Marketing Cloud, IoT Cloud, and Community Cloud & App Cloud.

Cloud computing has been a huge-scale parallel with shared computing system. In cloud computing, data generated in electronic form are large in amount. To maintain this data efficiently, there is a necessity of data recovery services.

Cloud computing has been envisioned as the next-generation architecture of IT enterprise. In contrast to traditional solutions, where the IT services are under proper physical, logical and personnel controls, cloud computing moves the application software and databases to the large data centers, where the management of the data and services may not be fully trustworthy.

This unique attribute, however, poses many new security challenges which have not been well understood. In this project, we focus on cloud data storage security, which has always been an important aspect of quality of service

However, the Cloud environment constitutes a

An Effective Data Disaster Recovery Services Using AWS Cloud

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Abstract – Nowadays cloud computing is most demanding technology. While dealing with the data in cloud we faces some problems like downtime, storage, security and privacy, vulnerabilities to attack, limited control and flexibility, Vendor lock-in, costs. AWS provides the facility to overcome this problem. Amazon Web Services (AWS) is a comprehensive, evolving cloud computing platform provided by Amazon. An advantage of the AWS cloud is that it allows customers to scale and innovate, while maintaining a secure environment. Customers pay only for the services they use, meaning that you can have the security you need, but without the upfront expenses, and at a lower cost than in an on-premises environment. This paper describes to implementing a proven and cost-effective disaster recovery solution for file servers that can minimize data loss and provide fast, automatic recovery of file services running on the AWS cloud.

Keywords- Cloud computing, Data replication, AWS cloud, Disaster recovery.

INTRODUCTION

Cloud computing is the delivery of computing services—servers, storage, databases, networking, software, analytics, intelligence and more—over the Internet (“the cloud”) to offer faster innovation, flexible resources and economies of scale. You typically pay only for cloud services you use,

helping lower your operating costs, run your infrastructure more efficiently and scale as your business needs change.

Amazon Web Services provides a comprehensive set of services and tools for deploying Microsoft Windows-based workloads on its reliable and secure cloud infrastructure. Active Directory Domain Services (AD DS) and Domain Name Server (DNS) are core Windows services that provide the foundation for many enterprise class Microsoft based solutions including Microsoft Share Point, Microsoft Exchange, and .NET applications.

The aim of a disaster recovery site is to keep business operations active in case of any damage or hazard occurs. Disaster recovery helps in restoring applications, data, and hardware quickly for business continuity.

Businesses are using the AWS cloud to enable faster disaster recovery of their critical IT systems without incurring the infrastructure expense of a second physical site. The AWS cloud supports many popular disaster recovery (DR) architectures from “pilot light” environments that may be suitable for small customer workload data center failures to “hot standby” environments that enable rapid fail over at scale. With data centers in Regions all around the world, AWS provides a set

Secure Social Media

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Abstract: Social networking websites such as Facebook, Twitter, Google+, and LinkedIn are the popular social sites. Privacy and security are the main concern of any social media network sites such as Facebook, Twitter, and LinkedIn etc. The primary purpose of these sites is to allow people to share interests, activities, real-life connections. Facebook is most popular social networking site. Social sites are most common platform to communicate with their other friends, family and share thoughts, photos, videos and lots of information. Social networking websites have become platforms for cybercriminals for cybercrime; cybercriminals exploit sensitive and personal information through social engineering and reverse social engineering. It is usual for the users of social websites to share information; however they lose privacy, while sharing information with strangers, they can fall in honey trap made by them. Privacy has become an important concern in online social networking sites. Users are unaware of the privacy risks involved when they share their sensitive information on the social network sites. The default settings share everything, users have to change their default privacy setting options to make their accounts and personal information more secure. Security attacks continue to be a major concern of all users. How to keep social networking sites more secure and more private are the challenges that have been concern for every user. It is difficult for social networking sites and users to make and adjust privacy setting to protect privacy without practical and effective way to identify measure and evaluate privacy. Maximum numbers of users are not aware of the security risk associated whenever they shared sensitive data on the social sites, so that privacy concern will be raised among those online communications if their personal data has been shared to other users. The users should be aware of their privacy quotient and should know where they stand in the privacy measuring scale. Unfortunately many users are not aware of this and become victim of privacy and identity breach. So we conducted a survey to find users view regarding security and privacy of social networking sites and regarding.

Keywords: Social network privacy issues, social media, security, confidentiality, security issues, privacy awareness, social networking sites.

I- INTRODUCTION

Cyber is a common term used for the computers interconnected in a network and we can say a cyber is related to a computer network. As the number of users in the network is increased which give rise to our concern about the security which we called as "cyber security". Cyber security is defined as the security of data on cloud from theft, damage or unauthorized access. Now the questions arise from where the maximum security breaches occurs in the network? The more ambiguous is the users, the more there curiosity of accessing the information some may do knowingly and some unknowingly, from all this facts obviously our mind will drift towards the social networking sites. "Social networking sites" is an online medium that allows users from different background to create a profile and interact with the other users on the same websites. Social networking sites such as Facebook, twitter, etc. have become so popular among the people that they have started to share every single moment of their lives on these sites. Social networking sites are one of the easiest forms of communication these days and have become an unavoidable thing for youth. Every sectors of The system which already exists in the environment is there is no mechanism to stop peoples from creating fake ID's.

- 1) Users can share posts which may cause violence.
- 2) Users can share vulgar posts, morph images.
- 3) User can comment on anyone's post.
- 4) User can send abusive message.

II- METHODOLOGY

Miniaturization and Gain Enhancement of Array Antenna for Dual Band RADAR System

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Abstract— This paper presents a 2×2 hexagonal shaped array antenna with dual band characteristics at 2.4 GHz and 5.8 GHz. For the enhancement of gain and miniaturization of array antenna, CSRR is etched into the ground plane. Corporate feed network is chosen for the equal amplitude distribution at the input of patch elements. The CSRR structure incorporated into the design behaves like a metamaterial which has negative permeability and permittivity which results into negative reflective index. So transmitted wave could not pass into the structure and it gets reflected back from the structure. It also disturbs the current distribution at ground plane. This work achieves efficiency up to 83 %.

Keywords—Metamaterial, CSRR, corporate feed

Introduction

Due to the advantages of microstrip antenna, like light weight, low volume, these antennas are commonly preferred for radar applications, particularly for Weather radar and synthetic aperture radar [1]. Research has been carried out in the recent past to improve the performance & efficiency of these patch antennas. Rapid development in patch antennas started in 1970s & by the end of 1980s the idea of using microstrip array antenna in wireless communication was well established. The radiation pattern is usually very broad in single element antenna. So the directivity is effectively very low. By enlarging the size of the element the directivity can get increased. The alternative way is to assemble the antenna elements in a geometrical configuration. It is known as array. The individual elements forming the array are usually identical and they can be of any form in [2]. CSRR is the dual counterpart of split ring resonator which exhibits band stop characteristics at resonant if electromagnetic fields are aligned appropriately [1]. To enhance the efficiency and gain, a novel engineered magnetic superstrate is designed in [3]. DGS use for the reduction of harmonics is explained in [4]. The Modified Split Ring Resonator unit cell is designed to get positive values for the effective permeability and permittivity at the center frequency of the antenna. Now a days ground plane is preferred by people for the inclusion of DGS. A miniaturized antenna array is designed with the help of DGS inclusion in the ground plane of antenna. They found the antenna size reduction upto 83% on the DGS properties with respect to miniaturization of antenna. DGS is an etched periodic or non periodic configuration defect in ground plane

which disturbs the current distribution in ground plane because of the defect in the ground plane. DGS can also be used for the reduction of cross polarization. Mutual coupling also reduces by the use of DGS. DGS can also be used for the reduction of mutual coupling and cross polarization explained in [5]. The planar antenna array for Ku band at 13 GHz is presented in [6]. The inclusion of CSRR in the ground plane is the useful technique for the miniaturization and multiband operation [7]. The DGS structure is also responsible for the suppression of cross polarization without affecting the dominant mode, input impedance and co polarized reduction pattern. The new concept has been examined and verified experimentally in [8] for a particular DGS pattern employing a patch having circular shape as the radiator. In 2004, the CSRR based on duality concept was demonstrated by F.Falcon and the CSRR excited by the axial electric field could reveal negative permeability upon their resonance [9]. In [11], a 4-element dual-polarized aperture-coupled microstrip patch antenna array have been designed with wide bandwidth, high isolation and low cross-polarization levels for a radar and communication integration system. In array antenna mutual coupling and cross polarization must be reduced. Mutual coupling gives the amount of power coupled between two antenna elements. formulas are explained in [12-16]. Array configuration and types of feeding are explain and array antenna for higher frequency with corporate feed is presented in [17].

In this work, on the ground plane, the CSRR is etched for the enhancement of gain, efficiency and suppression of surface wave. The dual band 2×2 hexagonal antenna array is presented with and without CSRR and results are compared. The CSRR composed is of two concentric broken circular rings etched in the ground plane between the patch elements. A 4 element dual polarized aperture coupled microstrip patch antenna array is designed in [10] for a radar and communication system. Some model structure that have been proposed in [11] and also demonstrate how electrostatic energy can strongly concentrated in these structures.

II Design of Proposed Antenna

In this paper a 2×2 hexagonal shaped dual band Microstrip patch antenna array has been designed and simulated at 2.4 GHz and 5.8 GHz. The patch is the dominant part of Microstrip antenna. Patch and ground plane is on the other



History of Human Powered Oil Expeller: A Literature Review

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Abstract. This paper covers the form and existence of oil expeller as well as manual methods from last decades. It delivers a vibrant introduction to both traditional and improved methods for the extraction of vegetable oil from oil-seeds. In the output of edible oils, an advance on the existing traditional methods, environmental factors, socioeconomic and cultural considerations of the users need to be considered. This can be achieved through more research in the recommended area of need. The purpose of the report is to introduce some views of oil expression technology in order to create an interest and awareness of technology, which may help improving the development in the rural regions. The different types of designs and progressive developments with operating parameters and mechanisms used can be overviewed from the literature review to obtain out the scope for further developments in human powered oil expeller.

Keywords: Oil expeller · Human powered oil expeller · Animal power
Petroleum extraction · Power ghani · Manual oil expeller

1 Introduction

In the worldwide background, India is one of the first producers of oilseeds. Though India produces around 18 million metric tons of oilseeds annually, but still this level of production is not decent to satisfy the need of edible oil in the country. Hence, an incessant effort is on to improve the production of oilseeds utilizing the accessible assets. Oil production is significant not only among small-to-medium scale industrialists, but also to rural populace, engaging quite a substantial workforce serving as a source of income to many communities pleasing in the exercise [1].

Area of agriculture is going towards the commercialization in economic crisis, economic growth, and economic growth. Prominence is on the mechanization of pre-harvesting and post-harvesting equipment's. We can discover that oil expeller is one of the post-harvesting equipment which has promising potential towards the industrialization and confined employment, this equipment is available at low cost and with the simplicity of operation [2]. Then the recommendation will be given to Human powered oil expeller machine which is ecofriendly as well as worked with the human power and then it will be recognized as a renewable source of vitality.

Improved technology exists for the all types of oil bearing raw materials, both at the pre-processing and oil extraction. Extraction devices exist into five essential technical

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Literature Review on the Developments of Rice Milling Machines

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Abstract. The aim of this paper is to present the recent developments in the field of rice milling technology including human powered milling machines. The present paper lucidly explains both traditional and improved methods for the rice milling operation. It speaks about the innovations that took place in dehusking machine from earliest times to the present and its future scope. The different types of designs and progressive developments with operating parameters and mechanisms used can be overviewed from the literature review to obtain out the scope for further developments.

Keywords: Dehusking · Paddy · Hullers · Mechanization
Human powered milling machines

1 Introduction

The farming sector is heading towards the commercialization and mechanization in twenty-first century, should be simultaneously environmentally compatible, economically feasible, affordable & adaptable to local weather. So emphasis is focused on the mechanization of pre- harvesting and post- harvesting equipments. Post harvesting equipments including rice milling, have a promising future towards the industrialization and local employment if the equipment is usable at low cost and with the simplicity of functioning. Human powered rice milling machine harness human energy which is acknowledged as a renewable as well as eco friendly source of energy.

Rice has been documented in the history books as a source of food as far back as 2500 B.C. The earliest traditional methods of rice milling include Mortar and Pestle, Vietnam pestle and several other domestic methods using human energy for dehusking upto 18th Century. With the introduction of mechanized & electrically operated mills somewhere in the heart of the 19th century witnessed simple one or two stage mill. Modern multi stage rice mills progressively developed from the year 1920 onwards up to present day setups.

The present paper is concentrating on human powered rice milling and hence containing a brief history with the traditional and mechanical methods of milling.

Stirrup Making Machine by HPFM

The Stirrup is one of the essential elements of reinforced cement concrete in civil construction. These stirrups are used for strengthening column and beams for avoiding buckling of the long slender column and also avoiding sagging of horizontal beam. In small construction sites workers bend stirrup rod by using the traditional method. In the existing stirrup making operations, the operators have to expend high human energy because of continuous repetitive motion of hands for a long duration which results in very severe internal injury to body organs like carpal tunnel syndrome, spondylitis, muscular-skeletal disorder. In order to compensate above drawbacks, the aim is to formulate an approximate experimental data-based model for human-powered stirrup making activity by using HPFM. Design of experimental work to be executed for establishing, formulation of experimental data based mathematical model for processing time, resistive torque and number of bonds for human-powered stirrup making activity. In this book, we developed a mathematical model and its analysis of model others models like the clubbed model, RSM model, and ANN simulation was done. Model comparison was done.

Dr. Subhash N. Waghmare was born in Nagpur, India in 1981 and conferred a Ph.D. Degree in Mechanical Engineering at R.T.M. Nagpur University, India. He has published 42 numbers of research papers in reputed Journal / Conferences. Presently he is working in the Department of Mechanical Engg., Priyadarshini College of Engineering, Nagpur, India.



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Stirrup Making Machine by HPFM

Waghmare, Shakale, Murgle

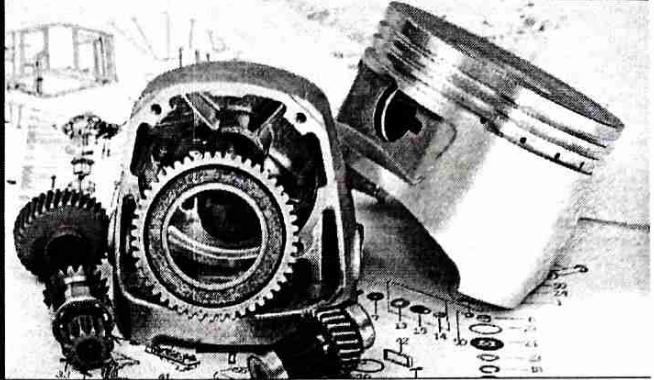
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Subhash Waghmare
Chandrashekar Shakale
Nischal Murgle

Stirrup Making Machine by HPFM

Analysis and Optimization

There is a demand for safer, cleaner and more affordable civil air engines and found to be of greater importance. Few years before, the European Union took a action for the design and construction of efficient and environmentally friendly air engines. The benefits of this type of engine are focused on to reduced pollutants and decreased fuel consumption. In a wheeled vehicle engine system comprising a compressed air powered engine and tank assemblies, an engine connects to the vehicle drive wheels and is powered by compressed air and operates without emitting air pollutants and the tank assembly comprises a replaceable and/or rechargeable main air tank assembly containing air at high pressure and recovery tanks both so connected to the engine and arranged such that to recover and store energy of the vehicle and engine developed during braking and high-speed engine operation which was not fully utilized to propel the vehicle. This book is very helpful for finding the difference between the design of an air engine with the design of SI and CI engine. This book is also very useful for developing and design of piston for further analysis.



Chetan Tembhurkar
Sagar Shelare

Air Engine Piston

A Finite Element Approach

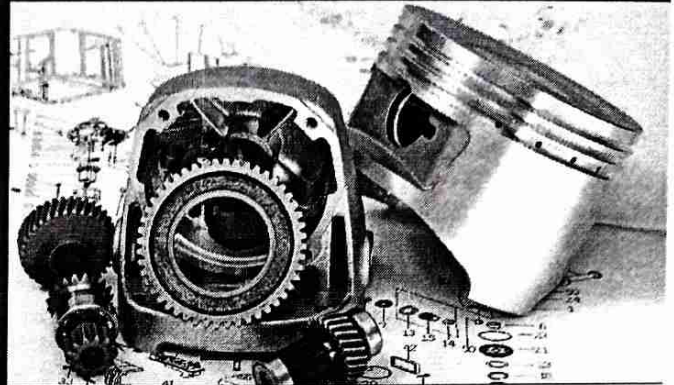
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Cloud Based Global Telemetry System for Physiological Signal Monitoring

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Abstract— To provide economic telemedicine to the patients living in the interior part of the globe is the need today. So as to serve such patients efficiently, a low power, low cost, highly portable wearable wireless telemedicine system may be a possible solution. In this paper, a cloud-based physiological signal monitoring system implemented for continuous cardiac monitoring is presented. The system consists of an ECG sensor Module, one wire digital temperature sensor, an ultra low power MSP432 MCU and IOT Module. The system presented in this paper acquires body temperature by one wire digital thermometer DS18B20 without any extra ADC hardware. A power efficient 3-lead ECG sensor module AD8232 captures ECG and hence measures heart rate. The temperature value and ECG signal acquired from respective sensors are processed by an ultra low power high speed cortex core MSP432P401R processor/controller. In This paper it is tried to transmit important as well as an essential physiological signals of the patient over the globe using cloud technology. The temperature and the ECG signals are transmitted on to the cloud with the help of ESP 8266 Node MCU. The signals at transmitting and receiving end are compared and analyzed. This system proposed in this paper seems to be an efficient solution for wireless patient monitoring using cloud technology.

Keywords—telemetry; ECG sensor; healthcare; Instrumentation; MSP432 processor; node MCU; IOT module

I. INTRODUCTION

The Internet of Things (IoT) connects set of anyone, anything, anytime, anyplace, any service, and any network. IOT is used to globalize the patient data. IOT is useful in many applications such as health care, water level indicator, security, HMIS (Hospital management integrates service) etc. In this paper, monitoring of biological parameters such as body temperature and ECG/heart rate are acquired using low power sensors. These signals are properly processed by an ultra low power MSP432 processor before being fed to UART pin for the transmission to Node MCU. In the IOT based patient monitoring system, the real-time parameters of patient's health are sent to cloud using Internet for connectivity. [1, 5]

The patient's physiological information is sent to a remote Internet location so that an examiner/doctor can view these details from anywhere in the world. Doctors can take the reference of these changes or the history of the patient while suggesting the treatment or the medicines to the patient. Patient's real time health status can be stored in the cloud. So

it is more convenient to the doctors rather than maintaining the records on printed papers kept in the files or even the digital records which are kept in a particular computer or laptop or memory device like a pen-drive. Because there are chances that these devices can get corrupt and data might be lost. Whereas in case of IOT, the cloud storage is more reliable with minimum chances of data loss. [2, 3, 4]

II. SYSTEM BLOCK DIAGRAM

The system block diagram shown in fig. 1. consists of a temperature sensor, heart rate and ECG sensor, MSP432, Power supply, IOT module ESP 8266 (node MCU) and the receiving section i.e. mobile or laptop. A temperature sensor (1 Wire digital Thermometer) will detect human body temperature and then the data will be given to MSP432 by converting the signal from analog to digital.

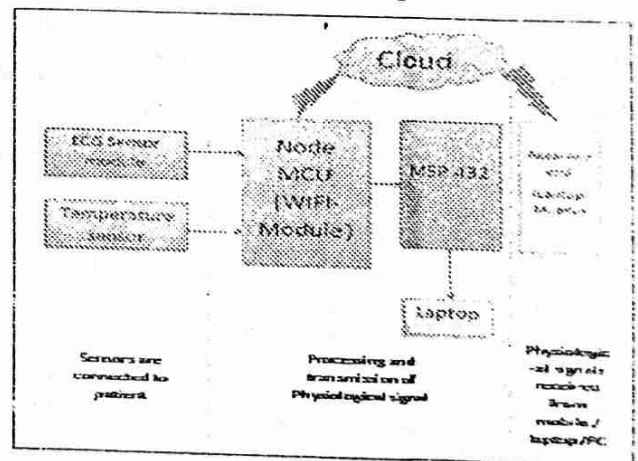


Fig. 1. System Block Diagram

In this paper the health care system is implemented to monitor physiological parameters of the patient using internet of things (IoT) and to improve the system performance with respect to power consumption, speed, and cost of the system. The block diagram consists of ECG sensor module, temperature sensor, MSP432 microcontroller and Wi-Fi module at the transmitting end and Laptop/PC/Mobile at the receiving/examiner end. The one wire digital thermometer DS18B20 takes body temperature directly in the digital form so is fed directly to the processor unit. The AD8232 is an

Biosensor Mobile Node Network: New Technology To Enhance Agriculture Crop Productivity

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Abstract— Biosensor mobile node networks represents system of mobile biosensor nodes that can self-organize freely and dynamically into arbitrary and temporary network topology. Network routing is the task of directing data packets for biosensor from a source to a given destination. Mobile biosensor wireless network with IEEE 802.11 MAC protocol can be used for monitoring agriculture crop, to improve their productivity and can be used to provide information about latest technology on agriculture to the farmer. This paper provides experimental and analytical observation of increase in productivity of rice crop when it is treated with mobile biosensor network with biotechnology.

Keywords— Biosensor, AODV, IEEE 802.11

I. INTRODUCTION

Since the last six decades, technological changes in agriculture and allied sectors backed by massive investment in irrigation, infrastructure and institutions have propelled many food-insecure, import-dependent developing countries, including India, into food self-sufficiency. The adoption of mobile communication biosensor network, biochemical and biotechnology in India have led to near fourfold increase of food grain production and five-fold increase in production of fruits and vegetables during the period 1967- 68 to 2012-13.. Due to the rapidly increase in population, which is likely to reach 1.5 billion by 2030, however, keeps the challenge of producing more food as significant as in the past. Also, the demographic transformation, urbanization and sustained growth in income are causing a change in the dietary pattern, away from staple cereals towards high-value commodities like vegetables, fruits. It is expected and projected that by 2030 India will require a minimum of 314 million tonnes of food grains, 179 million tonnes of vegetables, 99 million tonnes of fruits. Balancing the growing food demand with domestic production is very unlikely to be as smooth as in the past. Land will emerge as a very strong limiting factor to food and agricultural production. India's total net cropped area almost stagnates at around 160 million hectares; and the scope to increase food and agricultural production through area expansion is very limited. According to an estimate, nearly about 130 million hectares of land in the country suffers from one or the other form of degradation. Water is a very critical and limited input in agriculture, which uses over 88 per cent of the available water. Groundwater in the intensively-cultivated northwestern food basket of the country has already reached

its maximum limits of exploitation. The agricultural production will become more energy intensive but with a concomitant shift from the use of renewable to fast-exhausting non-renewable sources, (Jha et al., 2012). Due to intensification of agriculture will further strain these natural resources. Also increasing competition for land, water and energy will intensify due to their pressing demands for housing and industrialization; and thus there is a high probability of their diversion away from agriculture. These challenges will be aggravated further by increasing frequency of extreme climatic events, such as droughts, floods, cyclones, heat waves, etc. Technology has been the key driver of agricultural growth in the past. In view of these challenges, the future growth in agriculture has to come from acceleration in the rate of technological change and sustainable intensification of the production systems. This paper examines the potential of some of the latest biosensor mobile node technologies with biotechnology related to breeding of crops and natural resources management in improving food and nutritional security, and enhancing agricultural growth and rural development. This paper addresses a combination of two important technologies that is biosensor mobile node technology and biotechnology which have considerable potential to influence agricultural growth and rural development. First, this paper discusses the wireless communication biosensor mobile technology and its extent to improve agricultural productivity using this technology. Secondly, it explores the potential of frontier science like biotechnology, and information technologies in raising the agriculture crop production and its information.

The rest of the paper is organised as follows: The related work is discussed in section II. The biosensor mobile nodes network with biosensor described in section III, IEEE 802.11 protocol is described in section IV and AODV routing protocol is summarised in section V. The wireless sensor Networks (WSN) is described in section VI. The simulation environment is described in Section VII. The simulation results and observation in section VIII and the conclusion is presented in section IX.

II. RELATED WORK

Several researchers have done the qualitative and quantitative analysis of wireless communication technology with biotechnology on different crops. Bennett, R., U

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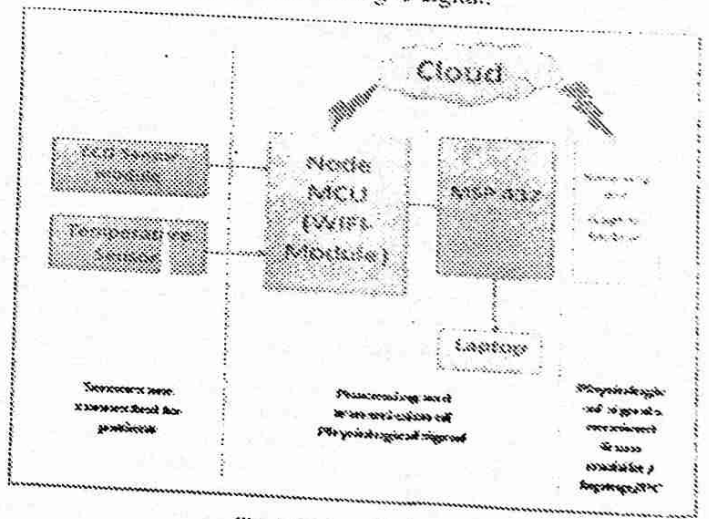


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its maximum limits of exploitation. The agricultural production will become more energy intensive but with a concomitant shift from the use of renewable to fast-exhausting non-renewable sources, (Jha et al., 2012). Due to intensification of agriculture will further strain these natural resources. Also increasing competition for land, water and energy will intensify due to their pressing demands for housing and industrialization; and thus there is a high probability of their diversion away from agriculture. These challenges will be aggravated further by increasing frequency of extreme climatic events, such as droughts, floods, cyclones, heat waves, etc. Technology has been the key driver of agricultural growth in the past. In view of these challenges, the future growth in agriculture has to come from acceleration in the rate of technological change and sustainable intensification of the production systems. This paper examines the potential of some of the latest biosensor mobile node technologies with biotechnology related to breeding of crops and natural resources management in improving food and nutritional security, and enhancing agricultural growth and rural development. This paper addresses a combination of two important technologies that is biosensor mobile node technology and biotechnology which have considerable potential to influence agricultural growth and rural development. First, this paper discusses the wireless communication biosensor mobile technology and its extent to improve agricultural productivity using this technology. Secondly, it explores the potential of frontier science like biotechnology, and information technologies in raising the agriculture crop production and its information.

The rest of the paper is organised as follows: The related work is discussed in section II. The biosensor mobile nodes network with biosensor described in section III, IEEE 802.11 protocol is described in section IV and AODV routing protocol is summarised in section V. The wireless sensor Networks (WSN) is described in section VI. The simulation environment is described in Section VII. The simulation results and observation in section VIII and the conclusion is presented in section IX.

II. RELATED WORK

Several researchers have done the qualitative and quantitative analysis of wireless communication technology with biotechnology on different crops. Bennett, R., U.

Low Power Multiparameter Health Monitoring System: An Advanced Patient Diagnostic Approach

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Abstract— The developed electronics in biomedical field has now been extended to the level of remote patient monitoring. Telemedicine system is an effective outcome of it and has proven boon to the people especially living in rural, tribal as well as in the interior parts of the globe. Patient with inherent acuity of complexity, the critical illness which requires frequent checkups are benefited with these systems. In this direction, lot of research has carried out to develop the wireless patient monitoring based on Bluetooth, mobile communication system, RFID WLAN systems, satellite system, GPS, GPRS, 2G,3G and even 4G systems. In all such systems the patient's data is transmitted using various protocols. All the available systems facilitate the patients mostly with offline remote health care. However, these systems still can be made more advanced by some added features in order to transmit necessary body parameters like ECG, Blood pressures, Temperature and heart beats, required for the quick diagnosis. Hence, using MSP432P401R, an ultralow power telemedicine system capable to transmit physiological information throughout the globe is designed, developed and analyzed. It may turn out to be an advanced patient diagnostic approach.

Keywords— telemedicine; ECG sensor; BP sensor; Instrumentation; MSP432MCU; wi-fi protocol; energy trace.

I. INTRODUCTION

Acute diseases require more intensive care and treatment in a hospital. Generally, patients are either admitted to an ICU for acute diagnosis and management or in a general ward to provide non-urgent treatment. Based on the specific illness as well as the patient's health and economic condition the development in the healthcare system is required. Effective and reliable health monitoring using multiple sensors, attached to the patients is crucial so as to ensure early diagnosis, timely and informed curative decisions, effective organization of treatment and regular follow ups. Using the growing information technology, the efforts have put in, to build electronic equipments to measure physiological signals and provide short distance wireless access in the ICU environment.

Telemedicine now days is widely considered to be part of the inevitable future of the modern practice of medicine. It is gaining more and more momentum as a new approach for patient's care outside the hospitals (at home). It can ensure public safety, early diagnosis, quick and proper treatment, and may provide increased convenience. Moreover, Cardiac patients usually need to be monitored and controlled in

hospital for a period of one up to several days. Sometimes they need to be monitored in a longer period of time in order to provide more complete information for the progress of the treatment.

Wireless telemedicine systems are under continuous development stage since past few years and are also available commercially. The main problem associated with such commercially available system is higher cost. This has motivated to develop real time remote health care system with high class integrity of low power low cost devices making the system more and more portable.

Hence, an efficient and effective patient monitoring system is developed and analyzed. The system uses an ultra low power biomedical sensors such as AD8232 (3 lead ECG module), DS18B20 (Digital temperature sensor) and MPP-02 (pressure sensor for BP Measurement). The system is controlled by an ultra low power processor MSP432P401R. The communication between Patient end and internet router is established through an advanced Wi-Fi module ESP-8266/12E [1, 2].

II. SYSTEM BLOCK DIAGRAM

The complete telemedicine system is divided into three different modules as the data acquisition wearable module, an intermediate local transceiver module (patient's end) and global communication module (doctor's end).

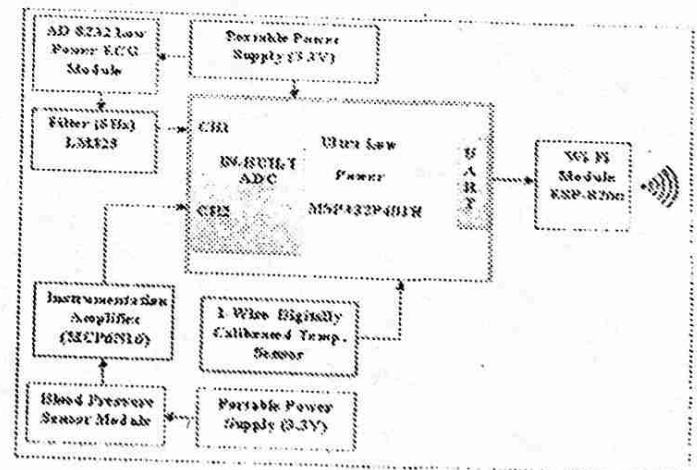


Fig. 1. Wearable Module Block diagram

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Advanced Embedded System for Identification of Asthma

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Abstract— Asthma is a chronic lung disease and its early detection is required. The conventional method for asthma detection uses a stethoscope for lung sound analysis, but has disadvantages; Requires expertise, Sense of hearing, Lacks recording, Low sensitivity, No statistical description, Reduces the Strength of frequency of sound above 120 Hz and the human hearing capability has low sensitivity to the lower frequency components. The Embedded system developed for detection of asthma is a very novel approach for detection of asthma with an accuracy of 86.6 %. This system contains an Instrumentation Amplifier for initial amplification of lung sound and band pass filter to remove unwanted heart signals from lung sound signals. The Wavelet Packet Transform (db3, coefficients 5, 29) applied to signals at the output of the filter to compute different feature vectors and with the help of these, we trained the Artificial Neural Network to identify asthma. But again we can improve this system by reducing Hardware, Software (code length) and Computational Power. This paper presents improved lung sound analysis based Low Power, Low Cost, Embedded System for Identification of Asthma. Here Wavelet Packet Transform (Haar, coefficients 7, 69) directly applied to lung sound signals at the output of Instrumentation Amplifier which blocks the need of band pass filter and reduces electronic hardware and down sample lung sound signals. Moreover, by applying a threshold to the output of Wavelet Packet, we can decide whether the patient is asthmatic or not. This also blocks the use of Artificial Neural Network which reduces the code length and computational power as compared to Wavelet Packet Transform (db3, coefficients 5, 29). It is seen that this new improved system has 20% hardware reduction, 30% code length reduction, 45% computational power reduction and an accuracy of 88%. This improved system using MSP430G2 mixed signal microcontroller consumes only 361 μ A from 3V, 350mAh AA NiCd Rechargeable battery, i.e. very less power and do not require Band Pass Filter and trained Artificial Neural Network.

Keywords— Asthma, Wavelet Packet Transform, Embedded System, Artificial Neural Network, MSP430.

I. INTRODUCTION

In methodology [1] for detection of asthma, the microphone, mounted near headset of the stethoscope, is used for acquiring the lung sounds for 9-12 seconds. The signals provided by the microphone are too weak to process. Hence, an

instrumentation amplifier is needed to amplify these weak signals to process further. But the acquired sound signals contain a mixture of lung sounds, heart sounds and others. Asthma is related only to lung sound (wheezes) and not with heart sound signals and others. So, here the lung sounds are separated using a band pass filter with cutoff frequency 300Hz -1.2KHz. Then a Wavelet Packet Transform, (db3, coefficients 5, 29), is applied to these lung sound signals to extract five different feature vectors viz. Absolute Mean values, Max of the absolute values, Average power spectra, Standard deviation and Zero crossing count of coefficients (5, 29). On last an Artificial Neural Network is used to classify whether the input signal is asthmatic or not as shown in figure 1.



Fig. 1. Methodology [1] for the Identification of Asthma

II. PROPOSED METHODOLOGY

This paper proposes a new methodology as shown in figure 2 to optimize the methodology given in [1] for the hardware, code length and computational power reduction. And in a work to develop an Advanced Embedded System (low power, low cost) for Identification of Asthma. it was observed that the use of Wavelet Packet Transform. (Haar, coefficients 7, 9) instead of Wavelet Packet Transform (db3, coefficients 5, 29) [1], directly and easily extracts the wheeze signature from the signals provided by instrumentation amplifier. So, there is no need of band pass filter here, which in



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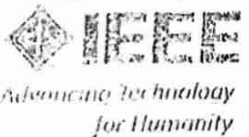


20.9.18

International Conference on Recent Innovations in Electrical, Electronics & Communication Engineering - (ICRIEEECE)

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Design of Lane Detection Warning System Using Matlab Simulink

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Abstract— This research work describes implementation of a lane detection system using Hough Transform and deliver a warning signal to the driver. In this system the input to the system is video streams recorded by the video camera mounted on the vehicle. The input is processed by using Image processing algorithm. Edge detection, Hough Line and Hough Transform to detect lane marks. Edge detection is one of the important part of image processing. Edge detection is the processes to detect the sharp changes in intensity value (pixel value) of the image. The detected lane marks and vehicle positions are used to determine whether the vehicle stays on its lane or stays out of lane. And if the vehicle move towards the Lane, warning signal deliver to the driver. In this research work make a natural video of Lane in different light, weather and road conditions using prescan software is processed by using Image processing algorithm, Edge detection, Hough Line and Hough Transform to detect lane marks. In this research we deal with MATLAB/SIMULINK model for Image processing algorithm, Canny's edge detection Hough Transform.

Keywords— Image Processing Toolbox, Hough Transform, Canny Edge detection, MATLAB/SIMULINK

I. INTRODUCTION

Due to the negligence, drowsiness of the drivers traffic accidents occurs. To improve the safety and efficiency of the traffic and also to reduce the number of traffic accidents, research on Intelligent Transportation System (ITS) have been conducted worldwide. The researchers are developing camera-based solutions to improve vehicle safety at lower speeds (when the driver is stuck in traffic), or at higher speeds (on a long highways). These propose systems, are known as Advanced Driver Assist Systems (ADAS). Advance driver assistance system is used for increasing the safety of driving cars and support the driver. Lane Detection systems are part of ADAS called Lane Departure Warning System (LDWS) is responsible for detecting involuntary lane departures by monitoring the lane lines. Lane Departure warning System (LDWS) uses a camera to monitor the distance between the vehicle and lane markings and, if the vehicle drifts towards the lane markers, the system gives warning to alert driver for keeping vehicle back into its lane. Many research teams around the world have been trying to improve lane departure warning systems. For the lane departure warning system to become more effective, the system must be as cheap as possible. So systems are being implemented with the help of video camera.

The implementation of a lane detection system using Hough Transform [1]. The propose system can detect road lane markers in a video stream and an unintended departure from the lane. Camera based systems relying on computer vision and image processing is one of the most desirable methods used to carry out these functions. [11] The input to the system is video streams recorded by the video camera mounted on the vehicle. The input is processed by using Image Processing Algorithm with Hough Line and Hough Transform to detect lane marks. [1,2,3] The detected lane marks and vehicle positions are used to determine whether the vehicle stays on its lane or stays out of lane. The system will produce a message in the form of vibrating signal to the driver for lane departures. The main objective of this paper is to implement a cost effective video based lane departure warning system. In this paper, image processing based lane departure warning system is composed with processing steps: filtering, edge detection, lane detection and departure detection. Warning to return focus to the wheel is produced after applying edges detection and Hough Transform. [2]

II. RELATED LITERATURE

According to Hamid [1] (2013), describe, On-Board Driver Assistance System for Lane Departure Warning and Vehicle Detection. videos are taken to validate the effectiveness of our system even under some difficult environment and various lighting conditions. And, the frame rate of our proposed system is roughly 20 fps and it is ready for real-time application.

Ms. Pawar et. al., implementation of Canny and Beam let transform Image edge detection algorithms using MATLAB/SIMULINK are described. Comparative analysis between two algorithms is done by calculating different performance metrics such as MSE (mean square error) and PSNR (Peak Signal to Noise Ratio). MSE values are much smaller for beam let transform method over canny edge detection method, which shows better performance of beam let transform edge detection method. Also in case of PSNR values beam let transform has much greater values than Canny edge detection method, this also describes superiority of Beam let transform edge detection method over Canny edge detection method [3, 5].

According to Raghuraman Gopalan [4] (2012). Without any assumptions on the road structure, or the motion pattern of

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Biosensor Mobile Node Network: New Technology To Enhance Agriculture Crop Productivity

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Abstract— Biosensor mobile node networks represents system of mobile biosensor nodes that can self-organize freely and dynamically into arbitrary and temporary network topology. Network routing is the task of directing data packets for biosensor from a source to a given destination. Mobile biosensor wireless network with IEEE 802.11 MAC protocol can be used for monitoring agriculture crop, to improve their productivity and can be used to provide information about latest technology on agriculture to the farmer. This paper provides experimental and analytical observation of increase in productivity of rice crop when it is treated with mobile biosensor network with biotechnology.

Keywords— Biosensor, AODV, IEEE 802.11

I. INTRODUCTION

Since the last six decades, technological changes in agriculture and allied sectors backed by massive investment in irrigation, infrastructure and institutions have propelled many food-insecure, import-dependent developing countries, including India, into food self-sufficiency. The adoption of mobile communication biosensor network, biochemical and biotechnology in India have led to near fourfold increase of food grain production and five-fold increase in production of fruits and vegetables during the period 1967- 68 to 2012-13. Due to the rapidly increase in population, which is likely to reach 1.5 billion by 2030, however, keeps the challenge of producing more food as significant as in the past. Also, the demographic transformation, urbanization and sustained growth in income are causing a change in the dietary pattern, away from staple cereals towards high-value commodities like vegetables, fruits. It is expected and projected that by 2030 India will require a minimum of 314 million tonnes of food grains, 179 million tonnes of vegetables, 99 million tonnes of fruits. Balancing the growing food demand with domestic production is very unlikely to be as smooth as in the past. Land will emerge as a very strong limiting factor to food and agricultural production. India's total net cropped area almost stagnates at around 160 million hectares; and the scope to increase food and agricultural production through area expansion is very limited. According to an estimate, nearly about 130 million hectares of land in the country suffers from one or the other form of degradation. Water is a very critical and limited input in agriculture, which uses over 88 per cent of the available water. Groundwater in the intensively-cultivated northwestern food basket of the country has already reached

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