	3.2	Research Publication and Awards
	3.2.2	Number of books and chapters in edited volumes/books published and papers published in national/ international conference proceedings per teacher during last five years

Grenze International Journal of Engineering and Technology, Jan Issue

Understanding Electric Vehicles Battery, Charging & It's Impact on Power Quality

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Abstract—**Battery is a device that converts chemical energy into electrical energy and vice versa. The use of battery in automobiles started in early 1900's. In initial stages, battery was used for energizing automobile accessories like head lamps, indicators, horn etc. The recent advances has put battery for use in staring IC engine with electric start, integrating music system in automobiles, mobile charging and even in some of the high end vehicles custom inverters are build on battery that makes the vehicle suitable for camping purpose. Now a day's the battery operated electric vehicles are becoming popular which addresses the key challenges in reducing pollution. Likewise the use of battery in automobile sector has advanced through the years. The cycling of battery is done in terms of charging and discharging. Depending upon the size and specifications, the time taken to charge battery differs. This charging time layoff hampers the performance of electric vehicles. Various strategies, battery charging methods, charging stations are proposed and developed by researchers leaving behind critical issues related to the power quality to be addressed. This paper focuses on advancements in battery usages and charging in Electrical Vehicles. The power quality issues arising as a result of non linear load are presented.**

Index Terms— **Battery, Electric Vehicle, Battery Charging, Power Quality, Harmonics.**

I. Introduction

Conventionally power systems are designed for unidirectional power flow. Recently PV systems and wind turbines are gaining popularity as alternate energy source. Being accepted as a clean energy source, it helps ecological system in reducing CO2 emission. They also offers many advantages like reducing burden on grid, flexibility in installation and capacity extension and decrease dependency on fuels.

Batteries have been commercially accepted as energy storage device. Until recent developments, high installation cost, short life time, low efficiency, long charging time were setbacks for installation of battery systems. However, developments in lithium ion battery have somehow overcome some of the limitations in battery usages.

II. Battery Systems

A battery converts chemical energy into electrical energy and vice versa. A battery is composed of cells. These cells are assembled in series and parallel combination so as to bring it to the required specifications. The

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Analysis and Application of Zigzag Transformer in Distribution System for Mitigation of Triplen Harmonics

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***Abstract*—The three-phase four wires low voltage supply system to residential, commercial and production areas in the distribution system is implemented. The different nature of loads connected to the three-wire four-phase distribution system. It can be personal computers, automatic machines, variable speed drives, lighting ballasts and other electronic power equipment, which may produce a nonlinear characteristic cause zero sequence current to flow in the system in the neutral of supply system. This may cause a serious power quality problems, results in reduction. This paper present to reduce the harmonics currents and neutral overloading by using the zigzag transformer. The zigzag transformer is one of the solution to attenuate the neutral current and reduce the zero sequence harmonic currents of the distribution systems.**

***Index Terms*—Zigzag Transformer, Neutral current, THD, Zero Sequence current, Harmonic current Reduction**

I. INTRODUCTION

In production plants, commercial and residential buildings, energy is distributed through a three-phase four-wire system (3P4W). One of the phase conductors and the neutral conductor provides single-phase power to the loads in these systems. The load is evenly distributed to balance the load at each stage. Due to the unbalanced nature of the current, the net current flows through the neutral conductor. For linear loads, the neutral current is only due to the imbalance between the phases. Various non-linear loads in the three-phase four-wire distribution system will generate third harmonic components. For the phase current, even under balanced conditions, the components of the third harmonic will not cancel each other, but add up at the neutral point. Therefore, the fundamental and harmonic components of the unbalanced load current will affect the total neutral current, and therefore neutral overload will occur in the three-phase four-wire distribution system.

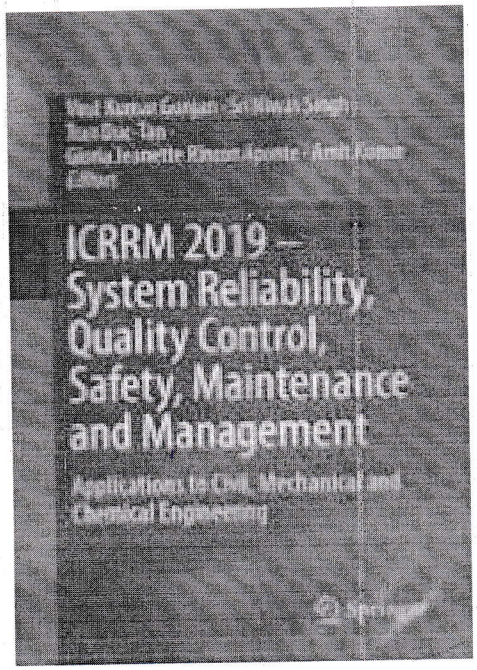
Excessive neutral current will increase the line loss, deteriorate the system voltage distribution, overload the system phase, cause the protection relay to fail, cause saturation problems in the distribution transformer, increase communication interference, and reduce power quality, system safety And reliability. Power supply etc. The voltage difference between the neutral point and the ground can cause sensitive electronic equipment to malfunction. The neutral current and neutral voltage in the four-wire three-phase distribution network pose serious problems in the power supply system because they reduce the total power. For the phase current, even under balanced conditions, the components of the third harmonic will not cancel each other, but add up at the neutral point. Therefore, the fundamental and harmonic components of the unbalanced load current will affect the total neutral current, so neutral overload will occur in the three-phase four-wire distribution systems [1]. There are various approaches that deals with mitigation of neutral current. Solve the harmonic current and neutral current problems of passive and active filters in three-phase four-wire distribution system can be used [2]- [3].

The performance of the passive filter is often significantly affected by the impedance of the system. Due to high capacity and cost, the use of the Active filter is limited. If compare the active and passive filter for low voltage application, the electromagnetic filter are simple and low in cost [4]. However, nonzero filter resistance, nonzero leakage flux, and non ideal magnetic coupling does not allow perfect filter performance. The zigzag transformer is parallel to the load and has been used to reduce the neutral current due to the benefits of reasonable cost, high performance and simplified connection [5].

II. NECESSITY

Why do $3^{r\ d}$ harmonic currents overload neutral conductors?

Figure 1 demonstrate that for linear load which are balanced, the sinusoidal load current causes their vector sumquite small for three-phase four wire distribution system [6]. As demonstrates in Figure 2 if the load is non-linear in nature



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Productivity Improvement in a Manufacturing Industry Using Value Stream Mapping Technique

Vahid M. Jamadar, Gurunath V. Shinde, Sandip S. Kanase, Ganesh S. Jadhav & Anant D. Awasare

Conference paper | First Online: 14 June 2019

Abstract

The purpose of this paper is to develop a value stream map for a compressor assembly company in Emerson Climate Technologies, India Ltd. Atit. The main aim is to identify, analyze and eliminate waste in the shop floor which is any activity that does not add value to their final product, in the production and assembly process. Value Stream Mapping has the one of the too which status of finding waste in manufacturing, production, assembly and business

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ORAL AND POSTER PRESENTATIONS

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		Performance of Mesh Wick Heat Pipe	
24	ICEE038/ORAL	RSM Based Optimization of Defluoridation of Water Using Zirconia Nanoparticles	31
25	ICEE039/POSTER	Solar Paint in Cars for Green and Clean Energy	31
26	ICEE040/ORAL	Prediction of Thermal Characteristics of Double-Pass Solar Air Heaters Using Artificial Neural Networks (ANN)	32
27	ICEE041/ORAL	Application of Fixed bed Reactor for Removal of Methylene Blue Dye using Heterogeneous Fenton Catalyst	33
28	ICEE047/ORAL	CFD Modeling of Macro-Encapsulated Latent Heat Storage System Used for Solar Heating Applications	34
29	ICEE048/ORAL	Process Intensification using Hybrid Distillation Scheme – Separation of Benzene and Cyclohexane	35
30	ICEE049/ORAL	Hybrid Separation Scheme for Recovery of Acetonitrile from Ethanol Ammoxidation Process	36
31	ICEE050/ORAL	Application of Taguchi Method to Evaluate Sulfidogenesis by a Mixed Sulfate Reducing Bacterial Culture Utilizing Biomass of Green Macroalgae *Ulva sp.*	37
32	ICEE051/ORAL	Comparitive and Kinetics Studies of Organo Nano Kaoline Clay and Organo Nano Bentonite Clay as the Adsorbents for the Removal of Chromium (VI) from Tannery Effluent	37
33	ICEE053/ORAL	An Electrochemical Approach on Detection of Cr (VI) Ions in Aqueous Solution by Using Aniline Modified Carbon Paste Electrode (AMCPE)	38
34	ICEE056/ORAL	Plant mediated Nanoemulgel: A Novel Approach for the Topical Administration of Dermatological Disease	38
35	ICEE057/ORAL	Performance Evaluation of Loop Heat Pipe with Al_2O_3 – Water Nanofluid	39
36	ICEE060/ORAL	Synthesis, Characterization and Evaluation of Porous Polybenzimidazole Material for the Recovery of Metal Ions from Nuclear Waste Solution	40
37	ICEE061/ORAL	CFD Simulation of ETV-EGR Combined System for Diesel Engine Intake	41
38	ICEE062/ORAL	Effect of Blending Micro and Nano Particles on the Tribological and Rheological Properties of Sesame Oil	41
39	ICEE063/ORAL	Optimization of Process Parameters for Microwave Assisted Extraction of Naringin from Nagpur Mandarin (Citrus Reticulata) Peel using Response Surface Methodology (RSM)	42
40	ICEE068/ORAL	Synthesis of Hierarchical CuO Nanosheets and their Photocatalytic activity on commercial dyes under UV Light and Visible Light Irradiation	43
41	ICEE070/ORAL	Biosorption of Toxic Cadmium Ions using Local Fungi Isolated from Textile Industrial Effluent: Isotherm, Kinetics and Sticking probability	44
42	ICEE071/ORAL	Enhanced Production of Carboxylic acid using Aspergillus sp from Wheat Straw Hydrolysate	45
43	ICEE072/ORAL	Molecular characterization of heavy metal resistance in gram-negative bacteria isolated from textile effluent in Vellore, India	45
44	ICEE073/POSTER	Metal Tolerance behavior of Soil Fungi isolated from Metal Contaminated Agricultural soil: *Aspergillus niveus*	46

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45	ICEE074/ORAL	Optimization of Process Parameters affecting Biogas Production from Food Waste using Response Surface Methodology	46
46	ICEE075/ORAL	Kinetic Studies of Cellulosic Ethanol Production from Woody Stem Prosopis Juliflora using Thermo tolerant yeast Kluyveromyces marxianus	47
47	ICEE077/ORAL	Application of Unmix Model in Characterization of PM10 and PM2.5 Emission Sources	48
48	ICEE078/ORAL	Impact of Sugar Industry Effluent on Quality of Groundwater at Rasulwadi- Sambarwadi, Maharashtra, India	48
49	ICEE079/ORAL	Studies on the Chemical Composition and Physicochemical Properties of Tyre Pyrolysis Oil (Tpo) for its Suitability as Engine Fuels and Furnace Oil	49
50	ICEE081/ORAL	Downstream processing for liquid biofuel production from oleaginous microalgae feedstock cultivated in Hybrid Loop Airlift Photobioreactor (HLALPBR)	50
51	ICEE082/ORAL	Three-phase Three-dimensional Electrode Reactor for the Removal of Toxic Cr(VI) ions from Real Tannery Industrial Wastewater	50
52	ICEE083/ORAL	Application of analytic hierarchy process and artificial neural network in deciding to opt for an appropriate bid	51
53	ICEE084/ORAL	Classical PID Controller for Semi-Active Vibration Control of Seismically excited structure using Magneto-Rheological Damper	51
54	ICEE085/ORAL	Particulate Matter Emissions from Forest Fired Biomass Burning in India	52
55	ICEE086/ORAL	The Facile Green Mediated Synthesis of Multifunctional Nano-Catalyst for Antibacterial and Photocatalytic Degradation of IC Dye.	52
56	ICEE087/POSTER	Photocatalytic Saccharification of Lignocellulosic Materials using Nano ZnO Catalysts	53
57	ICEE088/ORAL	Studies on the Impact of Leachate from the Municipal Solid Waste dumpsite permeating into the Soil	53
58	ICEE090/POSTER	High yield of Bio sugars from the marine algae combining enzyme and sonication collected from Nagapattinam Shores: Role of Particle size in saccharification	54
59	ICEE094/ORAL	Influence of Substrate Concentration on Biogas Production using Rapeseed Oil Cake	54
60	ICEE095/ORAL	Removal of Antibiotics from Water and Wastewater by Nanofibre Membrane	55
61	ICEE096/ORAL	Influence of chloride content and exposure time on corrosion behaviour of AZ80 wrought Mg alloy	56
62	ICEE097/POSTER	Experimental Investigation of Friction Welding on Aluminium AA5083 Alloy	56
63	ICEE099/POSTER	Management of Sanitary Wears - A Review	57
64	ICEE0100/POSTER	Removal of Indoor Air Pollutants Using Activated Carbon	57
65	ICEE0101/ORAL	Mercurry emissions from coal combustion in India and its control measures	58
66	ICEE0102/POSTER	Indoor Air Pollution in Green Buildings: A Review	58

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90	ICEE130/ORAL	Removal of Malathion from Aqueous Solution by Advanced Oxidation (Fenton Process) with Ferrous Sulphate and Iron Swarf	72
91	ICEE131/ ORAL	Performance Evaluation of an Upflow-Anaerobic Reactor in Treatment of Water Contaminated with Pesticide	72
92	ICEE132/ ORAL	Synthesis and Characterization of ZrP/PTFE Membrane for Energy Devices	72
93	ICEE133/ POSTER	Application of Microwave for Pectin Extrcation from Cavendis (Musa acuminate) Peels and its Preliminary Characterizations	73
94	ICEE134/ ORAL	Performance Analysis of the Heliostat Solar Field for Various Sun Position and Radial Spacing Method	73
95	ICEE135/ ORAL	Experimental Studies on Effect of Nutrient Medium on Microbial Fuel Cell	74
96	ICEE136/ORAL	Studies on Electrochemical Treatment of Pulp and Paper Mill Waste Water	74
97	ICEE137/ ORAL	Prediction of Corrosion Rate of Dual Phase Alloy Steel by using the Experimental Polarization Data in Dynamic Simulation	75
98	ICEE138/ORAL	Modeling and Simulation of Solar PV-Fuel Cell-Battery based Integrated Hybrid Renewable Energy System using MATL AB/Simulink	75
99	ICEE139/ ORAL	Process Optimization Of Microwave Assisted Acid Pretreatement Of ProsopisJuliflora Biomass For Bioethanol Production	76
100	ICEE142/ POSTER	Amino-functionalized Fe_3O_4 Magnetic Nanomaterial as a Novel Adsorbent for Removal of Anionic Dyes	77
101	ICEE143/ ORAL	Experimental and Modelling Studies of Nutrient Mist Reactor for Sustained Production of Hairy Roots of Artemisia Annua	77
102	ICEE144/ POSTER	Numerical Simulation of Single Bubble Dynamics during Nucleate Pool Boiling by Altering Contact Angles	78
103	ICEE145/ POSTER	RSM Optimization of Biodiesel Production from Waste Cooking Oil and Analysing its Physiochemical Properties	78
104	ICEE146/ ORAL	Energy Saving Strategy for Ammonia Plant through Feed Switchover from Naphtha to r-lng	79
105	ICEE147/ ORAL	Comparison of Statistical and Non-statistical Mathematical Models in Predicting the Biodiesel Production from Gossypium arboretum l. Seed Oil	79
106	ICEE0148/ORAL	Use of Fly Fiery Remains for Amalgamation of Zeolites	80
107	ICEE149/ POSTER	Statistical Optimization of Bioethanol Production from Waste Potatoes: A Comparison of Acidic and Enzymatic Hydrolysis	80
108	ICEE150/ ORAL	Development of a Rapid Method for Determination of Nitrogen Release from Coated Urea Fertilizer	81
109	ICEE 151/ ORAL	Simulation of Different Biological Nutrient Removal Processes using GPS-X	82
110	ICEE152/ ORAL	Congo Red Dye Removal from Synthetic Wastewater using Electrocoagulation: Kinetic Study and Process Performance	82

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Experimental Investigation of Friction Welding on Aluminium AA5083 Alloy

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Abstract

In this paper effect of rotary friction welding on similar joints of Aluminum AA5083 was investigated. Initially some trials were conducted with due consideration of material shrinkage. Successful joint was obtained when material shrinkage is less i.e. less material removal. Tensile strength and microstructure were further observed. All samples were failed at weld region except one which was failed at parent material showing tensile strength of weld is more than parent material.

Keyword: Rotary Friction Welding, Tensile Strength, Microstructure.

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Numerical Simulation of Single Bubble Dynamics during Nucleate Pool Boiling by Altering Contact Angles

Pradip Gunavant*, GurunathShinde , Sarafaraj Mulani
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Abstract

The contact angle significantly affects the nucleate pool boiling and enhances the heat transfer. The present study is performed to numerically analyze the effect of contact angle on single bubble behavior during nucleate pool boiling of water. Numerical simulations are performed by using commercial Computational Fluid Dynamics (CFD) code, Ansys-Fluent-13.0. Numerical set up is decided for two-dimensional fluid flow. The complete Navier-Stokes equations along with continuity and energy equations are solved using the SIMPLER method. The liquid vapor interface is captured using finite volume method of multiphase model. Only half domain is modeled to take advantage of symmetry boundary condition and simulations are initialized from saturated condition of water for reducing computational time. In order to understand the associated convective mechanisms, the bubble growth and its departure from a horizontal heated surface has been numerically simulated by varying excess temperature (〖ΔT〗 _excess=T_s-T_sat). Also the contact angles are altered from 0° to 180° to analyze its effect on bubble dynamics. The result highlights the effect of contact angle on diameter of bubble before departure and time required for departure. Grid independence and time independence study are conducted to nullify its effect on the results.

Keywords: Nucleate Pool Boiling, Bubble Dynamics, Contact Angle, CFD

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Brushless DC motor drive with power factor correction controller technique

Publisher: IEEE

Snehal Manik Kulkarni ; P.M. Pujari ; A.M. Mulla All Authors

Abstract: In this paper we have proposed a power factor correction technique for permanent magnet brushless DC motor (PMBLDCM) drive. The proposed method improves the power quality... **View more**

Metadata

Abstract:

In this paper we have proposed a power factor correction technique for permanent magnet brushless DC motor (PMBLDCM) drive. The proposed method improves the power quality of the system by reducing the harmonic contains in current source i.e. total harmonic distortion (THD) in the system. As THD get reduce of the system, the power factor of the system get improved and archived near to unity. To improve power factor of the system it is necessary to bring source current in phase with source voltage, which can be done by the boost converter. PMBLDC motors are best because of their high efficiency, silent operation, compact size, high reliability, and low maintenance requirements. The performance of the proposed system is simulated in MATLAB/Simulink environment.

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Rainfall Trend in Drought Prone Region of Satara District of Maharashtra in India

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Abstract
In this paper the present study disclose the talukawise annual rainfall trend in Satara District of Maharashtra State during 1998 to 2015. The rainfall is one of the basic substantial parameter among the climate for the advancement of society is concern and it also determines the scarcity as well as the environmental factors for the particular region. We know that annual rainfall conditions vary from region to region. The average annual rainfall is eastern part of the Satara district is 473 mm whereas in western part of the Satara district it varies up to 5000 mm and in the middle and central part it comes up to 1200 mm. Eastern part of the Satara district which has historically been extremely affected by drought. The downfall of monsoon has had a harmful effect on the district's agriculture sector and a large part of the population relying on agricultural for employment. This studies focus on the four (out of total 11) tahsils in Satara district which is particularly sensitive to drought Dahiwadi, Khatav-Vaduj, Phaltan and Koregaon tahsils. This article aims to studies related to trends in rainfall eastern part of Satara district in Maharashtra. There are changes in the results of the talukawise studies and a clear and rational picture of rainfall trend has variability in drought prone region. In a study on talukawise trend analysis seven tahsils had decreasing trend in annual rainfall. Among two tahsils showing increasing trend, Mahabaleshwar tahsil shows highest rainfall trend. Remaining two tahsil had the same direction of trend in annual rainfall and seasonal scale.

Keywords: Annual Rainfall, Rainfall Variability, Drought Prone, Climate Change, Trend.

Introduction

To meet the various water demands of agriculture, industry, irrigation, hydroelectric power generation, and other human activities in district water budget is important factor. More than 70 per cent of the population in India is engaged in agricultural activities. The problem of raising ample food for millions is of crucial importance. Indian economy is completely associated with the monsoon and its prosperity is fully dependent on amount of rainfall receive during monsoon. The success or failure of crops in any year is closely related with the behaviour of the monsoon most of the states of India receive 90 to 95 per cent rain from south-west monsoon. Effective utilization of water resources is of prime importance in order to increase agricultural production. The rainfall variations are largely because of relief variations, contracted conditions, movement of the monsoon through. Rainfall in the greater part of India is uncertain, irregular and unevenly distributed. Rainfall is the huge parameter affecting agriculture activity of man. Rainfall is the powerful single weather element influencing the intensity and location of farming system and the choice of enterprise. Recent studies show that in some part of India the amount of rainfall is constant over last few decades but the duration of rainfall is reduced. Therefore it also becomes critical to store this water or most of its parts go waste in runoff. It also causes hazards like flood conditions arise. Eastern part of Satara district is largely relied of natural rainfall. In Satara district an average annual rainfall is lot of closeness. The highest rainfall reported in western part of the Satara district in Mahabaleshwar tahsil. The rainfall generally decreases first rapidly and then slowly from the Western Ghats towards the eastern boundary of the Satara district. The government of Maharashtra and Central government of India declared total seven tahsil district drought prone areas. This attempt has been made 1998 to 2015 annual rainfall tabulation and use help of mean, rainfall trend calculation and variation of rainfall in Satara district. Eastern part of the drought prone region local people recognizes that the total rainfall had reduced over the past 40-45 years because of the loss of summer any rainy monsoon.

Study Area:

The Satara district is one of the important districts of the Maharashtra state well known for agricultural development. In addition, the agricultural and rural based cultural wisdom and closeness of the author, with all these motivated the researcher to undertake the present study.

The Satara district is situated in west part in Maharashtra state. This district consist eleven tahsil with 1,727 villages. The total area is covered with 10,480 sq.km and extending between 170 5' and 180 11' North latitudes and 730 33' to 740 54' East longitudes. According to the census of 2011 Satara district has a population of 3,003,741, nearly equal to the democracy of Albania or the US state of Mississippi. This gives it a positioning of 122nd in India (in association with a total of 640). The district has a population density of 287 occupants per square kilometre (740/sq.mi). The population growth rate of Satara district was 6.93% over the decade 2001-2011. The climate ranges from the rainiest in the Mahabaleshwar region, which has an average annual all of over 6000 mm to the driest in Man tahsil where the average annual rainfall is about 500 mm.

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LEAST SQUARE SUPPORT VECTOR MACHINE FOR ESTIMATING REFERENCE CROP EVAPOTRANSPIRATION IN SEMI-ARID REGIONS OF INDIA

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ABSTRACT

Accurate estimation of reference crop evapotranspiration (ETo) is very crucial for efficient management of irrigation systems. This is particularly important for arid and semi-arid regions where the availability of water resource is scarce and the existing ones are over exploited. The conventional equations have not proved to be very efficient in estimating evapotranspiration under varying climatic and data availability conditions. This study makes an attempt to model daily reference crop evapotranspiration using least-square support vector machine (LS-SVM). The study was conducted for Hyderabad and Pali weather station situated in semi-arid region of India. The performance of the model was compared with the conventional equations and artificial neural network (ANN) models. The results of the study show that the artificial intelligence based ANN and LS-SVM models perform better than the conventional equations. Further it was observed that the LS-SVM model has performed better than all the other models tested in this study. The study concludes that LS-SVM can be successfully employed for efficient estimation of ETo in semi-arid regions of India.

Keywords:*Evapotranspiration; Least-square support vector machine; semi-arid region.*

1. INTRODUCTION

In agriculture sector, evapotranspiration (ET) is closely related to crop water demand. As evapotranspiration plays a vital role in determining crop water requirement, accurate measurement of evapotranspiration becomes evident. Normally lysimeters are used for direct measurement of evapotranspiration. However, high operating costs and need for accuracy in measurements has limited the use of lysimeters. In nineteenth century, researchers developed various physical, empirical and semi-empirical equations that used meteorological variables to estimate reference crop evapotranspiration (ETo). The Food and Agricultural Organization of United Nations (FAO) has accepted the FAO Penman-Monteith (FAO-56PM) as the standard equation to estimate ETo (Allen et al. 1998). Large requirement of climatic variables has limited the use of FAO-56PM equation in developing countries like India, where, availability of these records has often been minimal. Additionally the performance of empirical equations using fewer climatic variablesis often found to be inconsistent when tested under different climatic conditions.

In the recent years, use of artificial intelligence (AI) techniques like ANN and Support vector machines (SVM) for modeling intricate hydrological processes has increased significantly. Sudheer et al., Sudheer et al.(2003) examined the potential of ANN models in estimating actual crop evapotranspiration from limited climatic data. Zanetti et al. (2007) proposed an ANN model that used only maximum and minimum air temperature to estimate ETo. Rahimi (2010) compared performance of Hargreave's and ANN methodologies for estimating reference evapotranspiration in semiarid environments.

Recently, many studies have used SVM models to estimate various hydrological parameters. SVM achieves an optimum network structure by minimizing the upper bound to generalization error instead of minimizing the training error. In addition, SVM is equivalent to solving a linear constrained quadratic

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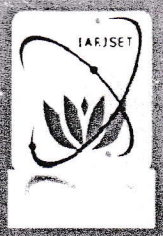

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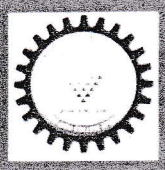

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INDEX

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INDEX

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Zigbee Based Wireless A Remote Carbon Dioxide (CO2) Monitoring System

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Abstract: The increasing quantity of CO2 is a big problem leading to global warming. Therefore it is necessary to properly design a system to monitor the amount of CO2 in the atmosphere to prevent the debacles of future.This paper gives us details about how to develop CO2 monitoring system based on the ZigBee protocol. Graphical user interface is helpful to display monitoring data on screen. This is another important advantage present in this paper.

Keywords: CO2 Concentration, Controller, Monitoring, Real time, Zigbee.

I. INTRODUCTION

The object of the project is to measure concentrate/ion of carbon dioxide (Co2). Here we use the Co2 sensor to measure the gas in air. In today's world high speed wireless systems are in demand. Wired communication cannot meet the requirements of speed and cannot be available every time everywhere. It is found in many industries and laboratories that the percentage of Co2 is very dangerous and bad for workers. So we are design wireless Co2 monitoring system which measure the Co2 amount in working area.This project wireless sensor networks a remote Carbone Dioxide (Co2) Concentration Monitoring System using Zigbee is a reliable circuit that take over the task of measuring the concentration of Co2 accurately. Zigbee is used for the data transmitter as well as receiver which is controlled by the microcontroller. The real time data display on the monitor shows the Co2 amount to the observer. According to the predefined limit of Co2, we create safe and dangerous zone on display. If the amount of Co2 exceeds the safe zone and enters in danger zone then observer getting this information at a time one alarm is used in this system. Zigbee is a new Wireless Protocol characterized by less distance and low speed. It can be used in special situation for signal collection, processing and transmitting. ZigBee is a technology now being used for wireless sensor networks. A sensor network consists of sensing, computing and communications elements that allows the administrator to instrument, observe and react to events and phenomena in a specified environment. The maximum area cover by Zigbee is 40m. In line of site area increased up to 110m.

II. PROPOSED SYSTEM

The basic block diagram of wireless Co2 monitoring system is shown in the fig. 1. This block diagram consist of the following essential blocks. 1. Co2 Sensor
2. ATMEGA-328P MICRO-CONTROLLER
3. ZIGBEE

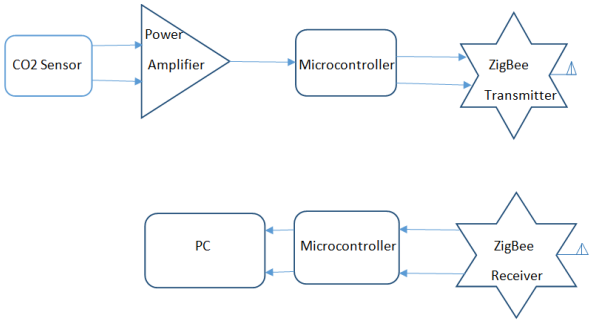

Fig. 1. System Block Diagram

In this project we are going to design a system which will wireless Co2 concentration monitoring. So firstly we have to measure the values of Co2 concentration by using the MQ135 sensor. After that by using ATMEGA-328p we are going to transmit these values wirelessly to control room via zigbee. At the control room we use a sensor unit basically consists of Co2 sensor used to detect the predetermined parameters that indicate the Co2 concentration. The sensor use battery for their operation. The information being sensed by the sensors is then converted into electrical signal and then it is passed to a microcontroller or microprocessor that processes it to the value understandable by humans. These values are then given to the ZigBee trans-receiver at the observer site.At the monitoring side, we slots the Co2 concentration levels according to the above figure.

1. Arduino UNO:-

Arduino is common term for a software company, project, user community designs and manufactures computer open-source hardware and software, and microcontroller-based kits for building digital devices and interactive objects that can sense and control physical devices.

2.ZigBee:-

ZigBee is an IEEE 802.15.4-basedspecification for a suite of high-level communication protocols used to create

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Synchronization of Three Phase with Electrical Grid-A Survey

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Abstract: In order to synchronizing the parameters of inverter and grid system, control algorithm plays an important role. Control algorithm used to generate PWM pulses. The total harmonic distortion is generated by non-linear loads. The various methods are available for synchronization and reducing total harmonic distortion. One of them SPWM method, it is reliable and easy method and also MATLAB Simulink is used for proposed.

Keywords: synchronization, grid, inverter, THD (total harmonic distortion), control algorithm, PWM pulses.

I. INTRODUCTION

The use for electricity for commercial, domestic loads in industrial and rural, urban and semi-urban area has developed year by year. Demand on renewable energy increased by the energy consumption and maximum grid connected systems is used. If this things are used in large scale then output current cannot be vanished its harmonic pollution. According to this standard the inverter output is harmonically distorted than output of grid. The isolating transformer is connected by many distributed resources via grid resources. The power supply use to require in the generated voltages to elimination of dc component for increasing the protection. To reduce the undesirable harmonic content of output current transformer this fact can be used as an advantage. Especially in high power application power quality of grid connected inverter is an important factor. By using voltage quality, the power quality is determined when voltage is controlled variable.

In order to provide the required load voltage, inverter system works in standby mode or grid connected mode. In load scheduling condition, the inverters work in standby mode and provide the required power to the load. The power available through renewable systems is in DC form, inverters are preferred instead of alternators. Voltage, frequency and phase are the parameters of the inverter can be controlled for the purpose of synchronization with the related parameters of the grid system. Synchronization of inverter parameters like Voltage, frequency and phase with grid systems can be possible by specific control algorithm. The output from the inverter system can be varied with synchronization of grid system to meet the load requirement.

II. PROPOSED WORK

The basic requirement of the system is match the parameters (phase, amplitude, frequency, voltage and current) of inverter and grid. When grid is in offline mode or load shading mode at that time inverter is in standby mode.

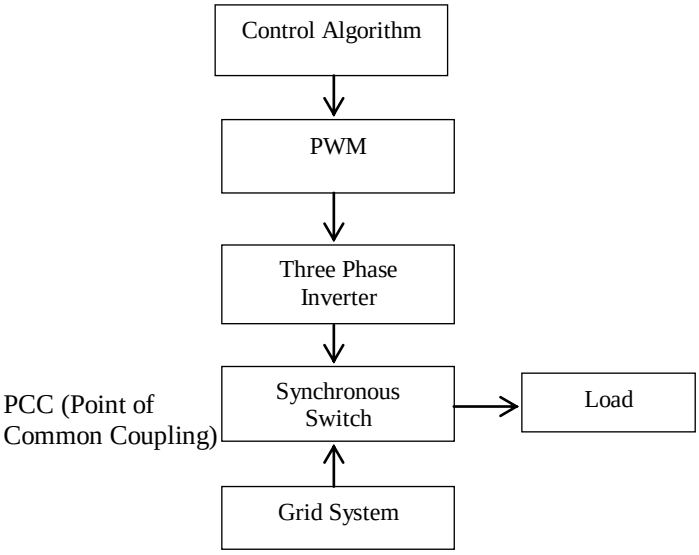

Fig.1.Block Diagram

By using control algorithm we generate the PWM waveform for trigger inverter. The shape of PWM is sinusoidal type used. The PWM is gives to the six switches used in inverter to get output.

PCC is nothing but point of common coupling; it is used as synchronous switch between grid and inverter. It is used for matching the parameters of grid and inverter. Signals of inverter from upward side and signals of grid system from downward side are given to the synchronous switch (PCC).

Basically strength of inverter signals are weak as compare to signals of grid system, therefore synchronous switch increase the strength of inverter signals. These signals strength approximately matched with signals of grid system finally output of synchronous switch is given to load. When grid is in offline mode, the load is work on inverter.

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Intelligent Safety System for Women Security

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Abstract: Now-a-dayslife is full of rush and India is fastly moving on the path of being a promising super power and an economic hub. But this goal can be achieved if large number of woman participate in the development process. Today's modern women have acquired high offices in India including that of the president, prime minister, speaker of the loksabha and even in field of aeronautics, military, IPS, IAS, etc. Even today women have achieved top positions in job and society, yet they are facing problems such as physical harassment and sexual assault. The cases of harassment and rapes on women are increasing hence security issue for such woman is more important. So it is essential to develop system to provide security to women. The system allows women to protect herself from attackers. By pressing the button of the system a helping message along with her location will be transmitted by the system to the police station and her few relatives, so that they will get aware of her current situation. Along with the message she is also able to give shock to the attacker with the help of system. So she get some time to get rescue from that attacker.

Keywords: ARM Controller, GPS, GSM, Women Security

I. INTRODUCTION

Since last few decades the status of women in India has been going through lot of changes. To remain part of fast life women also works a lot to survive and supports their family.

They work at different places like BPO's, call centres ,IT firms, and so many places like it. But even today's women is still facing many social challenges in India and are often victims to violent crimes.

Thomson Reuters had said that," according to global poll, India is the 4th most worst country in the world and the dangerous country for women among growing 20 countries." Day by day the attacks on women are increasing and in some cases she is not even able to take her mobile and dial up to police ,this system will help women in such cases to inform about attacks and also in giving her exact location to nearby police station for necessary action.

The greatest motivation for this system was the Delhi Nirbhaya case that triggered the whole nation. Women will be provided with a device that includes GSM, GPS, Shock Generator. By pressing the button, a helping message will be sent to nearby police station and her relatives informing about her exact location.

II. LITERATURE REVIEW

Security is most important factor for safety of women. Today's women require help for their safety so there is need for developing a portable system for women security [1]. Recently existing security system for women are as follows:

VithUapp:
It is mobile application used in smart phone in which, when power button is pressed two times helping message regarding the location of women(user) will be sent to already stored contacts.
Sent information (location) is updated after every two minutes[2].

SHE (Society Harnessing Equipment):
Three engineers designed a clothing which has electric circuit. 3800kV of current is generated by circuit.

It will generate 82 electric shocks which will help women to get recue from the situation in case of multiple attacks.

It will not harm the women(user) because the clothing is made up of two layers[2].

We got idea of including buzzer in system to grab attention of nearby people so that she will get help from them [3].

The I Safe app describes that whenever the women is in danger by this app on mobile the contacts saved on her mobile get her location and also a message that she is in danger[4].

Today's demand is to be safe and secure. So the women need a gadget which is small in size and can be carried easily with her which help her in the crime incidents[5].

III. SYSTEM DESCRIPTION

A. Block Diagram

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GSM and GPS Based Real Time Vehicle Theft Tracking and Control System

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Abstract: At the present time almost of the public having an own vehicle, theft is happening on parking and sometimes driving insecurity places. The safe of vehicles is enormously essential for public vehicles. Managing location information of mobile phone devices is a very much important role in mobile computing systems. The aim of this work is to build a secured and authentic vehicle anti-theft system which will have the ability to reach the vehicle subsystems from a distal location where there is GSM network. This is the anti-theft system that not only pause your vehicle but also track the location of your lost vehicle. We have made a system which will supply users the capability to track vehicle distantly through the mobile network. Specifically, the system is supplying the owner of the vehicle to pause his moving vehicle whenever he found it riding by the new person. This is done by sending a command to the GSM modem included in the system to stop the engine.

Keywords: GSM, GPS, ARDUINO.CC Software.

I. INTRODUCTION

The rate of growing in car theft in this part of the world has reached a dismal rate .Car thefts are growing at a horrific rate all over the world. To resolve such problems, a system is cultivate using GPS and GSM technologies and an application is introduced in this project work.

Managing location information of mobile phone devices is a very much important role in mobile computing systems. The GPS/GSM Based System is one of the most important systems, which unbroken both GSM and GPS technologies.

It is necessary due to the many of applications of both GSMand GPS systems and the large usage ofthem by millions of people throughout the world.
Vehicle owner just use his smart phone to send the off command as SMS. After switching off the engine, motor cannot restart without retransmission of SMS driven by appropriatoror by resetting the whole system.

This system is user friendly, easily accessible, easily installable, and can be used for various other purposes. After installation system will assent to track the target anytime and anywhere in any environmental conditions.

II. LITERATURE REVIEW

Chen, H., Chiang "REAL TIME VEHICLE CEASING AND TRACKING USING GSM AND GPS TECHNOLOGY" described To track the theft vehicle by using GPS and GSM technology. This system puts into the sleeping mode after the vehicle gets handled by the owner or authorized persons through the reset button over it.

Ramani, S.Valarmathy "Vehicle Tracking and Locking System Based on GSM and GPS" described When the theft identified, the responsible people send SMS to the micro controller, then issue the control signals to stop the engine motor.

This design will continuously watch a moving Vehicle and report the status of the Vehicle on demand

Ch. Bhanu Prakash "Design and Implementation of a Vehicle Theft Control Unit using GSM and CAN Technology" described the present security system that will warn the owner of the vehicle by sending SMS when there has been an intrusion into the vehicle.

SMS is a good choice of the communication to replace the conventional alarm.

III. PROPOSED SYSTEM

In existing system drawback overcome in proposed system by using GSM technology.

In our project, we provide to track the vehicle theft by using GPS and GSM technology. when theft can be start the vehicle engine then message will send to the owner of the vehicle and also send the real time location of the stolen vehicle.

IV. BLOCK DIAGRAM

The Proposed Block Diagram of work is shown below in fig.1-

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Renewable Energies, Lamps and Communication Technologies: A Review

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Abstract: Now a days the use of electricity is a measure issue in an India. Where the wastage of light observed highly in street lighting area. Street light system performs an important role for providing security at night times, for avoiding accidents during night time and also for avoiding many other problems. The street light can be controlled manually but this method is very costly and difficult to monitor, it involves high power consumption and this system is time consuming. So to avoid this problem we can automatically monitor street lighting system by using GSM. The problem of power consumption can be minimized by using renewable energy source instead of using conventional source. Renewable energy causes energy saving and system is ecofriendly. By using renewable energy sources many problems can be solved. In this paper we make a review on renewable sources, lampposts and communication technologies.

Keywords: Renewable energy source, street lights, communication technology.

I. INTRODUCTION

In previous systems numbers of street lamps are less but with development of urbanization the numbers of streets increase rapidly. There are some factors needs to be considered during designing of good street lighting system. When considering the effects of technical system on the environment energy is the most important parameter. The traditional street light system is not much effective system it includes disadvantages like high power consumption, high cost and more manual work.

The above problems can be minimized by using various methodologies as:

- Use renewable energy source instead of using conventional power sources.
- Use LED lighting technology which gives energy efficiency, ecofriendly environment.
- Remote control system- In this LED lamp will be ON/OFF manually.

Lighting control is one of the important parameter in intelligent buildings. The invention of LED lighting device consumes half of energy than fluorescent lighting device. Solar powered street lighting system is proposed in order to reduce burning of fossil fuels, to generate electricity, to reduce air pollution. For this purpose we introduce renewable energy source based street lighting system.

II. LITURATURE REVIEW

The paper [1] is based on remote control. They use master and slave boards. Master board is placed in electrical panels and slave board is place on each lamppost which are used to turn ON/OFF the lamppost which causes power consumption. Finally this project achieved 28-32% power consumption with just a 3-5% illumination reduction. In paper [2] they use zigbee based wireless technology which allow more efficient street lighting system. It uses many sensors for controlling the system. Zigbee is used to transfer information in point-by-point manner. This system is mainly appropriate for street lighting in remote urban and rural areas where the traffic low.

Paper [3] introduces new technologies which offers easy maintenance and energy saving. Here in this paper they used conventional source. The [4] paper is based on zigbee technology which effective management. Here 20-22% power reduction is possible. GSM based Automatic Street light control system which depends on light intensity and traffic density introduced in paper [5].This project is cost effective and the general purpose of project is reduction of crime.Paper [6] is completely based on different sensors, lamps and different publications. It satisfies the problems faced by common street lighting system. This paper deals with survey on experimental part of research.The comparison of zigbee with other technologies is given in paper [7]. This system can be elongate, modifiable and adaptive new technologies.

The paper [8] is a review on comparative study on various wireless technologies which are used to build different smart networks.The contents of paper [9] are policies of India about renewable energy sources. There are various renewable energy sources introduced in this paper such as hydroelectricity, geothermal, biomass, solar, wind.

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Wireless Library Management System Using Smartphone

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Abstract: Library is a fast growing sector. A properly updated library will provide most of services to its user. Library management system which is helps for maintaining a database of number of various books to be borrow, return and recording the information of the registered students and librarian also to identify the student identification by using RFID card. With the help of RFID card and tags of the student's database and books will be loaded on it and paperless work will be done within limited or in very few seconds. This will help in less time consumption. The books which are limited it should be properly circulated amongst all members. So we will be introducing a reservation system for members in which the users can reserve his/her books through GPRS. The number of members can be reserved but first preference will be given to reserved member. Along with this process GPRS technology is also used in order to send message to respective student regarding the due date of the book issued by the student and the fine applicable if the book is not returned on time. The proposed system gives information to the student whether the book to be issued is available or not available. It will be helpful to all library members, so they consume their time and chaos condition in library.

Keywords: GPRS, GSM MODULE, radio frequency identification (RFID), EMBEDDED SYSTEM, ANDROID.

I. INTRODUCTION

Pre-computerization:

Before computerization, library tasks were performed independently from each other. They ordered materials with ordering slips and indexed them by using card system. The fines were collected by librarian. The students signed books out manually by indicating their name on cards which were collected at the library circulation desk.

1960s: the influence of computer technologies:

In era 1960s, the next biggest innovation came with computer technologies.

The library automation were innovates; they began experiment in the mid 1960s onward.

1970s–1980s: the early integrated library system:

The improvements were established in computer storage as well as in telecommunication. Due to this improvement ILS were established.

The ILS were includes hardware and software which allowed control over the library tasks.

All the remaining library task were accomplished through ILS as well as cataloguing.

All remaining library task were accomplished through ILS as well as cataloguing.

1990s–2000s: the growth of the Internet:

In era 1990s to 2000s, Library users were engaged with their library through online web based portals.

Library users log into their library accounts for reservation as well as renew books.

The ILS were grew exponentially in this era's than in 1982.

Mid 2000s–Present: increasing costs and customer dissatisfaction:

Most of the services were provide by ILS vendors with increasing cost. At the same moment, ILS was in its fast testing.

Today most of the libraries began to use the open source ILS as Koha and Evergreen.

Most of the common problems were noted to avoid vendor lock in and license fees. Library were accepted all kind of freedom, according to their request.

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Android based Interactive Home Automation System through Internet of Things

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Abstract: Now a day's Automated systems are taking over manual system. Home Automation system using IoT is a system that uses laptops or smart phones to control the basic home functions and features using internet from anywhere around the world. It is used to save the electricity and human energy. Home automation is the automatic control and monitoring of household appliances and residential house features like TV, fans, lights, doors, gate and even the windows. Events can be programmed to be triggered under specific conditions (such as depending on the sensors data), and this can be used in reducing the total energy consumed by some appliances. On the other hand, the system can suggest smart task scheduling. In simple installations, domotics may be as straightforward as turning on the lights when a person enters the room. In advanced installations, rooms can sense not only the presence of a person inside but know who that person is and perhaps set appropriate lighting, temperature, taking into account the day of the week, the time of day, and other factors.

Keywords: Internet of Things (IoT), Raspberry Pi, Arduino, Zigbee, Automation, Image Processing.

I. INTRODUCTION

A.BACKGROUND

Homes of the 21st century will become more and more self-controlled and automated due to the comfort it provides, especially when employed in a private home. The "Home Automation" concept has existed for many years. The terms "Smart Home", "Intelligent Home" followed and has been used to introduce the concept of networking appliances and devices in the house.

Home automation Systems (HAS) represents a great research opportunity in creating new fields in engineering, and Computing. . A home automation system is a means that allow users to control electric appliances of varying kind. HASs includes centralized control of lighting, appliances, security locks of gates and doors and other systems, to provide improved comfort, energy efficiency and security system. HASs becoming popular nowadays and enter quickly in this emerging market. However, end users, especially the disabled and elderly due to their complexity and cost, do not always accept these systems.

Many existing, well-established home automation systems are based on wired communication. This does not pose a problem until the system is planned well in advance and installed during the physical construction of the building. But for already existing buildings the implementation cost goes very high. In contrast, Wireless systems can be of great help for automation systems. With the advancement of wireless technologies such as Zigbee, Bluetooth, Wi-Fi, cloud networks in the recent past, wireless systems are used every day and everywhere.

II. LITERATURE REVIEW

Design of Smart Home Control System Based on Cortex-A8 and ZigBee

In [1], the system consists of three parts which includes user intelligent control terminal, embedded home gateway and home ZigBee wireless network. It can perform functions such as safety and alarm, the indoor environment testing, household electrical appliances control and intelligent lighting and other functions. Users can access Internet web to monitor the home furnishing remotely. The users can also use cell phone with Android smart furnishing control client applications to interact remotely with home furnishing device.

Home Automation Using Internet of Things

In [2], the system uses Intel Galileo that employs the integration of cloud networking, wireless communication, to provide the user with remote control of various lights, fans, and appliances within their home and storing the data in the cloud. The system will automatically change on the basis of sensors' data. The designed system not only monitors the sensor data, like temperature, gas, light, motion sensors, but also actuates a process according to the requirement, for example switching on the light when it gets dark.

An Android Based Home Automation System

In [3], the system allows multiple users to control the appliances by an Android app or through a web site. The system has three hardware components: a local device to transfer signals to home appliances, a web server to store customer records and support services to the other

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Safe Driving Assistance with Road Communication using Zigbee

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Abstract: Today there are various sign indications available on roadside but the driver many times unable to see information due to person mistake and bad climate condition. Nowadays there are new technologies integrated in one system which makes a complex solution and much expensive. So to overcome the above problems we introduced the safe driving assistance with road communication using zigbee technology.

Keywords: Driver Assistance Systems, Vehicular Communication, Zigbee Protocol.

I .INTRODUCTION

Current days we are using various technology such as radar, GPS, sensors. Combining all of these technology into single system become complex system which refers to high power consumption, low battery life, high cost, complexity etc.

To overcome the above problem the solution seeks the new technology which introduces .the zigbee. Nowadays vehicle to vehicle, vehicle to road, vehicle to environment has become the need in order to make road safer, cleaner and to manage the traffic, to reduce the road accidents [1].

While today's vehicle are already able to sense the surrounding environment, we expect that future car will communicate with roadside communication infrastructure and with each other. [2]

Here in this system we use zigbee network. Zigbee is transreciever and is only standard based wireless technology designed to address the unique needs of low cost, low power wireless sensor and control networks.[1]

Due to the advantageous nature of zigbee we used it in driver assistance system that is it provides the information from the preset waypoint to car system about any roadside infrastructure [signboards, drive in restaurant]. Zigbee can be used with combination of RF and ultrasound for indication and for cost benefit. [5]

Here we will place the portable unit in the car and a waypoint unit at a preset point. The waypoint unit will provide the information to the portable unit of any sign indication.

So whenever the information is needed such information is automatically passed on to the portable unit from waypoint unit and the driver in the car can get a clear idea of the contents received**.**

TABLE I. FEATURES OF ZIGBEE[1]

Feature	Wi-Fi	Bluetooth	Zigbee
Battery life time	Several hours	Several days	Several years
Coverage	100m	10m	10m to several km
Nodes number	32	7	65000
Security	SSID	64 bit,128 bit	128bit AES
Complexity	high	complex	simple
Data rate	11mbps	1mbps	250kbps
Time for network communication	3sec	10sec	30msec
Extension	Roaming enable	no	yes

II. LITERATURE REVIEW

ZigBee is wireless technology designed to address the unique needs of low-cost, low-power wireless sensor and control networks [1].

Since ZigBee can be used almost anywhere, is easy to implement and needs little power to operate, the opportunity for growth into new markets, as well as innovation in existing markets, is limitless. The system dedicated is to alert and inform the driver whenever the vehicle approaches a preset waypoint on the road. A ZigBee-based unit is installed at each waypoint, broadcasting relevant information to corresponding ZigBee units embedded in approaching vehicles.

Such a system significantly reduces the reliance on human vision and on-road lighting on human vision and on-road lighting conditions.

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Accident Prevention by Observing Bridge Structural Health

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Abstract: The proposed system and implemented using a real time wireless network for bridge structural health monitoring system the main use of this system is of lossless data transmission over few minutes of continuous. This system is used mainly send the environment parameters for observation and to maintain the fettle of bridge. The main challenge is to ensure that the fettle of civil infrastructure bridge is capable of can resist the accumulate weight of all the vehicles that travel in the bridge. Bridges are most important part of society's infrastructure and secure methods are necessary to monitor them and ensure their safety and efficiency. Bridges contaminate with age and early find out the damage helps in extending the lives and prevent fortunate failure. Most bridges still in used today were built decades ago and are now subjected to changes in load patterns, which can cause localized distress and if not corrected can arise in bridge failure. Recent fortunate bridge failures clearly indicate the urgent need for improving interval-based examination procedures that are qualitative and subjective in nature.

Keywords: 89C51 Microcontroller, vibration sensor, scour sensor, GSM.

I.INTRODUCTION

A measure concern with large civil infrastructure such as bridges, dams, tunnels, etc. is in the valuation of their integrity in relation to the load-carrying capacity due to aging/usage diminution and the occurrence of damage events throughout the life time of structure. The advancement in wireless technology has provided motives to the authors to develop the wireless network based bridge health monitoring system. In this research, sensor devices such as accelerometer, scour sensor and GSM.

Monitoring the damages in the bridge is in concern for the benefit for the public. The vibration sensor is used to identify the internal and external damages. If damage is detected via GSM communication the damage detection is informed to the base station. Bridge health monitoring defines available to monitor bridge health. In addition to this different type of sensing systems, there are other terms capable to bridge health monitoring, as well as the methods and capabilities of the various sensing systems, when choosing a system to meet the bridge needs. Increase in traffic, in urban and rural areas, creates more pressure on the bridge networks than was originally intended.

Bridge engineers require a responsible way to importance of the structural integrity of bridges to maintain the continuous operation of road network while ensuring the safety of the public. Traditional visual inspection methods are both time consuming and costly. They are also qualitative and can only importance of outward appearance. Any internal damage may ignore for a long period of the time. This system can detect changes in the bridge superstructure and in some cases predict impending failures. This system can monitor bridges in real time and warn state engineers of possible problems to avoid tragedies like collapse.

II.PROPOSED SYSTEM

The proposed system an implemented using a real time wireless network for bridge health monitoring system the main advantage of this system is of lossless data transmission over few minutes of continuous. This system is used mainly transmit the environmental condition for observation and to maintain the condition of bridges. Vibration sensor is used to detect internal and external faults. If fault is identify via GSM communication the fault detection is informed to the base station. Scour sensor is used to detect sand mining.

This system includes the GSM module for long and short distance wireless data communication which is mobile phone carrier network. This system also uses sensor and interface LCD for displaying output of sensors.

III.HARDWARE REQUIREMENTS

i. Microcontroller AT89C51
ii. Vibration Sensor(ADXL 335)
iii. Scour Sensor
iv. A to D Converter
v. MAX232 IC, Cable
vi. GSM
vii. LCD
viii. Relay Driver

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Real Time ECG Monitoring System

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Abstract: Current ECG monitoring systems in hospitals use mostly 12 Lead Electrodes along with a DSP signal processing block. The system can be used at doctor's side only & the patient solely cannot check his/her own ECG. In some cases, the patient cannot get emergency treatment. Also the system is bulky & complex which makes it inefficient for portable use. We have designed a system with 3 Lead electrodes along with a small signal processing block which uses the technology of Arduino Uno & MATLAB for signal conversion & representation. The system is cheap, light-weight, portable. Also it provides the self monitoring facility at patient side.

Keywords: ECG, electrodes, patient, doctor, MATLAB.

I. INTRODUCTION

Among all vital signs that track an individual's health, electrocardiogram (ECG) has a significant importance, since it includes meaningful information about the person's heart and performance. It is the primary diagnostic for people with cardiac diseases and is a standard procedure in current cardiac medicine. Much effort has been spent lately to make ECG monitoring an easy and anywhere–anytime available procedure for people with cardiac problems and; especially, for those at risk of heart attack or stroke.

Cardiovascular diseases are some of the most prevalent and serious life-threatening health problems in the world, and represent the main cause of death for people between 44 and 64 years old, and the second most frequent cause of death for people between 24 and 44 years old. Its treatment includes regular check-ups and care which becomes costly for the middle-class people All this facts motivated us to design such a portable system which will bring such patients close to doctor or any concerned person. Information from ECG signal given by our system gives a general idea about patient's heart condition.

II. LITERATURE SURVEY

Cardiovascular diseases are the deadliest in the world, killing 9.4 million people every year, according to the World Health Organization (WHO). According to the WHO, cardiovascular diseases which affect the heart and the blood vessels, resulting in heart attacks or strokes in extreme cases, account for 26% of the deaths in India or 2.5 million[1].

A. Integrated Disease Surveillance Project (IDSP)[2]:

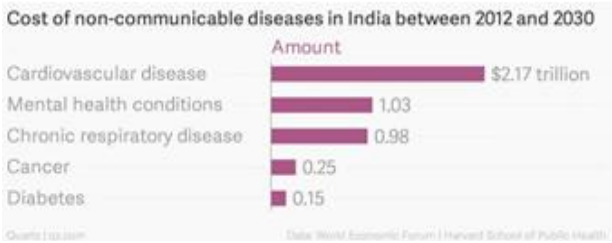
I. Only around a third of the adult population surveyed had normal blood pressure.

II. Half of the adult population was categorized into pre-hypertension group, another 17% were found in stage-I hypertension with the remaining 3% in stage-II.

III. Only 5% of population reported history of hypertension, which requires urgent attention for intervention.

B. Survey by World Economic Forum

All The consequences of such a deadly disease are just as deadly for India's economy. Just as World Economic Forum says,



The study estimates the total economic loss due to non-communicable and mental health diseases in India between2012 and 2030 to be $4.58 trillion— about two and a half times India's GDP— with cardiovascular diseases accounting for almost half of the losses. The losses are calculated by taking into account the money spent on treatment—that ends up hurting personal savings[1]

Heart diseases are the leading cause of deaths among Indians, who account for 60% of all the heart patients worldwide, a study by Registrar General of India and Indian Council of Medical Research found. Stress, tobacco consumption and obesity are some of the main reasons behind the large number of heart patients in India[1].

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To Find Location of Optic Disc in Digital Fundus Images

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Abstract: Optic disc (OD) location plays an important role in automatic diagnosis of diabetic retinopathy. Medical image analysis and processing has great significance in the field of medicine, especially in non-invasive treatment and clinical study. Changes in optic disc shape and area may indicate disease processes, particularly glaucoma, and accurate identification of the disk boundary may be used to quantify changes. In this paper we are presenting the preprocessing step which will be beneficial further to calculate the cup to boundary ratio of optic disc. This paper presents technique for finding location of optic disc from digital retinal image. The optic disc pixel (ODP) should first determine for further processing. The optic disc pixel (ODP) can be further used for finding location of optic disc. Three methodologies for finding optic disc pixel and finally one voting algorithm for final optic disc pixel are presented in this paper.

Keywords: optic disc pixel (ODP), maximum variance method, maximum difference method, low pass filter method.

I. INTRODUCTION

Diabetic retinopathy (DR) is a chronic disease which nowadays constitutes the primary cause of blindness in people of working age in the developed world.[1].computer diagnosis is called for to allow detection of early signs of diabetic million patients with diabetes every year[8]. Retinopathy in The benefits that a system for automatically detect early signs of this disease would provide have been widely studied and assessed positively by experts [2]. It is caused by damage in blood vessels in retina. This is important for find the optic disc pixel from given retinal fundus image. The aim of this work is to finding location of optic disc innretinal image. It needs as initial information the coordinates of a pixel located within the OD. A simple but reliable and very fast OD location methodology is also proposed to obtain the required OD pixel.

OD segmentation is also relevant for automated diagnosis of other ophthalmic pathologies. One of them and maybe the most noteworthy is Glaucoma. It is the second most common Cause of blindness worldwide. Glaucoma is identified by recognizing the changes in shape, color, or depth that it Produces in the OD. Thus, its segmentation and analysis can be used to detect evidence of Glaucoma automatically.

A computer-aided fundus image analysis could provide an immediate detection and characterization of retinal features prior to specialist inspection. With the increasing size and number of medical images of eye, the use of computers in facilitating their processing and analysis has become necessary. Optic disc or optic nerve head is the point of exit for ganglion cell axons leaving the eye. The optic disc represents the beginning of optic nerve and is the point where the axons of retinal ganglion cells come together. A bio microscopic exam can give an indication of health of optic nerve.

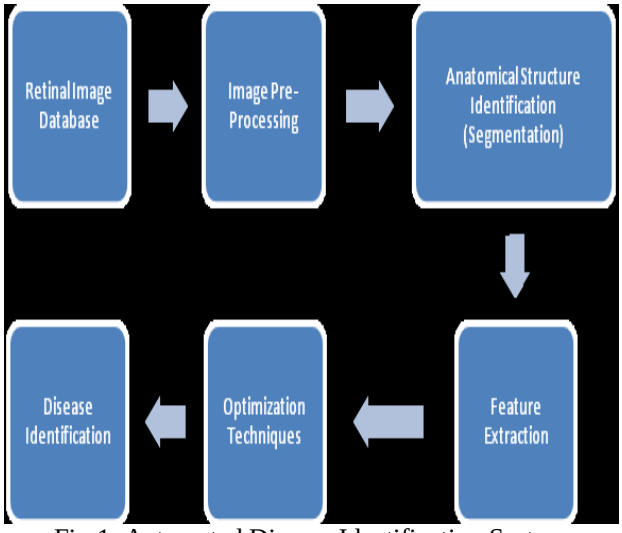

Fig.1: Automated Disease Identification System

Now days in human being the eye problems occurred in a huge amount. In which blindness comes due to optic disc. So detection optic disc is a very important research in medical science. Optic disc (OD) detection is an important step in developing systems for automated diagnosis of various serious ophthalmic pathologies.

This paper presents a new methodology for finding the ODP from digital retinal images. It requires a pixel located within the OD as initial information. For this purpose, a location methodology based on a voting-type algorithm is also proposed. From this or by using this algorithm we

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Data Transfer using Visible Light Communication

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Abstract: The visible light communication (VLC) refers to the communication technology which uses the visible light source as a signal transmitter, the air is used as the transmission medium, and the appropriate photodiode as a signal receiving component. Visible light should be considered as the medium for wireless transmission because it has got few advantages over other standard wireless transmissions. LED's can be switched on and off faster, which helps for data transmission. To encode data in the light can be done by varying the rate at which the light flicker ON and OFF to give different strings of 1s and 0s. The intensity of the light is modulated so rapidly that human eye can't detect, so the output appears to be constant. The photo detector at receiver side receives different strings of 1s and 0s and receiver decodes it in its original form. This data then can be saved to receiver computer. In this way data can be transferred from one computer to another computer.

Keywords: Visible Light Communication (VLC), LED, Light Sensor (Photodiode), Data Transmission

I. INTRODUCTION

Communication is the essential part in the field of electronics and communication. It deals with transfer of data from one place to another place. Communication medium has major role in the successful data transfer and to determine the mode of transmission.

There are two mode of transmission; wired and wireless transmission. In wired transmission, data is transferred through a physical medium or a link whereas no physical link is used in wireless transmission. Both mediums have it's own characteristics and advantages.

Wireless communication uses the RF source to modulate. But it takes some time. But, if we use a visible light instead of RF wave source, transmission speed can be increased. The visible light communication (VLC) refers to the communication technology which uses the visible light source as a signal transmitter, the air is used as the transmission medium, and the appropriate photodiode as a signal receiving component.

Visible light should be considered as the medium for wireless transmission because it has got few advantages over other standard wireless transmissions. VLC uses white Light Emitting Diodes (LED), which send data by flashing light at speed. VLC uses white Light Emitting Diodes (LED), which sends data by flashing light at speeds undetectable to the human eye [1]. When signals reach the receiver through the indoor wireless channel, the photodiode will convert the optical signals to electrical ones and the original information will be recovered. This type of communication has several advantages respect to the RF wireless communications, such as free use of the visible spectrum, increased security in communication, the bandwidth 300 THz and null electromagnetic interference [3]. It has a major advantage that it causes no interference to RF-based devices.

This made wireless communication possible in RF hazardous areas such as hospitals and space station. In addition to these two key advantages, safety, simple installation procedures and band licensing-free characteristic also helped to increase VLC's potential to be developed as an alternative, or even a new standard to the wireless communication scheme.

II. PROPOSED SYSTEM

The basic principle of working of system is based on conversion of data to be transmitted into TTL form using MAX232 IC. This logic is then applied to LED which will get turn ON and OFF accordingly.

The switching period of LED is fast so it can't be detectable to human eyes. The photodiode at receiving side will capture all the light from LED and fed to MAX232 IC which will convert this data (which is in the form of 0s and 1s) into its original format. For applying data to the transceiver circuit USB to serial converter cable can be used.

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USB to USB Data Transfer using Raspberry Pi and ARM

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Abstract: An importance of portability is well known to us so to achieve this, we are going to design a system which we can carry anywhere. Using this system we can not only transfer data but also we are able to see the transfer of the particular file which we are going to transfer by using graphical display .Hence the system to be designed will be more compact .In our project we are going transfer data between different USB devices using Raspberry pi and ARM7 without using any computer or laptop .As shown in block diagram four USB devices can be connected to Raspberry pi while one USB device can be connected to ARM 7.Out of these various devices one device can act as a master while others will act as slaves. After sending particular command to processor ,the processor will start fetching data from master USB device and ARM processor will wait from the signal from destination or slave USB.As soon as processor gets the signal from destination device data transfer operation get started.

Keyword: Raspberry Pi, ARM7, USB, Graphical display.

I. INTRODUCTION

As we discussed earlier importance as well as need of portable devices is known to every one of us.

It is very easy to find an USB device along with its application around us everywhere.

Carrying laptop just for transferring data is not possible or not affordable now a days when all of us need all devices to be handy.

Moreover, data transmission using laptop or PC involves wastage of lots of power as well as time.

So an effective remedy for this problem is to implement a small and handy device which is able to fulfill our expectations.

II. BACKGROUND

Various models have been developed on this theme. But we should pay our attention on overcoming drawbacks of these models.

For achieving this goal we are going use touch screen display instead of keypad, this will reduce the bulkiness and hence device will be more handy.

For achieving higher speed of transmission we are going to use Raspberry Pi.

III. BLOCK DIAGRAM

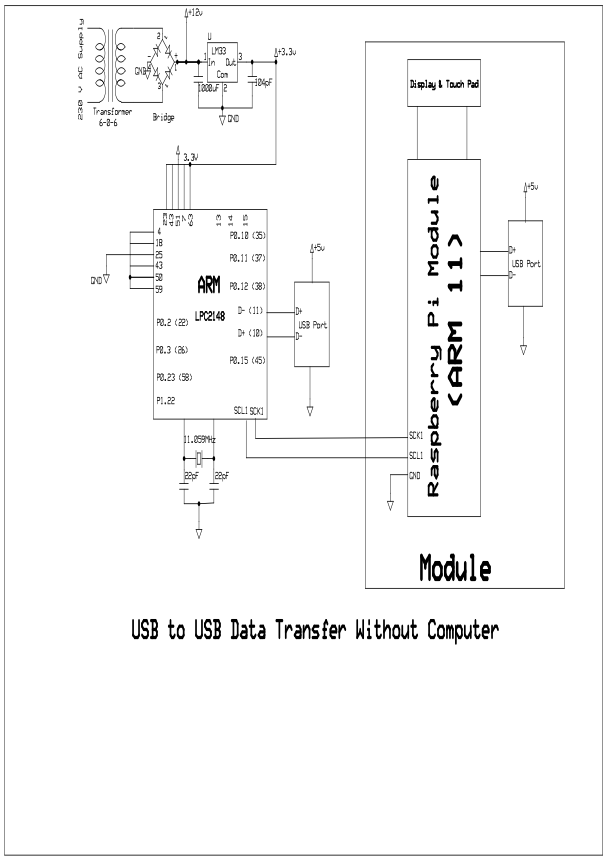

Fig.1:Proposed system

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Implementation of Automatic Solar Tracking to Maximize Illumination and High Battery Storage

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Abstract: The solar tracking system is controlled by PIC microcontroller depending upon the control signal given in this technological world. The need for renewable energy resources has been very essential rather than non-renewable resources, because cost of the non-renewable resources sums to be a larger one and it will not provide an ecofriendly environment. So, in this concept we introduce the Parabolic Solar Tracking System instead of the flat solar tracking system which is very common in our day today life. By implementing parabolic solar tracking system, which uses the multifunction solar cells with parabolic mirror reflectors the efficiency can be improved up to 39.2% compared to the single junction cells. This enhanced feature is due to the infinite number of junction in the multifunction solar cell and the shape of the reflectors that is designed. The tracking system is controlled by PIC microcontroller depending upon the control signal given by LDR.

I. INTRODUCTION

This Paper display a model of hybrid power generation by using solar power and gives a power generating method from sunrays or light. That method of power generation is simple and is taken from natural resource. This needs only extra maximum sunlight to generate power. This paper helpful to for power generation by setting the equipment to get maximum sunlight automatically. This system is tracking for maximum intensity of light. If when there is decrease in intensity of light, this system automatically changes to its direction to get maximum intensity of sunrays or light. We are using three sensors in three directions to sense the direction of maximum intensity of light. The difference between the outputs of the sensors is given to the microcontroller unit. We are using the microcontroller for tracking and generating power from sun–light. It will process the input voltage from the comparison circuit and control the direction in which motor will be rotated so that it will be receive maximum intensity of light from the sun.

II. HISTORICAL BACKGROUND

Energy is the key input to drive and increase the life cycle. Primarily; it is the well gift of the nature to our in various forms. The consumption of energy is directly proportional to the progress of the mankind. With ever increasing population, improvement in the living standard of the humanity, industrialization of the developing many countries, the globalmainly demand for energy is expected to increase the rather significantly in the near future. The mainly primary source of energy is fossil fuel, however finiteness of fossil fuel large scale as well as reserves environmental degradation caused by their widespread use. The Particularly global warming, urban air Pollution and acid rain, There are strongly suggest that harnessing of non-conventional energy, renewable and environment friendly energy resources is vital for steering the global energy supplies towards a sustainable path. Nuclear deal is going to help our power sector. We have need lots of power to keep the momentum of growth going to realize the dream of our more than one billion people. It will not readily solve our energy problems.

We need to tap other sources of power as well, like the renewable sources such as wind power, hydroelectric-power, tidal power etc. It needs a lot of vision. Though, participation of youth is happening but it requires more intensity. Twenty years ago, the Atomic Energy Commission was laid down a target of 10,000 MW of electricity generation by the end of 20th century.

Today, in 2010 our capacity is about 4,200 MW and due to shortage of uranium many of these plants are operating at much below their capacity. Therefore, there is need of the non-conventional energy in large scale still now. Energy is stored in a lead acid battery and is made to charge an emergency light and is made to glow during night time.

A) Solar Energy:

The Energy is released by sun as the electromagnetic wave. That energy reaching the earth's atmosphere consists of about 8% UV radiations, 46% are visible light and 46% infrared radiations. There are Solar energy can be used in two ways as solar heating and solar electricity.

There are Solar heating is to capture sun's energy for heating buildings and for food stuffs etc. Solar electricity is mainly produced by using photovoltaic solar cells which are made of semiconductor materials that directly convert sunlight into electric power.

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"Automatic Lift for Construction with Electronics Safety"

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Abstract: The Bucket elevator& Belt conveyor are the Part of transportation of material from one Place to another in a Particular space. Belt conveyor was huge load carrying capacity, large covering area simplified design, easy maintenance and high reliability of operation. Belt Conveyor system is also useful in material transport in foundry shop like supply and distribution of molding sand, molds and removal of waste. Hence Bucket elevator can be of great use during bulk material handling. This paper is mainly based on the combination of Bucket & Belt Conveyers to perform complex task within a short time and successfully in a cost effective way. On account of this, a machine and its physical description are covered here with some basic calculation. Lift is transport devices that are used to move either goods or material vertically.

Keywords: AVR@mega8A, L293D motor driver.

I. INTRODUCTION

Material handling involves "small-distance movement that usually takes place within the confines of a building such as construction or plant and between a building and a transportation office." It can be used to make "time and place usefulness" through the handling, storage, and handling of material, as distinct from manufacturing, which creates "form utility" by changing the size, form, and makeup of material. It is often said that Material handling only adds to the cost of a product, it does not add to the value of a product. Although Material Handling does not provide a product with form utility, the time and place utility provided by MH can add real value to a product, i.e., the value of a product can increase after Material Handling takes place.

• The value get added by the extra delivery of a material is higher than or exact equal to the additional cost of the service as compared to regular mail service—otherwise regular mail would have been used.

•Robotics and Automation has been in all like the most challenging endeavour in the American construction engineering academic community over the past decade. Similar for this field has been shared by several government and private research institutions and laboratories. The industry, including design and construction firms, material suppliers, equipment manufacturers and owners, with a few notable exceptions, was somewhat slowly in relating self to this new field of research and development activity. Whereas the process of disseminating the early results from the research and development community to industry practice is now slowly beginning to take place. There are no universally accepted definitions for the terms 'construction automation'. For the sake of our discussion, we will assume that 'construction automation and robotics ' refers to the engineering or performance of any construction process, on-site or off-site, by means of teleported, numerically controlled, semiautonomous, or autonomous equipment.' The primary "technology drivers" for introducing robotics to construction sites in the U.S. were health and safety hazards to workers from chemical or radioactive contamination. In extreme cases, where human access to the jobsite is impossible due to excessive levels of contamination, performance of the required work tasks can only be accomplished through the use of robots regardless of the assigned payable cost. On-site experience with robotics in these environments, as well as in underwater and outer space tasks, has provided the developers of robotic systems with valuable lessons with respect to the practicality of certain robot design and task implementation solutions. The underlying incentive for automating construction tasks is potential labor savings once the new technology proves successful. Although the U.S. has not experienced acute labor shortages in the construction industry similar to those in a few other developed nations, there appears to be significantly diminishing number of skilled construction workers at this time. There is also a potential for a shortage of labor in the future due to demographic reasons. Hopes for expanding the construction activity into difficult work environments, improving construction productivity and quality through the use of automation on jobsites are also frequently mentioned.

II. LITERATURE SURVEY

"Automation of Material Handling with Bucket Elevator and Belt Conveyor"
I. Ghazi Abu Taher

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Automatic Counting and MSG Sending using GSM

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Abstract: The Automatic counting and MSG sending using GSM system is most widely used in industries. Automatic bag counting offers extreme advantages over traditional off determining what product has been received at the godown. In this system also detect defected bags. And defected bag is automatically removed by using shaft. Manually it is not possible to find defected bags so this is good advantage to this system. If weight of bag is less than the considered weight then weight sensor sense it and defected bag is found and immediately shaft will remove that defected bags and after detection bag will automatically counted by laser sensor. Manual counting is very time consuming process. The basic purpose of automatic counting and MSG sending using GSM module system is bags are counted automatically and MSG will be send to mobile of supervisor in specific period. It is most efficient system for counting bags. The PIC16F877 controller provides counting product automatically and also help to find defected bags accurately. The laser sensor makes the system efficient.

Keywords: PIC16F877, laser sensor, weight sensor, shaft, GSM module.

I.INTRODUCTION

In automatic counting and MSG sending using GSM module system bags are counted automatically and MSG will be send to mobile. Purpose of this project is to avoid manual work of counting bags. Due to this we can reduce manual work and increase accuracy of work by doing this we can increase the profit of industry. By using weight sensor system will find defected bags and remove by using shaft. In various industries, market application we use such type of counting machine.

In the system PIC16F877 controller is used. It supports analog to digital conversion function and also consumes low power. There is a laser sensor is used for automatic counting of any product packets. When bags cut the light coming from laser sensor then count is increased by one. Buzzer is applied for indication. It also includes real time clock (RTC) for 24 hour accurate counting purpose. MAX232 IC establishing serial communication between PIC16F877 controller and GSM. After completion of 8 hours counting numbered MSG are send to the mobile of supervisor through GSM module[4]. LCD is also include in the system for displaying counted number of bags. Counted numbers are stored on erasable programmable read only memory. Worker not count large number of bags accurately in a single day.[2]

II.PROPOSED SYSTEM

A. Software

The software part is based on keil µvision4.

i. Keil µVision4

Keil c compiler for the microcontroller is most popular compiler in the world. It provide more features that is it provide complete symbol and type information for source-level debugging.

B. Hardware

i. PIC16F877 controller

PIC controller have Harvard organization of memory. In PIC number of data lines for data memory and a program Memory are different.

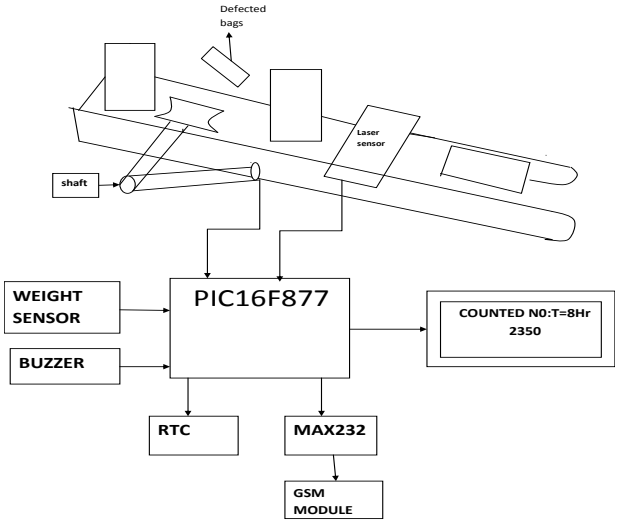

Fig.1 Block diagram of Automatic counting and MSG sending using GSM

Also the number of address lines for program and data are different. PIC uses 14 bits for instructions which allows for all instructions to be one word instructions. It have

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Smart Notice Board System

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Abstract: The Educational institutes in huge campuses and Buildings, to conveying some Notice to the students or staff becomes very difficult sometimes. It is not possible for the administrators to update the notice board manually every time as it takes lots of time. Hence a system that will update the notice board automatically by taking only the voice input from the administrator will be helpful for the institutes.This project consists of digital notice board that can display the messages, a voice input device and speech resignation system. The administrator commands or notices are acquired in speech through the mice. These notices are converted into corresponding text notices by and display on the notice board with the help of microcontroller device and LCD.

Keywords: LCD, messages, voice, resignation system, notices.

I. INTRODUCTION

In this world everyone needs a comfort living life. Man has researched different technology for his sake of life. In today's world of connectedness, people are becoming accustomed to easy access to information. Whether it's through the internet or television, people want to be informed 0and up-to-date with the latest events happening around the world The inclination of making the manually controlled things automatic has become a common practice these days. The process of making the things automatic is being exploited in almost all the major fields of life. Making things automatic reduces burden on the humans. The time utilized and the effort used in manually controlled processes is much higher than the automated systems. [2] Considering the commonly used notice board system in our schools, colleges and universities. The advancement in technology, there occurs a gap between the two. In these institutes, we still use manual way of putting the important notices, class and examination schedules, results, etc. in the notice boards. This manual system needs more effort and time to get the written announcements from the faculty and then put it on the notice board. In this paper, we have developed a smart notice board system which is automatic in nature and provides us information &we can update the notices, changed schedules, display results quickly on the display system without the interference of other person. The advancements in technology has been put together to make an effort to automate the process of manually publishing notices. [3] Notice Board is primary thing in any institution or public utility places like bus stations, railway stations, colleges, malls, etc. But sticking various notices day to day is a difficult process. A separate person is required to take care of this notices display. This project is about advanced wireless notice board. The project is built by using ARM controller.

II.PROPOSED SYSYEM

The intention of this project thus is to deliver the messages within a short time span. The system is based on the android application and display messages on LCD. A person is able to deliver his/her message in very easy manner. There are no certain connections to perform this particular activity in short period. It is wireless system using Bluetooth of mobile phone. This project deals about an advanced high technology wireless notice board.

Block Diagram:

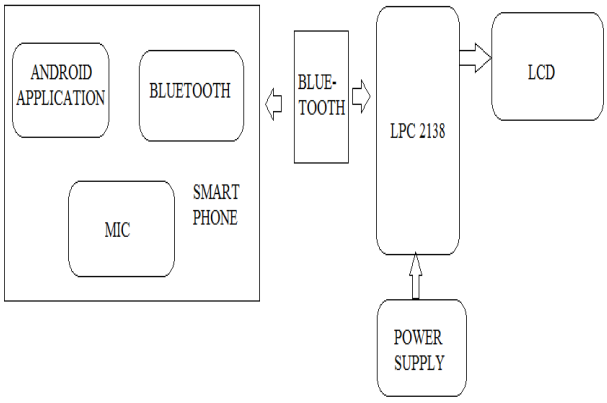

Fig. 2.1Block Diagram of Smart Notice Board System

A. WORKING:

The system uses Bluetooth protocol for transmission of data from transmitter to receiver via Bluetooth. Received data is recognized by using Google database which is

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Application of operation research techniques for solving assembly line balancing problem

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Abstract: In type's production management techniques, operation research is one of the most powerful techniques for purpose of shopfloor management decision making. The application of the techniques are helped to solve many complex problem regarding with assembly controlling, scheduling which otherwise are more difficult to solve. To the survival and growth of an industry product mix decision is an important planning activity. Single-product assembly line used for making mass production and mix-product lines used to assemble different shape and size product. There are many constraints under which the product mix decision is to be made.

Keywords: Operation research, Production scheduling, Product mix decision.

I. INTRODUCTION

Balancing work load is a first goal for assembly operations for various types of production system without the flexibility to respond effectively to changing production requirements by the customer or as well as the demand of market. It is need ability to maintain optimal line balance may be seriously compromised. However, the line routing flexibility of modular systems allows parallel system to be added for balancing of cycle rates between slow and fast workstation tasks or the routing of reject parts off-line and reworked parts back on-line. Integration of test functions. As assembly operations become both more complex and efficient; test or inspection functions are being incorporated as an integral part of the process. Retrofitting these functions into an existing system may pose insurmountable obstacles unless the system is modular and affords the flexibility of reconfiguration.

II. TYPES OF ASSEMBLY LINE BALANCING PROBLEM

In this type of the problems, models for the assembly line design and the development problem are developed. Finally start with a basic model that minimizes the number of stations, while allowing stations in U shape Parallel line. Further, this model is reformulated to incorporate cost effective factor for different paralleling situations as shown in fig.1. The basic assembly line balancing problem is techniques to allotment a set of tasks to an ordered set of workstations such that the precedence relations are balance, some measure of performance is optimised.

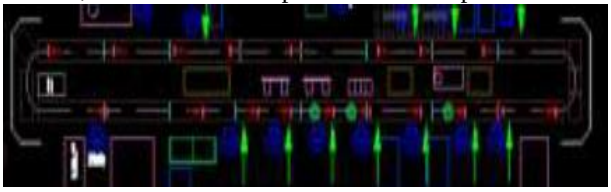

Fig.1. Parallel Assembly line layout

Assembly line balancing problems are classified into two types, type 1 and type 2. In type 1 problems, the required number of production rate, cycle time, assembly tasks, tasks times, and precedence requirements will be given. Our aim is to minimise the number of workstations. A line with also give results in lower labour number and reduced size requirements for the material handling so effort are to be less [4].

Type 1 [4] problems, generally occur when designing new assembly lines. For this purpose, to achieve the future demand the number of workstations should be reduced. For demand is very high from the market firm can also use this type 1 problem, to minimise the number of extra stations to be installed.

Type 2 [4] problems, when the number of station on assembly line or operators is fixed, the aim is to minimize the cycle time or through put time. This will maximise the production rate. Type 2 balancing problems generally find, when the organisation wants to produce the optimum number of production by using a fixed number of assembly stations without purchasing capital investments or without developed space. Here, we can identify precedence, while balancing the main line; we have also to consider subassembly lines. Type 1 problems are more common than type 2. One of the main problems to design and development of assembly line is how to arrange the workstations and various tasks which is to be performed.

III. VARIOUS O.R. TOOLS AND TECHNIQUES

1. Linear Programming: This is a constrained optimization technique, which optimize some criterion within some constraints. In Linear programming the objective function (profit, loss or return on investment) and constraints are linear. There are different methods available to solve linear programming.

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Multipurpose Agricultural Robot

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Abstract: This paper is to develop a robot capable of performing operations like automatic seeding, irrigation, fertilization. It also provides manual as well as auto control. The main component here is the ARDUINO that supervises the entire process. At the present time, robots are increasingly being integrated into working tasks to replace humans especially to perform repetitive task. Seeding is one of the first steps in farming. During this process seeding is carried out in all the rows of the farming plot. In irrigation process, the soil sensor used for monitoring the environmental condition. It checks this level and alerts the farmer, then slowly applies small amount of water to the planted seeds in all the rows of the farming plot. The fertilization process is same as irrigation process but some crops need fertilizers when the seed germinates and the plant begins to grow. The robot works on solar energy.

Keywords: Solar panel, ARDUINO, Seeding, Irrigation, Fertilization, Soil sensor.

I. INTRODUCTION

The main aim of agricultural robotics is apply robotics technologies on the field of agriculture as well as the agricultural challenges to develop new techniques. Now days, no one can end up the day without using any kind of embedded system products. It makes our human life very robust and makes work comfortable. The 21st century is said to be century of creation, progress, globalization and so much else, but the second side too, that is nothing but 21st century is century of the population, global warming, drought and cloud burst also helpless health factors! Automation in agricultural robotics system has been developed to implement a number of agricultural productions in many countries. Such as picking, harvesting monitoring, weeding, seeding, fertilizer, irrigation. But in this project functions included are soil based applications of Seeding, Fertilizer, and Irrigation. The purpose of this project is to design, minimize the labour of farmers in addition to increasing the speed of the work as well as increase the yield of agriculture.

A robot which performs manual and automatic operation, this is useful for the humans. In this project, it is shown that the farm cultivation process in autonomous agriculture system which is controlled by ARDUINO. The technique of seed operation in sowing is based on row per column depending on the types of cultivation. The irrigation process slowly applies water to the sown seeds in all the rows and columns of the farming plot. In fertilization process, fertilizer is sprayed on all the plants.

II. PROPOSED SYSTEM

In this system Agribot is a robot designed for agricultural purpose. Here our purpose is to build a system whose data is acquired through the use of X, Y, Z plotter (Open Source System). The robot can be autonomous or controlled manually and can perform variety of tasks with great accuracy. In this project there are two switches, auto and manual.

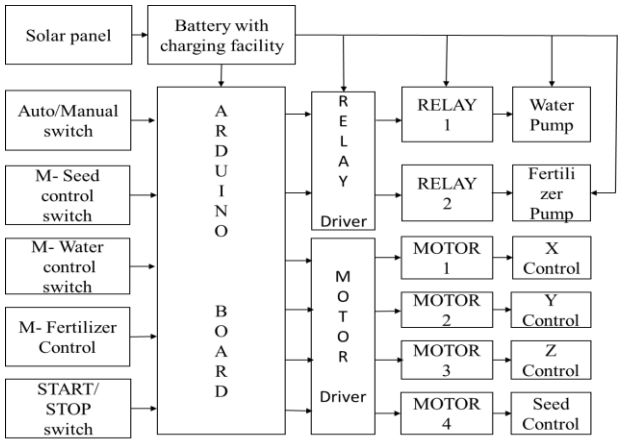

Fig. 1. Block diagram of proposed system

A. Auto / Manual Switch

This switch is used to operate our farm boat in either Automatic Mode or Manual Mode.

B. M- Seed Control

This switch is used for manual Seed Control. If you press this switch then only seeding operation is done automatically.

C. M-Water Control

This switch is used for manual water feed Control. If you press this switch then only watering operation is done automatically.

D. M-Fertilizer Control

This switch is used for manual fertilizer feed Control. If you press this switch then only fertilizer operation is done automatically.

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Automatic Irrigation System using GPRS Module

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Abstract: Agriculture is source of livelihood of majority Indians and it also has great impact on economy of the country. In dry areas where there is inadequate rainfall or when a farmer is not aware how use water when there is water storage or when there is no water storage irrigation become studious. Wireless sensors networks is an automated irrigation system used to enhance the use of water for agricultural crops. System consists of a wireless network that is the soil moisture sensor placed under the soil where plants roots are reached which is distributed network. The system has water level sensor which will indicate the presence of water level in tank. Gateway unit manages information related to the sensors triggers actuators and data transmitted using GPRS module. A software application was developed by predetermining the threshold values of soil miniature and water level that was programmed into an arm controller. The data from GSM module is transmitted or received from or to mobile using software application or normal texting mode which optimizes the use of water quantity. Control voltage fluctuation to get system work properly.

Keywords: GSM system, water level sensor, soil moisture sensor.

I. INTRODUCTION

Continuous increasing food demand requires the huge improvement in food production technology. In a country like India, where the economy is mainly based on agriculture and the weather circumstance are isotropic, still we are unable to make full use of agricultural resources. The main reason is the insufficiency of rains & scarcity of land reservoir water. Continuous water extraction from earth is decreasing the water level due to which lot of land is coming slowly in the zones of un-irrigated land. In modern drip irrigation systems, the most significant advantage is that water is supplied to root zone of plants drip irrigation due to which a large quantity of water is saved. At the current era, the farmers have been using irrigation techniques in our country through manual control in which farmers irrigate the land at the regular intervals. This process system sometimes consumes large amount water or sometimes the water reaches late because of this crop get dried. Lack of water can be detrimental to plants before visible wilting take place. Slower growth rate, lighter weight fruit because slight water deficiency. This problem can be perfectly rectified if we use automatic microcontroller based drip irrigation system in which the irrigation will occurs only when there will be intense requirement of water.

II. SYSTEM DISCREPTION

WATER LEVEL SENSOR:
Water level sensors (also known as transceivers when they both send and receive) work on a principle similar to radar which evaluate attributes of a target by interpreting the echoes from radio or sound waves respectively. Ultrasonic sensors produced high frequency sound waves and evaluate the echo which is received back by the sensor. Sensors calculate time interval between sending the signal and receiving echo to determine the distance to an object. This technology can be used for measuring: direction and wind speed, tank or channel level, and speed through air or water. In this case to measure water level ultrasonic sensors are used.

RELAY:
Relay is an electrically operated switch. The relay is used here to switch the motor to ON /OFF position according to the water requirements. Current flowing through the coil of relay creates magnetic field which attracts a lever and changes the switch contacts. The coil current can be on/off so relays have two switch positions and they are double throw switches.

LCD Display:
The LCD Display is used to provide the user with digital values converted by the PIC microcontroller. LCD driver is a link between microcontroller and LCD. It is important to interface the LCD according to the driver specification. To understand the algorithm of LCD interfacing user requires datasheet of both LCD and LCD driver. In LCD initialization you have to send command bytes to LCD.

GPRS:
GPRS stands for General Packet Radio Service. GPRS is technologies to improve 2G phones to enable them for

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Smart Hair Salon Management System

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Abstract: Nowadays, there is rapid need of automation to reduce human efforts and increase the work efficiency as everyone knows the importance of booming technology in many areas. As early methods of hair salon management systems are time consuming and incompetent so most probably these are neglected. Here the total salary of the workers in the salon and customer details are not properly recorded hence human efforts are more required. Therefore, proposed system known as "smart hair salon management system" which helps to overcome these drawbacks. The proposed system helps both the customer and owner to maintain the salon records in particular format. Based on the customer's entry as well as his/her registration, worker provides service to the respective customer according to their demand. Similarly, the process continues and queue is created. The type of queue formed is basically the principle of "First in First Out" (FIFO) strategy.

Keywords: Management, Customer, Worker, Hair Salon.

I. INTRODUCTION

The 21st century is said to be century of inventions, century of development, century of globalization because no one can end up the day without using any kind of embedded system products. It makes human life very smarter and to feel comfortable. Being a salon client today is inconvenient. The customer have to remember that the customer need to make an appointment, then hope he or she remember during business hours, and finally scramble to find the phone number and take time out of his or her busy day to make the call. And never mind finding user reviews of local salons, tracking those down somewhere on the web is a headache that most don't even attempt.

This is the experience of countless salon-visitors every day. As traditional methods of hair salon are inefficient, therefore proposed system is known as "smart hair salon management system" is considered here. The proposed system is based on embedded system. In this system, first the customer messages or call to the salon then worker at the salon accepts this message or call. Worker first calculates how many customers are waiting as well as predefined time for particular activity to give reply of that message. When the customer comes in particular given time, worker give service to it according to their demand. Similarly, the process is continues and queue is formed based on the functions. In this proposed system Microcontroller AT89c51 is used as a main control element. LCD is used to display information regarding salon schedule. RTC is used for giving current time.4x4 keyboard is used to assign particular activities such as Hair Cutting, Shaving, Facial treatment etc. GSM Module is used for sending and receiving details of information. People can easily be reached through their handheld devices such as mobile phone irrespective of their location, Hence, there is need to develop a system that will combine the resources and reach people through short message service (SMS) using GSM module. PC is used for storing whole database. [1]

II. LITERATURE REVIEW

The traditional system of hair salon was manual and insecure because there was no any counting system of customers coming in the salon which creates sometimes major issues. The customer as well as the owner faces the problems.[2] These early systems are dependent on paper-pencil systems for billing purpose that means the records of bills of customer and the workers working in their salon are in written form. The records may get wrong due to anyone's mistake. There is difficulty in maintaining records of all these tasks manually. Hence, proposed system is the best solution of avoiding all these problems. Salon manager are often responsible scheduling staff members, training new front desk workers. [3]

Since salon is a service sector, so the success of hair salon depends on the satisfaction of customer. The business of salon is totally dependent on customer satisfaction.

III. PROPOSED METHODOLOGY

The block diagram of the proposed system is as shown in Fig.1. the details of each block and working are as below.

A. Working Principle:

The functional block diagram consists of total eight blocks. The proposed system mainly consists of blocks such as Real Time Clock (RTC), 8051 Microcontroller (AT89c51), IR sensor, comparator, MAX 232, GSM Module, 16x2 LCD, PC, and 4x4 keypad. [7]

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Machine Parameters Monitoring For Automatic Plant Irrigation System Using GSM

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Abstract: Now a days farmers are struggling hard in the agricultural fields round the clock. They do their field work in the morning session and irrigate their land during night time with intermittent intervals. Farmers working in the farm lands are dependent on the rains and boar wells for the irrigation of land. Even if farm land has water pump, manual intervention by farmers is required to turn ON/OFF pump whenever needed. The task of irrigating fields is becoming quite difficult for the farmers due to lack of regularity in their work and negligence on their part because sometimes they switch on the motor and then forget to switch of which may lead to wastage of water. The proposed system, tried to minimize manual intervention by the farmer and helps the farmer to ON/OFF the motor and provide update status of the operation carried out in the agricultural fields via SMS with the help of GSM modem and monitor Temperature, Voltage, Current and Dry run of the motor because farmers are not familiar with the technical problems occurred in the motor.

Keywords: Irrigation, Motor (Water pump), Sensors, Arduino Atmega328, GSM.

I.INTRODUCTION

Agricultural field is playing a vital role in Indian economy. Where irrigation mechanism is important. In India most of the irrigation are operated manually. In recent times, the farmers have been using irrigation technique through the manual control in which the farmers irrigate the land at regular intervals by turning the water pump ON/OFF when required but sometimes task of irrigating fields is becoming difficult due to irregularity in their work. The farmers does not get current situations of the agricultural land when they are not physically present in the land.[1] In this paper GSM(Global System for Mobile Communication) is used to ON/OFF the motor without physical presence of farmer in the field and inform the user about the exact field condition then the information is passed to user in the form of SMS. The proposed system monitors the Temperature, Voltage, Current and Dry run of the motor (water pump). In this controller act as a core device for functioning of the automated process
after it has been initiated by the GSM. The microcontroller continuously receives the data from sensors and after this the data is displayed on LCD. By giving miscall, water pump gets started, only when there is sufficient water level in the tank. For sensing the moisture level in soil we are using moisture sensor. When there is moisture in soil then the output of moisture sensor is low, otherwise its output is high. Once the motor is started, a constant monitoring on soil moisture and water level is done and once this moisture is reached to sufficient level, the motor is automatically turned off and for this the message is send to subscriber that the is turned off. Motor used for irrigation purpose need to be monitor for effective irrigation and protect it from damage. An easy way to comply with the conference paper formatting requirements is to usethis document as a template and simply type your text into it.

II.LITERATURE SURVEY

1. In the existing system farmers have to travels to fields often at odd hours just to switch ON/OFF the motor. Sometimes they forget to switch off and water pumps are left running for longer time. This lead to wastage of both electricity and water. Laxmi Shabadi proposed wireless connection between server and nodes. Irrigation will takes place only when there will be intense requirement of water.[1]
2. In Purnima, S.R.N Reddy, "Design of remote monitoring and controlling system with automatic plant irrigation system using GSM-Bluetooth", proposed system is artificially supplied water to land where crops are cultivated. Traditionally boar wells, canal water & rainfall were a major source of water supply for irrigation. This method has led to several drawbacks like under irrigation, occur irrigation which in turn causes leaching and loss of nutrient content of soil.[2]
3. In past few years controlling and monitoring the machines remotely has seen an interesting field of study among researchers. This paper mainly focuses on reviews in the field of remote monitoring and control, the technology used and their potential advantages. The paper proposes an innovative GSM/Bluetooth based remote controlled embedded system for irrigation.[3]

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GSM Based ATM Security ATM Banking

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Abstract: Now a day the idea of designing the Security Based ATM banking system project is born with the observation in our real-life incidents happening around us. This GSM base project deals with avoidance of ATM theft from robbery. So, overcome the deficiency found in existing technology in our society. We are implement the new proposed system. In this system, we provide GSM based security. In case when we lost the ATM card or theft form robbery then we are essay block the transaction in proposed system. we provide double security to ATM money transaction. First, when ATM user Insert the ATM in ATM machine, he can type the password and second, then message goes through card holder via GSM then card holder can send the security code or OTP using GSM through main system and start the transaction via card holder. When we lost the ATM card then in second case card holder cannot send the security code and stop the transaction and he directly block the card using GSM system.

Keywords: GSM, AT89C51 Microcontroller, LCD, Flash magic, Keil tool.

I. INTRODUCTION

In today's technically advanced and developed world, autonomous systems are improvement rapid popularity in world. As the social computerization, automation and developed technics has been increased and the ATM and credit card has been installed and spread out to simplify the financial activity, the banking activity has been simplified so more, however the crime related with financial organization has been increased over numbers in the world in proportion to the ratio of spread out of automation, devices and technologies.

Now, a day theft from robbery increases gradually. ATM related crime cases are increases. For stop this situation weare put GSM technology in ATM system. We are only change the software by using GSM technology. By using GSM, we provide double security in the ATM banking. So, same amount of robbery can be control.

II. LITERATURE REVIEW

The existing self-banking system service has got very high popularity with 24 hours' service to customer. Use of ATM (Automatic Teller Machine) is helpful for money transaction purpose. ATM is activated by placing the card, then putting or entering the pin number of the particular card. But this system is not safe as possible as to use, because anybody can access the system if they have the card and pin number like we share our card and pin number to our friends, family members who may miss use it [1]. There is various existing system are developed such as Security in e-banking via without using ATMs card [2] provides high security in authentication which also protects user from unauthorized access. In this system of model user required personal identity number (pin). Protected cash withdrawal in ATM using mobile phone [3] describes a method of implementing two way authentications.

III. BLOCK DIAGRAM

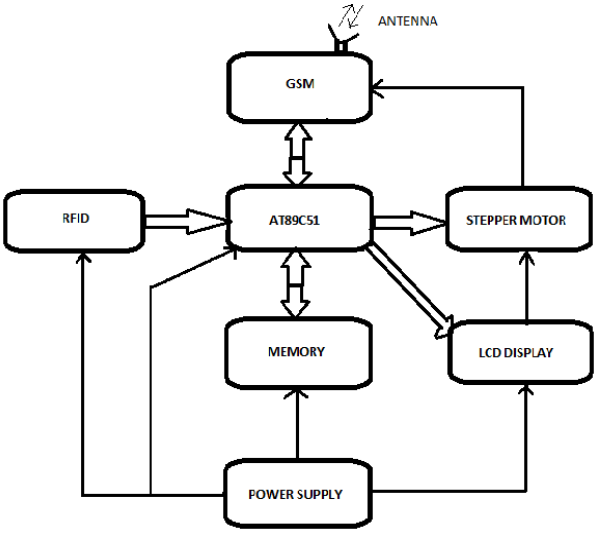

Fig. Block Diagram of GSM Based ATM Security ATM Banking

Fig.1. Block Diagram

Hardware required are: -

1. GSM module
2. Power supply
3. AT89C51 Microcontroller
4. LCD
5. RFID
6. Stepper motor
7. Voltage regulator IC 7805

When user can be use ATM in ATM machine, user type the password. Then message send to card holder by interfacing GSM module with AT89C51. This total system can be control by using microcontroller. This all message display on LCD. When transaction start then stepper motor run which is interface with microcontroller.

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"Review of Dynamic Wireless Sensors Networks for Real Time Safeguard of Workers"

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Abstract: Now a days, difficult task for construction sites is to track workers spread out across a large construction areas. It becomes more difficult when construction site collapse. Many sites use radio system but to overcome the demerits of radio system we are using wireless technology for tracking of workers. A location and tracking system is very important for sefty in future. For accurate location information is being used these system in the construction site. We have to implement an accurate location tracking mechanism using Zigbee with providing information of changes in atmosphere. The system can be applied outdoors especially in big construction sites for avoiding accidents. Wireless sensor networks have been developed widely. Sensor networks has sensor nodes which are very small size and low cost. One of the critical wireless sensor network applications is localization and tracking mobile sensor nodes. ZigBee is a new n rising technology for low rate, low power and low range communication networks, which aims to provide long battery life for network devices. The communication of transreceiver with base stations is through Zigbee module. We also include sensors such as temperature, vibration and humidity to intimate the base station and workers when some atmosphere changes occur. We are using real time system for continuous monitoring purpose.

Keywords: Wireless sensor network, Zig.ee, Sensors, Tracking.

I. INTRODUCTION

Constructions in cities are developing rapidly but precaution for safety of workers is negligible. It is a one of the major problem on construction sites. Workers are exposed to many dangerous environmental changes which increase the risk of their life. Construction workers are the largest group of service providers in city. Majority of workers from urban area are poor which are employed in building and construction industry. Health of workers gives direct impact on their potential due to which productivity loss occur at construction sites. The people at construction site face several problem such as collapse buildings due to earthquake or some other difficulties, sometimes there should be problem due to high temperature or humidity. To prevent all these problems faced by workers in construction site. Wireless Sensor Network (WSN) used to monitor physical or ZigBee is nothing but a communication protocol for wireless networks used to transmit or receive information between two or more nodes. All information is displayed on 2X16 LCD display. Real time clock is additional feature through which system provides real time output which is main purpose of this project.
environmental conditions, such as temperature, humidity, vibration etc.We proposed a project to measure temperature, humidity, vibration by using different sensors. The data related to all workers are transmitted to PC by using ZigBee module

II. SYSTEM DESIGN

These system we are going to implement on helmet of workers this helmet called as smart helmet. System mainly consists of controller, ZigBee, battery, display and different types of sensors such as temperature Sensor, humidity sensor and vibration sensor. In this vibration sensor will be used to detect vibrations. When there are continuous vibrations on respected construction site. Temperature sensor is used to detect the level of temperature from atmosphere. Also humidity sensor will be used to detect moisture in atmosphere and humidity sensor used when there is dampness in air the sensor will sense that change.

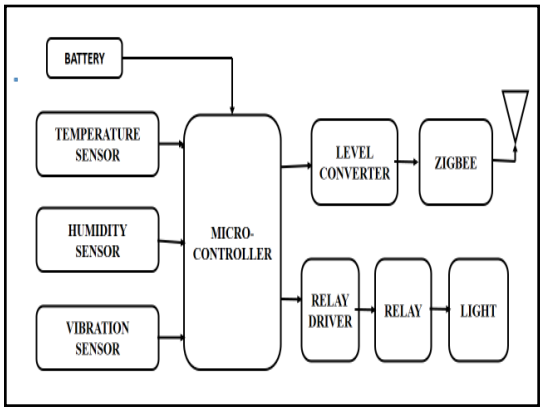

Fig 2.1 Transmitter section

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Full Automatic Threading Machine with AVR Control

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Abstract: The vibration of threading machine is major problem in Kalburgi Industry, to overcome the problem by our project. So we have to design this system," Threading machine automated with AVR control". The manually operating threading machine is automated with the help of pneumatic actuator. The AVR used as control system. The objects are clamped and declamped using pneumatic actuator. In a pneumatic system the working fluid is a gas (mostly air) which is compressed above atmospheric pressure to impart pressure energy to the molecules. This stored pressure potential is converted to a suitable mechanical work in an appropriate controlled sequence using control valves and actuators. Due to this reduce vibration problem which is main object of our project.

Keywords: Pneumatic actuator, control system, automatic threading.

I. INTRODUCTION

The 21st century is said to be century of inventions, automation. Now, a days automation plays important role in industry. Automatic control system, which saves manpower and financial statement & provide better accuracy. Hence we have selected the project "Full Automatic Threading Machine with AVR control."

The threading system used for automation is installed in Mechanical workshop of Institution. The system includes actuating elements like pneumatic actuator, direction control valve, proximity sensor, and it is programmed effectively using AVR. The manually operating threading machine is automated with the help of pneumatic actuator. There is clamping and declamping of machine to thread the object by using actuator. When thread the object , there is major vibration problem. The vibration of threading machine into up and down motion with full axis.

There is a need to develop automatic control system for threading machine. These done with PLC or Raspberry Pi also. But PLC (Programmable Logic Controller) becomes more expensive project. With Raspberry Pi also increases more complexity for project. It is like mini computer. Using Raspberry Pi, reboot the system every time and these not possible to reboot every time. So we have to design system with AVR.

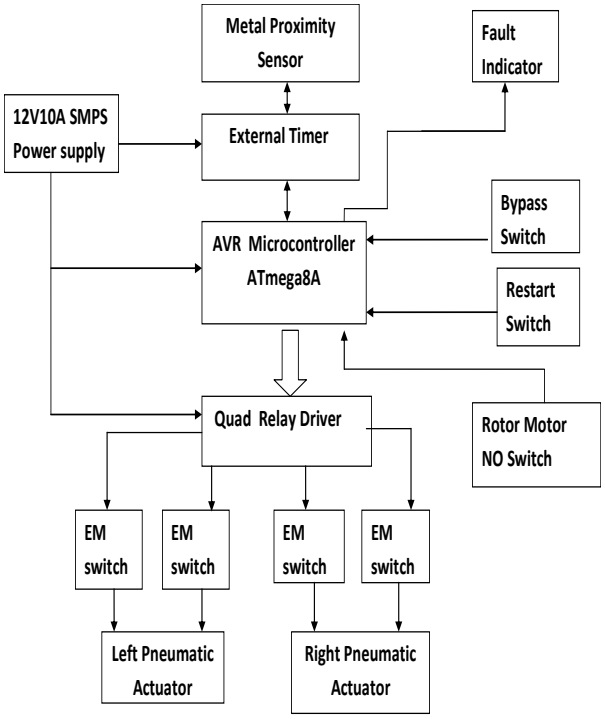

Fig.1.Proposed system

II. PROPOSED SYSTEM

a. Block Diagram Description

12V 10A SMPS power supply is required for project. Proximity Sensors is a sensor able to detect presence of nearby objects without any physical contact. Proximity sensors emit electromagnetic field or beam of electromagnetic radiation and looks for changes in field or return signal. The object being sensed is referred to proximity sensors target.

Proximity sensor can have high reliability and long functional life because of absence of mechanical parts and lack of physical contacts between sensed objects. They used in machine vibrations monitoring to measure the variation in distance between a shaft and its support bearing.

AVR(Automatic Voltage Regulator)is a hardware device used to maintain voltage to electronic device. Atmel AVR core combines instruction set with 32 general purpose working register. These directly connected to ALU allow

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Press Machine Automation

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Abstract: An insertion of sheet metal in a press machine is a major problem in a kalburgi industry. To overcome the problem by our project" Press machine automation with AVR control." There is rapid need of automation reduce human effort and increase the work efficiency, here we are going to design such a system which automatically manage and control the punching operation of sheet metal by using AVR controller This device offer a unique combination of performance power efficiency and design flexibility. AVR (automatic voltage regulator) is a hardware device used to maintain voltage to electronic device. Inductive proximity sensor used for the detection of metal object .When a metal object is placed within the magnetic field generated by the sensor, the resulting current induced from an additional load and the oscillation ceases. This Causes the output driver to operate and depending on the normally open and, normally close the output signal is produced .In this way to detect a sheet metal this is the main aim of the project.

Keywords: Punching Force, AVR controller, Manufacturing Process.

I. INTRODUCTION

The 21st century is said to be century of inventions, automation. Now, a days automation plays important role in industry. Automatic control system, which saves manpower and financial statement& provide better accuracy. Hence we have selected the project "Press Machine Automation."

Now a days in industries especially in automobile and other industries the automatic sheet metal press machine. Earlier the press machine where operated manually so the output of machine was very less so there is need to be an automation. The main aim and concept of this project is to have the overcome the problem metal sheet insertion in press machine by using the automation this problem will be reduced because automation saves the time ,it saves the energy, it reduces the labour efforts, it maintains the accuracy, and provide good quality of product (Programmable Logic Controller) becomes more expensive project. With Raspberry Pi also increases more complexity for project. It is like mini- computer. Using Raspberry Pi, reboot the system every time and these not possible to reboot every time. So we have to design system with AVR. Maintains the accuracy and provide good quality of product the design and fabrication of automatic punching machine controlled by PLC this process can have a greater control over the process [1].

PROPOSED SYSTEM

A. Block Diagram Description

12V 10A SMPS power supply is required for project. Proximity Sensor is a sensor able to detect presence of nearby objects without any physical contact. Proximity sensors emits electromagnetic field or beam of electromagnetic radiation and looks for changes in field or return signal.

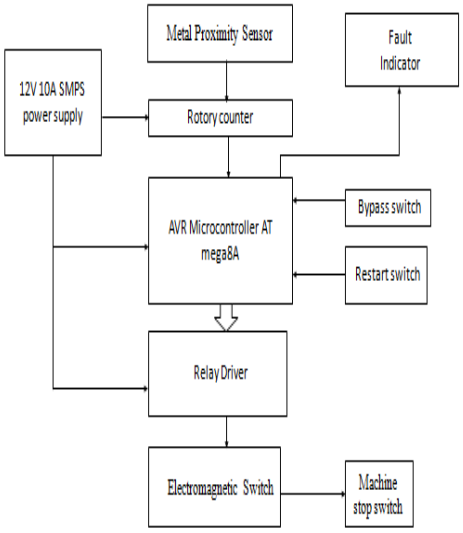

Fig.1.Proposed System

The object being sensed is referred to proximity sensors target. Proximity sensor can have high reliability and long functional life because of absence of mechanical parts and lack of physical contacts between sensed objects.

AVR (Automatic Voltage Regulator) is a hardware device used to maintain voltage to electronic device. Atmel AVR core combines instruction set with 32 general purpose working register. These directly connected to ALU allow him to independent registers to be accessed in one single inst. executed in one clock cycle.AVR uses Harvard architecture with separate memories and buses for programming data. Atmel AVR core combines a rich instruction set with 32 general purpose working registers. All the 32 registers are directly connected to the Arithmetic Logic Unit.

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Red Signal Alerting for Train using Wireless Communication

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Abstract: Human negligence and human error have becomes the primary reason for many train accident in India. The primary goal of this project is to avoid train accident and train collision using wireless communication. Our system is useful for train driver. To maintain the train flow, massive amounts of signals are required at pre-set distances. Traditionally, a train driver has to keep a constant lookout for any red signals that might appear on the post. The train driver then decides whether to stop or to continue with his designated path on the basis of these signals. But it's quite troublesome for the drivers to keep an eye out for every visual sign. To make life for train drivers and the maintenance staff as well easier, engineers have come up with an ingenious technology named as wireless red signal alerting for trains. At this time train will be gradually slow they also make for a good control systems.

Keywords: RF Module, Microcontroller, REED Switch, Embedded System.

1. INTRODUCTION

The Indian Railway network is one of the biggest rail networks in the world. Indian railway Network Handling and managing such a vast network is not an easy. The rail network consists of a many junctions and many signals set distances to manage the train flow. So far that train driver needs to linearly check for any red signals on every post and decide whether train stop or move train on station. It is very difficult to linearly keep track of every individual signal for the drive.

The propose an automatic alerting system that alerts the driver of any red signal ahead. Full assembling works on the basis of RF technology. A timer circuit is used in the transmitter circuit and this transmitter circuit is placed at a signal pole.

Transmitter circuit to produced RF beam between the pulses for a particular time interval. Then switch is turned ON only when the RED signal is ON. These RF beam cycles are repeated until the RED signal is ON. The transmitter linearly transmits RF signals informing about RED signal.

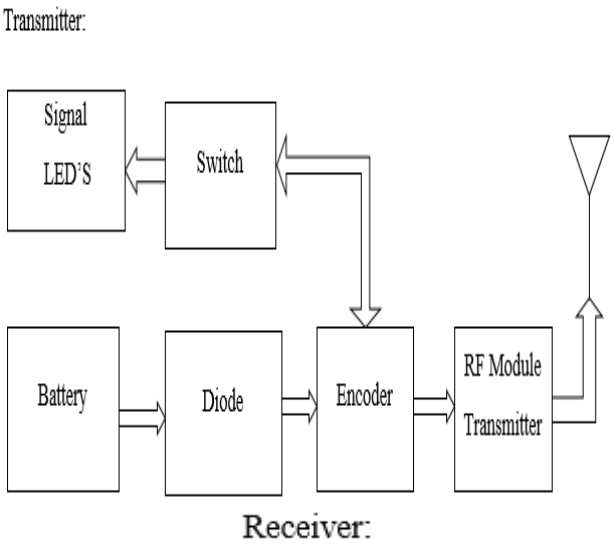
An RF receiver circuit is placed in the train. This is placed in such a way that it receives RF beam. Then the train whenever comes between the certain range area of the RF transmitter, RF receiver circuit receives the RF signal as input and sends it to the microcontroller.

The microcontroller then processes this receiving data for alert the driver about the signal ahead of train.

2. PROPOSED SYSTEM

The goal of this work is to design and implement automatic red signal alerting in railway system to prevent the train accident. In this project transmitter fitted on signal pole, then RED signal is turned ON through control room. Transmitter continuous transmits RF waves informing the signal. The receiver circuit fitted in train. Trains come in proper range of the RF transmitter. Capture this signal and demodulate this signal. Microcontroller process on it then alert the driver and automatically motor will be slow.

BLOCK DIAGRAM:



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Medicine Handing Robotic Arm with Computer Synchronization

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Abstract: Now a day's most of the work is done by robot or robotic arm. This proposed system deals with designing and implementation of a "medicine handling robotic arm with computer synchronization". This system is divided into three parts such as transmitter section, robotic arm and platform. Robotic arm used to perform simple activities like pick up objects from source location and placing that objects to the destination. It is based on a user and robotic arm via RF. In the proposed system user can control robotic arm by using computer. In the system robotic arm controlled as like human arm movement by using LPC2148. The programming is done on LPC2148 microcontroller. Motor driver is used for movement of robotic arm which is forward, backward, left and right for given path. This system is wireless which is based on RF module. This proposed system work done by robotic arm would be highly precise.

Keywords: LPC2148 IC, PIC16f877A, RF Module, Motor driver IC, Sensor LM358N.

I. INTRODUCTION

Robotics is the department of engineering science and technology related to robots or robotic arm and their design and applications [2]. Now a day's wireless communication is widely used. ARM processor is one of the new inventions of embedded processor which takes embedded system at a new level in the world. In this proposed system we are going to use embedded system. In today's world most developing technique is wireless embedded system and robotics [4]. Using embedded technology we can easily connect data wirelessly over a long distance.

In proposed system we can use RF for transmitting and receiving purposes. Using radio frequency we can easily collect information by wireless. Most important work of proposed system is to detect the object, pick that object and place in the destination. For detection of object we can use infrared sensor to detect the path. In this system we can used motor driver IC which is move to right side, left side or forward and backward. Using that motor we can move robotic arm. The aim of this proposed system is to design a robotic arm which is helpful to overcome the strength and speed as like human [5]. We can reduce human error by using that system.

II. DESIGN OF PROPOSED SYSTEM

In proposed system there are two sections one is transmitter section and another is receiver section. In transmitter section we can use four blocks which consists of RF transmitter, computer, max232 and PIC16f877A is used.

In receiver section RF receiver is used. The main part of the proposed system is LPC 2148. Three sensors are used to for path detection. Motor driver IC L293D is used.

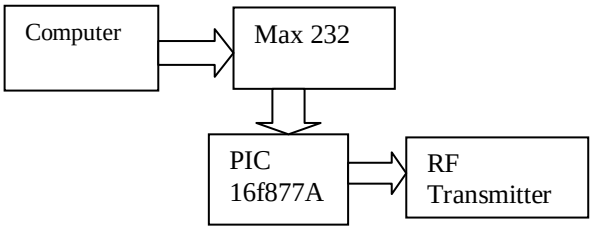

Fig 1.Block diagram of Transmitter section

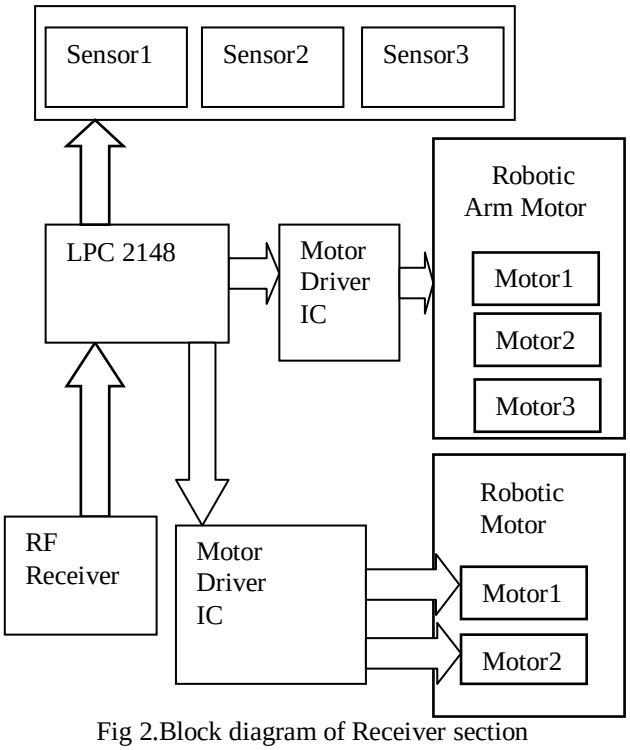

Fig 2.Block diagram of Receiver section

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Design & Development of Heart Beat Rate Measuring Device using Finger Tip

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Abstract: The design and development of microcontroller based heart beat rate, blood pressure, body temperature measurement using fingertip, monitoring them all at once is a costly process. In this paper, a low cost and portable method is proposed and implemented to measure heartbeat, blood pressure and temperature from human body using the microcontroller device with LCD output. Heart rate of the subject is measured from the finger using infrared sensors. Blood pressure using wrist band and temperature by temperature sensor. The heart rate is a parameter most significance to medicine, physics and many other fields. The heart rate is closely related to the function and status of the human heart. More than two million people are at high risk of having heart attack. It would be helpful if there was a way for these people to monitor their heart. So, we have a problem. That is the way our project focuses on how we can utilize this problem and find a solution. The heart rate of a person is different depends on the age. The most heart rate measuring tools and environments are expensive and do not follow ergonomics. Here heart is measured by employing the pulse method i.e. blood flow in to the finger. Heart rate for healthy person is around 72 beats per minute, babies have a around 120 bpm, older children have heart rate at around 90 bpm.

Keywords: fingertip sensors, microcontroller, LCD, power supply, Keil uVision.

I. INTRODUCTION

The heart rate monitor is personal monitoring device that allows subject to measure their heart rate in real time.Heart rate measurement is one of the most important parameters of human cardiovascular system. This project explains how a single chip microcontrollercan be used to analyse heart rate bit signals in real time.A compact sensor is used to monitor the heart beat in analog form. Temperature sensors and heart beat sensors is connected monitor the patient condition. To check the condition of the patient we required thermometer.

The Hardware and software design are oriented towards a single-chip microcontroller-based system. The specialist at a distance can monitor the patient condition so that we can savethe life. This system is to be available at reasonable prices. The heart rate of a person is different depends on the age. The most heart rate measuring tools and environments are expensive and do not follow ergonomics.

II. BLOCK DIAGRAM

The heart rate monitoring system includes the following blocks as shown in figure1. The Hardware and software design are oriented towards a single-chip microcontroller-based system. The design and development of microcontroller based heart beat rate, blood pressure, body temperature measurement using fingertip, monitoring them all at once is a costly process. In this paper, a low cost and portable method is proposed and implemented to measure heartbeat, blood pressure and temperature from human body using the microcontroller device with LCD output.

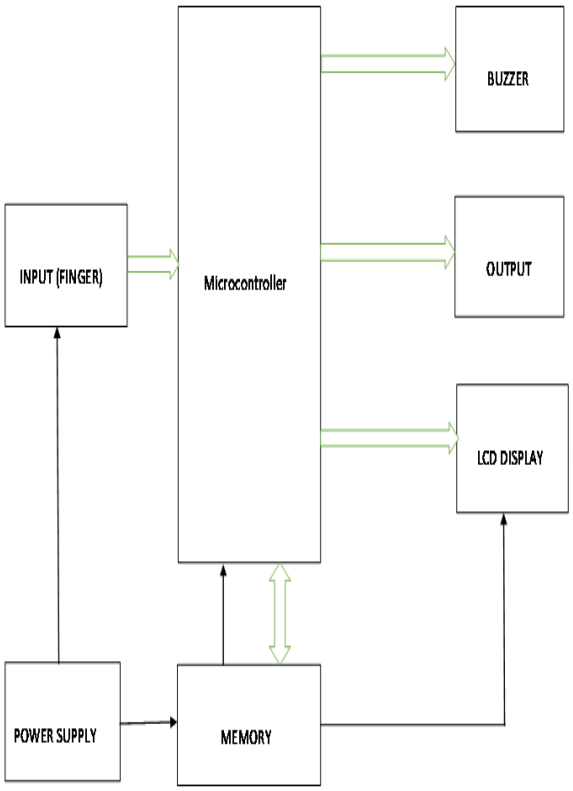

Fig1.Block diagram of system

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Smart Digital Oscilloscope using Bluetooth and Android

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Abstract:An oscilloscope, known as a scope, CRO or DSO is a type of electronic test instrument using which we can observe constantly time varying signal voltages, usually as a 2-D graph in which we can represent electrical voltages using the vertical axis plotted against time. Oscilloscopes nowadays we use today are CRO or DSO which is little bit difficult to use as well as not portable and consumes more power.

The system proposed consists of hardware device and an android application. This measuring System is based on Android device with application and equipped with Bluetooth Module which can measure input signal using Micro-controller and send this input signal to the Bluetooth of An Android Smartphone's. The hardware includes circuitry to capture the input voltage signals and an embedded Bluetooth module will transmit the captured signal information to an Android device for displaying the waveform. Using Android Smartphone we can observe Square Waveforms and Triangular Waveforms, Sinusoidal Waveforms. In this system an Android Software Application has been designed and developed for Smartphone based on android platform whose function is to display the information in the form of different parameters like Square, Triangular, and Sine Wave etc. This range for application to work is 30 meters between the Bluetooth of the Android device and external Bluetooth device. So this handy oscilloscope can be carried anywhere and is easy to use.

Keywords: dsPIC33FJ16GS504, Bluetooth module, Android phone.

I. INTRODUCTION

Oscilloscope is basic measurement device which is used for measuring purpose. It helps to you observe how the voltage behave at any moment in time. In the CRO major disadvantage of CRO are to spend huge amount of money to buy it and carry to difficult to carry from one place to another place. Now a day's portable Oscilloscope is available in the market nut they are very costly. In our project, we implement digital oscilloscope using Bluetooth and android system consisting of hardware device and software device application. New Technology, with low power consumption, dual Channel, portable. it is a Bluetooth embedded device which will capture input voltage signal and transmitted them to an external device Android is a Linux operating system design basically for touch screen mobile device such as a smart phone. Advantage of this android application is mainly environmental sustainable application, high mobility ,three time lesser than the cost of CRO and wireless the cathode ray oscilloscope is type of electronic test instrument that allow observation of constantly varying signal voltage, usually as a tow-dimensional graph of one or more electrical potential difference using the vertical or Y-axis, plotted as function as a time .this allow the measurement of peak-to-peak voltage of a waveform, the frequency of periodic signal , the time between pulse , the time taken for a signal to rise to full amplitude , and relative timing of several related signal.

In our project objective is:

1. To implement a system to measure signals and display it on android phone.

2.To implement low cost, portable, low power consumption .the input will be processed by embedded system and it will transmitted Bluetooth module.

II. LITERATURE SURVEY

The development of an oscilloscope using Bluetooth was in earlier reported, it is prototype system called the "Android Bluetooth Oscilloscope", in which use Bluetooth module to send data to an Android phone which display the waveforms on its screen .where transmitter circuit uses Microchip dsPIC33FJ16GS504 and an LMX9838 Bluetooth 2.0 SPP module. [1]

In literature survey we found that the oscilloscopes they are currently available in the market are have some drawbacks: very costly, more power consumption and small resolve displays. Using PIC18F458 microcontroller bulky transmitter circuit for the analog-to-digital conversion of the input signals. The proceed data on the PIC are then transmitted to the phone via Bluetooth module. [2]

From research we found that data rate's upto 2 Mbps are not sufficient with existing software stacks designed on the PIC controller. Therefore, the approach recommended

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Zigbee and RFID Based Student Attendance Monitoring System with Energy Saving

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Abstract: In today's world the use of RFID technology is increased in the fields like health-care, transportation, agriculture, and hospitality- industry because of most popularity of RFID technology. In our project the main purpose is that, to save the valuable time and energy required for maintaining attendance records of students. Attendance Monitoring System by Using Zigbee and RFID technology are designed to collect and manage student's attendance record from RFID devices installed in an educational institute. After the verification of the student identification in the classroom, the system could generate simplified student attendance database for analysis purpose in schools or collages. The RFID system consists of an RFID tag, reader and a user interface computer. When the RFID tag is activated by the Radio Frequency field, then it transmits back the identification contents stored in memory by modulating the incoming Radio Frequency field. The reader detects and demodulates the signal and identifies the tag shown by teacher or student. Objective of our project is to install proposed system in colleges or schools which help to element the wastage of time taken by manual attendance system. The major problem faced by whole world is unnecessary use of energy devices which causes wastage of energy; our project is going to solve this problem by add-on energy saving system.

Keywords: Energy saving system, IR Module & Attendance Monitoring System, Zigbee, RFID.

I. INTRODUCTION

The major difficulty faced by schools and colleges is time consuming manual attendance; the attendances are recorded manually by the teacher and therefore are prone to personal errors. There arises a need of more useful as well as effective methods for to overcome this problem. This problem is solved by today's most popular RFID technology. RFID technology is used for identification of tags and data collection purpose. RFID is not actually a new technology; it only quickly gained more attention recently because of its low cost and advances in other computing technology that opens up more application fields. RFID becomes radio RF and microchip technologies to create a smart system that can be used to verify, monitoring, secure and to do objects inventory.[1] At their simplest, RFID systems use tiny chips called ―tags that contain and transmits some data for verify information to an RFID reader, a device that is interfaced with computers [4]. In today's life energy saving is become a one of the most need. So we made an automated energy saving system which is very useful for that. In that a simple IR module is used to sense a presence and absence of human in room and according to that system keep ON or OFF energy consumptions devices like Fan, Lights etc.

II. LITERATURE REVIEW

In paper [2] Attendance Monitoring System Using Zigbee and RFID are designed to collect and manage student's attendance record from RFID devices installed in an educational environment. Based on the identification of the student in the class, the system could generate simplified student attendance database for analysis purpose. Student's attendance automation is based on personal profile. Students or teacher profile can be edited any time without making changes in the hardware. In the RFID system contains RFID tags, reader and a user interface computer. When the RFID tag is activated by the Radio Frequency field, then it transmits back the identification contents stored in memory by modulating the incoming Radio Frequency field. The RFID reader identifies and demodulates the signal and recognizes the tag.

In this paper [3], try to solve today's lecture attendance monitoring problem in developing countries using RFID technology. The application of RFID to student attendance monitoring as developed and deployed in this study is capable of eliminating time wasted during manual collection of attendance and an opportunity for the educational administrators to identify every classroom analysis for allocation of proper attendance scores and for further management decisions.

In our project the attendance monitoring using Zigbee and rfid is somehow same but the new concept in our project is that energy saving function. In that the bidirectional IR sensor detect the presence and absence of human in room and turn ON or OFF energy devices like FAN, LIGHT etc.

III.SYSTEM DESCRIPTION

A. Energy Saving System

Often we see visitor counters at stadium, mall, offices, class rooms etc. In that the bidirectional IR sensor detect the presence and absence of human in room and turn ON or OFF energy devices like FAN, LIGHT etc.

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Energy Efficient Outdoor Light Monitoring and Control Architecture using Embedded System

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Abstract- In this project, we proposed an energy efficient outdoor light monitoring and control system that can monitor and handle outdoor lights more efficiently as compared to the conventional systems. The proposed system uses the GSM wireless devices which allow more efficient lamps management. The Energy Consumption of outdoor or a specific area can be recorded and account on Energy Saving Lighting System with integrated sensors and controllers. Moreover, errors which occur due to manual operation can also be eliminated. Also the outdoor lights can be switch ON/OFF through computer from central control station or can be automatic using light sensors embedded in the outdoor light pole circuit of the application. With these facilities the performance and life of the lamps will be increases.

Keywords: GSM wireless devices, sensors, controllers.

I. INTRODUCTION

In the present system, mostly highways are used High Intensity Discharge lamps (HID) for lighting, whose energy consumption is very high. Its intensity cannot be controlled. so there is a need to switch on/off or to an alternative method of lighting system i.e., by using LEDs. This system is built to overcome the drawbacks of HID lamps.

White Light Emitting Diode (LED) replaces HID lamps in outdoor lighting system for dimming purpose. The microcontroller 8051is used to control the light intensity. This system uses LEDs (light emitting diodes) as the light source and it have variable intensity control as per requirement. the LED consumes less power and its life is more, as compared to the other conventional lamps. The most important feature is intensity can be controlled as per requirement for long time which is not available in HID lamps. A group of LEDs are used in the form a outdoor light. The microcontroller have programmable instructions which controls the intensity of lights. [1]

The intensity of lights are kept high during few hours because of high traffic. when the traffic on the roads goes decrease slowly in the late nights, then intensity of light decreases in steps till morning. At the morning time, it is completely shuts down. At evening, the system goes resume and the process will be start repeated.

II. PROPOSED SYSTEM

Proposed system overcomesdrawbacksof existing systemby using GSM technology. In our project, the proposed system integrates new technologies offering ease of maintenance and energy savings and it is appropriate for outdoor lighting in remote as well as urban areas. The system is all round, expandable and totally adjustable to user needs.

A. Block diagram:

The following fig. 1. Shows the schematic block diagram of proposed system. In this block diagram the microcontroller 89C51 is main component of whole circuit.

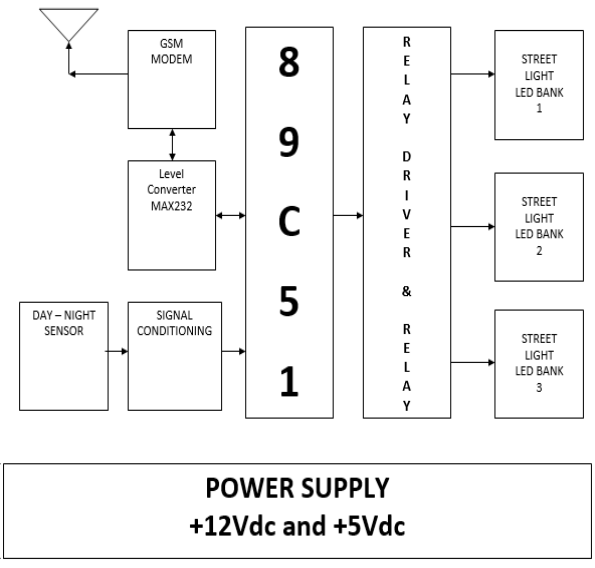

Fig.1. Basic block diagram

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Online Monitoring Based Versatile Telemedical System

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Abstract: Telemedicine is the use of telecommunication technology in medical field. This system consists of both hardware and software component at the patient and doctor ends. The proposed project in this paper provides an image based technique to analyse continuous monitoring of ECG signal and movement of patient by using sensors and digital camera. The system consist of sensors, software (MATLAB), microcontroller, data acquisition unit (computer).The proposed system uses android mobile phone as a interlink between patient and consulting doctor. This method captures the ECG signal and movement of patient from ICU monitoring machine using a digital camera and transmit the data through internet. The prime goal was to develop a telemedical system so that healthcare professional can monitor their patient continuously. The paper proposes a method to capture the image of patient condition using ECG and make the capture image be available to the physician. This system provide information about medical status of patient.

Keywords: Telemedicine, ECG, MATLAB, Android, Sensors, Patient Monitoring System.

I. INTRODUCTION

Health is very important for human being [2]. Telemedicine is highly interested and used in hospitals, clinics, nursing homes, rehabitation hospitals, homes, schools developed area for purpose of monitoring increase patients comfort and improve living standard of patients[4].Tele-health system have many applications like prisons or health department[3].

The healthcare professionals play the major role in day to day life[2].The main aim of this paper is to develop continuous monitoring ECG signal and movement of patient [3].Every time it is not possible for doctors to monitor the patient hence we develop android phone based monitoring system [2].It include anything like medical services at the inpatient or outpatient stage. The patients who live in rural areas they not get proper medical service without any transportation barriers. So we can proposed telemedical system [3].

Even a simple mobile phone can become a powerful healthcare device. Today "Smartphone" plays important role in transmit medical information and advice. Smartphone's will be the most popular technological development for the doctors[2].

Here we are trying to implement portable monitoring system with android mobile phone in which acquire ECG signal are processed[3].Telemedicine reduces the cost of healthcare as well as increase the efficiency of patient life .Telemedicine facility together with technological advances in communication facilitates. The specialist doctor and the patient separated by thousands of kilometers use mobile App to continuous monitoring of ECG signal and movement of patient [1]. Careful design of hardware and software component of the system is able to fulfill any further requirement of users [2].

II. BACKGROUND

Rahmat Sanudin- proposed LabVIEW based monitoring system for small scale application .The system is built using laboratory virtual instrumentation engineering workbench (LabVIEW) software and setting appropriate Internet Protocol(IP) address as well as physical connection between two terminals. This system is able to exchange mobile text message .The drawback of the system is that it is useful for only small scale application [1].

Real time wireless health monitoring application using mobile device by using this system the information contained in the text or email message. The healthcare professional can provide necessary treatment for patient [2].A portable wireless ECG monitoring system using GSM technique with real time detection of beat abnormalities.

This paper proposes the design of a real time low cost portable wireless ECG acquisition system which implemented through common mobile phone and high end

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Automatic Milk Measurement and Flow Control by using Embedded System

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Abstract: This paper focused on system to automate the process of measuring milk in tank and flow control of water. In milk measuring system we use Ultrasonic sensor to sense level of milk and microcontroller to calculate the distance between milk level and receiver by time of span method. LCD is used to display the milk level in terms of liters and percentage. If the milk level is above the specific level of milk tank then control valve is OFF so stop the milk entering. If the milk level is below the specific level of milk tank then control valve is ON. In water flow control, we use capacitive proximity sensor. It can sense not only conductor or metallic material but also non-conductor. The sensing distance depends upon distance. In this flow control system, if the milk can is present in front of pipe or tap of water, then motor is ON by changing the capacitance value and if milk can is not present then motor is OFF.

Keywords: Ultrasonic sensor, Infrared sensor, 0AT89C51 Microcontroller, LCD display, Motor.

I. INTRODUCTION

Now days, the India is moving towards the "Digital India". Automation plays a vital role in industry. Automation is necessary for industry to reduce human efforts to save time and to increase the product ability in more efficient way.

An India ranks first in milk production accounting to 18.5 percent of world production. But still in milk industry for milk measurement purpose traditional methods are used.

One of the method is labeling, in this method labels are printed inside the tank but after some time labeling become fade. So, the approximately measurement are taken by worker which is not accurate.

In milk industry to provide accurate measurement of milk with the help of Ultrasonic sensor. In industry there are many methods are used for level measuring that are floating buffer method, guide tube method. But here we use Ultrasonic system this gives accurate measurement without contact of milk so it is dose not effects on milk.

In milk industry, milk cans are clean at a time. Cans are clean by using motor. If milk can be not present, then also motor is continuously ON in this way more water is waste. To overcome this problem, we use IR sensor system, in this method if can is present then IR sensor detect the milk can [5] then motor is ON and vice versa.

II. BLOCK DIAGRAM

The block diagram for automatic milk measurement system using Ultrasonic sensor and control of water using IR sensor is as shown in fig.1.

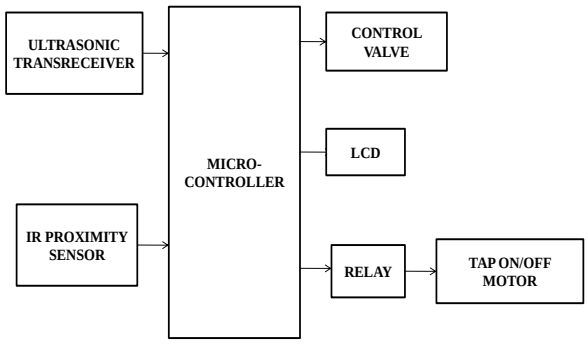

Fig.1. Block diagram

In milk measurement system, we use Ultrasonic sensor. Ultrasonic is a transceiver sensor. In that system, Ultrasonic transmitter transmits the ultrasonic waves towards the level of milk (target) then echo is present at receiver side. Then by using Microcontroller calculate the distance by using time of span method. The result is display on LCD in terms of liters and percentage. And when the milk level is above the particular level at that time control valve is OFF.
In milk industry to flow control of water we use capacitive proximity sensor. It senses the presence of milk can.

III. WORKING

In milk measurement system, Ultrasonic sensor is used, ultrasonic frequency is above the 20 KHz. In that system is initiate by using interrupt 1 (INT1). When the interrupt INT1 is ON at that time Timer 1 is start so that it generates the burst of pulses of 40 KHz frequency. These pulses are amplifying and strike on milk level and reflected back towards the receiver and again amplify this signal.

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GSM and RFID Based Library Book Availability and Location Finder System

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Abstract: GSM & RFID Library book availability & location finder system is very essential for digital libraries. RFID system is now very important because it play a very essential role to reduce human efforts. For find the location of each & every book we need to implement RFID tag. User sends the message to GSM modem. This message is accept by Arduino board & pass it to RFID Reader through level converter. RFID Reader pass that code to RFID Card. RFID Card reads that message & message is transfer to RFID Reader, then Arduino board send that message to Motor driver then Motor starts rotating and if book is available then motor will be stop.

Keywords: GSM- Global System for Mobile, RFID- Radio Frequency Identification, Arduino Mega 2560, Arduino software, LCD- Liquid Crystal Display, RS-232-standerd for serial communication.

I. INTRODUCTION

Libraries are the source of knowledge. In libraries a thousands of books are available so the process of searching any book is very time consuming.[1]

To reduce this efforts of users we are introducing our project. So that we can easily find out book availability and its location. This project is very essential in digital library. When RFID]jy tags are embedded into book then its not visible for detection.[2]

We use passive RFID tags and the range of tag is 10 cm only.There is problem of battery charging and discharging. In this library system we use arduino board. The arduino board 2560 is depends on ATmega2560.[3]

It is one type of microcontroller. Arduino operates on TTL series.[1]GSM modem works on the wireless network. A GSM modem is a external unit they require sim card.[4]

GSM modem is connected to pc through a USB cable. GSM operates on RS232.[5].

This library system capable to reducing the human efforts. This proposed system is completely based on GSM and RFID technology. For simplification we use ARDUINO MEGA 2560.[7]

We can interface PC here. Arduino Mega 2560 consists of 2 serial ports. The RFID technology is useful for fast issuing, returning and reissuing of the books.[10]

II. BLOCK DIAGRAM

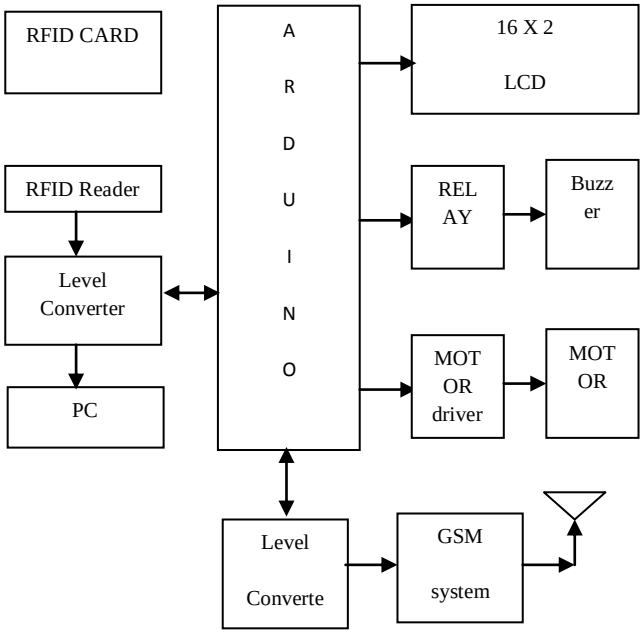

fig.1 Block diagram

III. HARDWARE DETAILS

A. RFID

RFID- Radio Frequency Identification.

RFID is a small electronic device that consists of an small chip and antenna. The chip carries 2,000 bytes of data.[4] The RFID device scanned to retrieve the identification information.[3]

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The Smart Surveillance System by using Raspberry Pi Technology

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Abstract: Implementation of Smart surveillance system using Raspberry pi technology for smart phones is represented by this paper. This project provides security to homes and other control applications. In this project Linux operating system has been used. The raspberry pi system is simple to implement, small size.. With help of infrared sensor raspberry pi operates and controls motion detectors and video cameras for remote sensing.by using web application captured data transmit to smart phone through 3G dongle. With help of possible instruction raspberry pi alters the owner which having smart phone.

Keywords: Raspberry pi, smart phone, PIR sensor.

I. INTRODUCTION

Raspberry pi is a device which operates like a smart computer .This device can be easily plugged into your TV and a keyboard. The Linux kernel-based operating system has been used in raspberry pi system. The system can automatically initiate image capturing or send notifications if any kind of motion is detected then capture the image and send it to smart phone .The raspberry pi model is developed in United Kingdom by the raspberry pi foundation. In raspberry pi for long term storage SD card is used. The Raspberry pi is nothing buts microcomputer squashed onto a circuit board measuring approximately 9cm x 5.5cm [4].

II. FUNCTIONAL DESCRIPTION

A. Block Diagram Description

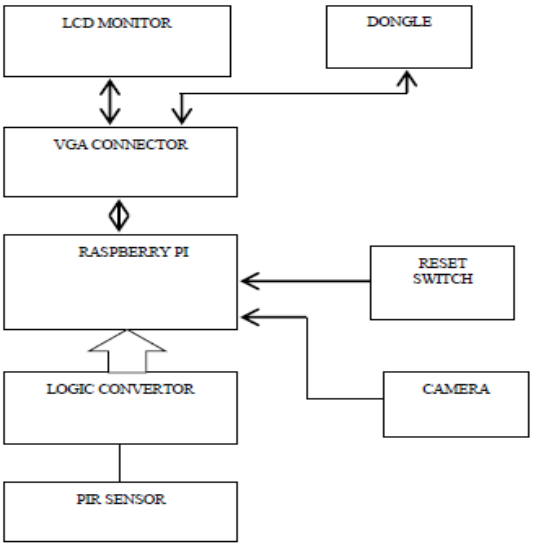

Fig 1. Functional Block Diagram

The raspberry pi model having four inputs such as logic converter, VGA connector, reset switch, camera. The logic converter is used for interfacing between raspberry pi module and PIR sensor. The function of logic convertor is to convert voltage from high level to low level and vice versa. Here logic converter gives sufficient voltage to raspberry pi module. Raspberry pi module operates at 5 volt. The VGA camera is use for capturing the image and sends this image to raspberry pi module. The picture resolution of VGA camera is high so here we use VGA camera. Raspberry pi receives image from camera and send this image to smartphone through internet dongle. The reset button is used for reset the device.

B. Hardware Implementation

1. Raspberry PI

Various generations of Raspberry Pi have been developed. The first generation of raspberry pi was released in February 2012 in basic Model A and a higher specification Model B. After some year Improved A+ and B+ models were released. The Raspberry Pi 2 was launch in February 2015 and Raspberry Pi 3 in February 2016. Prizes of these models are between US$20 and 35.

Fig 2. RaspberryPi

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Industrial Monitoring using Raspberry Pi Technology

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Abstract: This paper represents implementation of industrial monitoring using raspberry pi technology. It can control various industrial parameters like temperature, pressure, flow, proximity. Operating system of Raspberry pi is Rasp Bain os. Raspberry pi is single board computer it has small size like credit card. It is low power consuming .The Raspberry pi system operate on window or Linux operating system.

Keywords: Raspberry pi, wireless sensor, Industrial monitoring parameter temperature, pressure, flow and proximity.

I. INTRODUCTION

Real time system is continuous and reliable system and also system present low cost and low power consuming. Now days the wireless networks are standardized for industrial application. This system is a quick and accurate power system monitoring. Now a days the accident in industry quickly therefore the wireless system play important role in industry.

Single person can operate whole work. In industry the wired communication are not used because the sometime wire get damaged and data can be transmitted to required distance so wireless communication are use or play important role in industry. The real time data are more use for future analysis. Wireless system is one of the fastest technologies in process automation area. Human safety is important in hazardous area at that time there are no person is present on that area for monitoring it causes accident. For that reason we use sensor to alert the workers. Temperature, humidity, flow and proximity are measure parameter. This parameter is commonly used hospital, milk, medicine Production Company and chemical industry.

II. FUNCTIONAL DESCRIPTION

In our project monitoring of various industrial parameters like temperature, pressure, flow and proximity with real time computing system and monitoring system access anywhere and anytime when internet inbuilt from fig four sensors are connected to the signal conditioning unit .

The unit convert ac signal to dc signal .signal conditioning unit and also reset switch connect to the Raspberry pi .Reset switch is used for restart the program. Raspberry pi is nothing but decision making device. Raspberry pi is 16 bit device. VGA connector placed between LCD Monitor and Raspberry pi module .LCD monitor are used to display output.

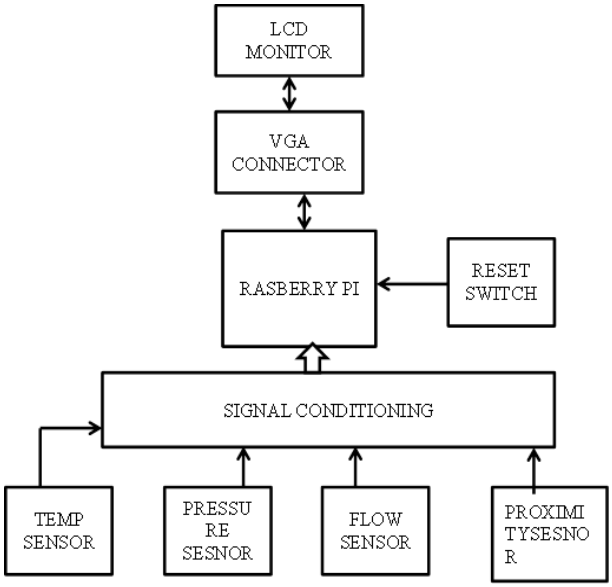

Fig 1. Functional Block Diagram

III.HARDWARE DESCRIPTIONS

A. Raspberry PI Module

Raspberry pi is low power consuming device. It is decision making device developed model B in February 2016 in United Kingdom. The price between 20 and 35 US $. This system based on real time operating system (RTOS). The RTOS execute many tasks at any time (Multitasking). It operates 2.4GHZ frequency. All programs are done through python language. Operating system is Rasp Bain and it is based on Linux type operating system. Programming is done by to interfacing 1) Hardware interfacing 2) Display interfacing. It includes general purpose input output (GPIO). Standard USB keyboard are work with Raspberry pi. Credit card sized Raspberry pi module is plugged into a computer monitor or TV and uses a standard keyboard and mouse. [1] [4] [6]

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Voice Controlled Home Automation Using Zigbee

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Abstract: In this paper a voice controlled wireless smart home system has been presented for elderly and disabled people. The main goal of this system is to control home appliances by using voice commands. The proposed system can recognize the voic commands,convert them into the required data format, and send the data through the wireless transmitter. In this the home appliances are controlled according the commands given by the human and the commands are recongnized by the speech recongnizer and the commands are processed by the microcontroller and loads are controlled according to the instuctions given to the microcontroller by the programmer. These commands are transmitted to the receiver from transmitter through the zigbee wireless communication zigbee works as a transreceiver here, the commands of our speech are transmitted to the receiver through zigbee from the speech recongnizer kit and the controller. The receiver side zigbee will receive the commands from the transmiter and zigbee and then to the controller and loads are operated through these commands.

Keywords: Level Shifter ,LCD Display,Micro-controller 8051 ,Voice Recognizer ,MAX 232 ,Relay Driver ,Zigbee.

I. INTRODUCTION

Voice controlled home automation systems have drawn considerable attention in the recent years. Initially, home automation systems were designed for the people seeking luxury and sophisticated home. But, there was always a need to develop home automation system for the people with special needs like the elderly and the disabled.In order to assist the old people and the people with disability home automation technologies are adopting voice control or voice recognition techniques. The main idea is to control and monitor home appliances by using voice command. The motivation behind this work is also the same.

II. PROPOSED SYSTEM

The basic block diagram of voice controlled home automation using zigbee is shown in the fig. 1.

This block diagram consist of the following essential blocks.

1. VOICE RECOGNIZER
2. MICRO-CONTROLLER 8051
3. ZIGBEE
4. MAX 232
5. Level Shifter
6. Relay Driver

1.Power supply:
For getting +5 volts supply, the + 12 volts supply from power supply output is taken. And it is given to 7805. The minimum input to 7805 is +7 Vdc and Maximum input is + 35 vdc. And we are giving + 12 Vdc as input to the 7805. Therefore the output of the 7805 is constant regulated +5 Vdc.

2.ZigBee:-
ZigBee is a wireless serial communication protocol,with the operating frequency of 2.4GHZ.ZigBee Home Automation provides better operating range. With the use of ZigBee Home Automation circuit considerable amount of power minimizing is possible and it is compatible with future upcoming technologies so it can be easily customized for individual requirements.

3.Micro-controller 8051:
It is a low-power, high-performance CMOS 8-bit microcomputer with 4K byte of Flash Programmable and Erasable Read Only Memory (PEROM).The device is manufactured using Atmel's high-density non-volatilememory technology and is compatible with the MCS-51™ instruction set and pin-out. The on-chip Flash allows the program memory to be reprogrammed in-system or by a conventional non-volatile memory programmer. By combining a versatile 8-bit CPU with Flash on a monolithic chip, the Atmel AT89C51 is a powerful microcomputer,
which provides a highly flexible and cost effective solution so many embedded control applications.

4. VOICE RECOGNITION UNIT:
The voice recognition system is completely integrated and easy to use programmable speech recognition Circuit. Programmable, in the sense that we can train the words or commands that we want the circuit to be recognized. This

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Wildlife Observation Robot Using RF

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Abstract: Here the wildlife observation robot with night vision capability system makes use of RF remote joystick to operate the robot on which the night vision camera is being mounted 360 deg. This allows the user to control the robotic vehicle wirelessly and get required angled of these wild animals. This video is recorded and can be viewed on PC for reference later. So wildlife observers can now safely get close footage of wild animals by operating this robotic vehicle without any threat from a safe distance. This system consists of an 8051 family microcontroller CPU unit used for processing user sent through the RF transmitter circuit. These signals are received by the RF receiver mounted on the robot. The microcontroller then processes this data and passes on signals to driver motors to control the robot. The driver motors now in turn operate the motors by providing required signal outputs to drive the vehicle movement motors. Also when the microcontroller receives the camera directional change signal, it then forwards this signal to the camera motor in order to achieve required camera angle. Thus this wildlife observation robot with night vision capability system helps to get a closer view of wildlife with the help of RF remote joystick.

Keywords: RF module, motor driver L293D, Night vision camera, dc motor, night vision.

I. INTRODUCTION

Project makes use of this innovative system in order to get close footage of wild animals using 360 deg cameras. As with the help of this system the user doesn't have to go close to the wild animals in order to get the close footage of movement of animals. Here the wildlife observation robot with night vision capability system makes use of RF remote joystick to operate the robot on which the night vision camera is being mounted 360 deg. This allows the user to control the robotic vehicle wirelessly and get required angled of these wild animals. This video is recorded and can be viewed on PC for reference later. So wildlife observers can now safely get close footage of wild animals by operating this robotic vehicle without any threat from a safe distance. This system consists of an 8051 family microcontroller CPU unit used for processing user sent through the RF transmitter circuit. These signals are received by the RF receiver mounted on the robot.

The microcontroller then processes this data and passes on signals to driver motors to control the robot. The driver motors now in turn operate the motors by providing required signal outputs to drive the vehicle movement motors. Also when the microcontroller receives the camera directional change signal, it then forwards this signal to the camera motor in order to achieve required camera angle. Thus this wildlife observation robot with night vision capability system helps to get a closer view of wildlife with the help of RF remote joystick.

II.LITERATURE REVIEW

Usage of sensor networks in monitoring, tracking and detection of different wildlife species is a common practice that is carried on. For small animals and birds, RF tags are used to track their motion using radio telemetry [1].

Mine Rover- It was developed in 2005 abandoned mines-remnants of old west mining booms –closely guard their secrets in the forgotten corners of Arizona's backcountry. What's concealed just around that bend in the tunnel are the inevitable questions those hikers and others ask when they stumble across these slumbering relics. Those can be dangerous questions[2]. Crumbling walls and ceilings that threaten to collapse at the slightest touch; hidden vertical shafts; poisonous gases; wildlife lurking inside are just some of the dangers that prevent the non suicidal from exploring. Still the question remains: what's inside They've built an 18 inch long, radio controlled rover to do the looking for them .it's equipped with a power full search light to explore the mines dark recesses and a pan and tilt video camera to send images back to their laptop computer. Jessica Dooley and Keith Brock made the ground rover to tour a mine [3].

The driver motors now in turn operate the motors by providing desired signal outputs to drive the vehicle movement motors. Also when the microcontroller receives the camera directional change signal, it then forwards this signal to the camera motor in order to achieve desired camera angle [4]

III. SYSTEM DESCRIPTION

The basic block diagram of wildlife observation system using RF system is shown in the above figure. Mainly this block diagram consists of the following essential blocks.

8051 series Microcontroller

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Intelligent Traffic Light Controller Using IR Sensors for Vehicle Detection

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Abstract: The aim of project is to reduce the problem of traffic congestion which is becoming a very severe problem now a days. The present traffic light system consist of a per defined Hardware which has a fixed time for green light and red light .To optimize this problem made a framework for an intelligent traffic control system. Generally the conventional traffic light system is not depends upon the density of the traffic. So the purpose of a scheme in which the time period of green light and red light is assigned on the basis of the density of the traffic present at that time. This can be done by using IR sensors. Once the density is calculated, the glowing time of green light is assigned by the help of the microcontroller. The sensors which are present on either sides of the road detect the presence of the vehicles and sends the information to the microcontroller. On the basis of those information, micro-controller will decide the glowing time of green light and red light. It means that the timing of the traffic lights is set according to the density of the vehicles. This is going to be very helpful to minimize the traffic congestion and it has a scope in future.

Keywords: Density based traffic control, infra-red sensors, RF transmitter-receiver, microcontroller based algorithm, Vehicle stoppage beyond zebra crossing.

I. INTRODUCTION

Human is the creation of god. For ease and making life more comfortable, human being an introducing new technologies every day. This is why traffic congestion is increasing on the road day-by-day. As a result there are two main problems are arises No traffic, but still need to wait, Heavy traffic jams. These problems occur due to Fixed Control on Traffic. The Fixed Control on Traffic means not controlling the traffic according to the density, but in manner of programming which is already fixed in the system. To solve this problem of a fixed traffic light control system, introducing a traffic control system which is depend on the density for keeping control on the traffic. It is named as 'Intelligent traffic control system depend on density'. Intelligent traffic control system depend on density means, a system which can modulates itself according to the number of vehicles or can say density. Here IR sensors uses and IR sensor contains IR transmitter IR receiver in itself. These IR transmitter and IR

II. LITERATURE REVIEW

In the past the researchers had gone through different types of technologies. A brief survey of various solutions to the traffic congestion problems are presented. In this system AVR 32 micro-controller with programmable flash memory, built-in 8 channel analog to digital converter and IR sensors are used. The IR sensors are used to detect the presence of emergency vehicle and the microcontroller is designed to give a red signal to all the sides but one with the emergency vehicle.[1] In this system active RFID tag, wireless coordinator wireless router, GSM modems and monitoring station software are used. Here the wireless devices are mounted on either sides of the road and they collect the data from the active RFID tags. Through GSM, monitoring station will collect all the data and respond to the corresponding traffic signal.[2] In this a wireless sensor network is being used. To define the direction of any emergency vehicle, system uses a fuzzy and by collecting all the information central monitoring Display system gives the corresponding appropriate response.[3] Three main function of this project are as follows,

Block Diagram

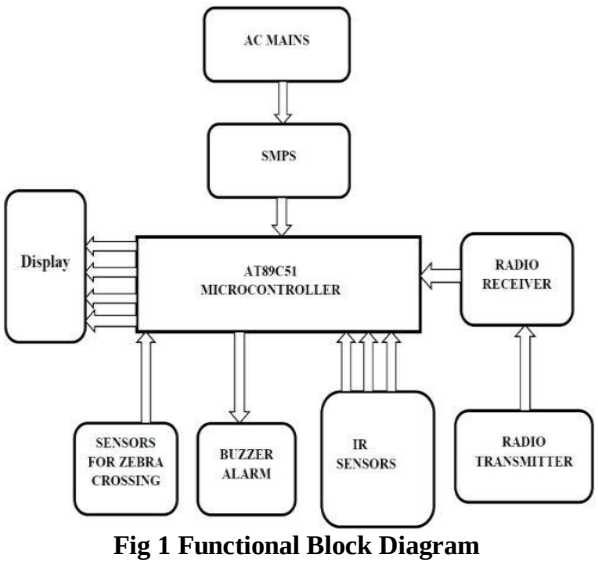

Fig 1 Functional Block Diagram

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Analysis of Vibration Energy Harvesting from Power Consuming Devices

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Abstract: Vibration energy harvesting is one of the most promising technologies. The majority of current researchers obtain 10 mW to 100 mW power,[2] which has only limited applications in self-powered wireless sensors and low-power electronics. The vibrations in some situations can be very large, for example, the vibrations of tall Buildings , long bridges, vehicle systems, railroads, ocean waves, and even human motions.

Keywords: machines vibration, VEH, piezo-electric, vibration energy.

I. INTRODUCTION

Simply stated, vibration energy harvesting is the process by which otherwise wasted vibration is harvested and converted to useful electrical energy to perpetually power Wireless Sensor Nodes (WSN).[5]

Energy harvesting is defined as capturing minute amounts of energy from one or more of the surrounding energy sources, accumulating them and storing them for later use.[7] Energy harvesting is also called as power harvesting or energy scavenging. With recent advances on wireless and MEMS technology, energy harvesting is highlighted as the alternatives of the conventional battery. Ultra low power portable electronics and wireless sensors use the conventional batteries as their power sources, but the life of the battery is limited and very short compared to the working life of the devices. The replacement or recharging of the battery is inefficient and sometimes impossible. Therefore, a great amount of researchers have been conducting about the energy harvesting technology as a self-power source of portable devices or wireless sensor network system.

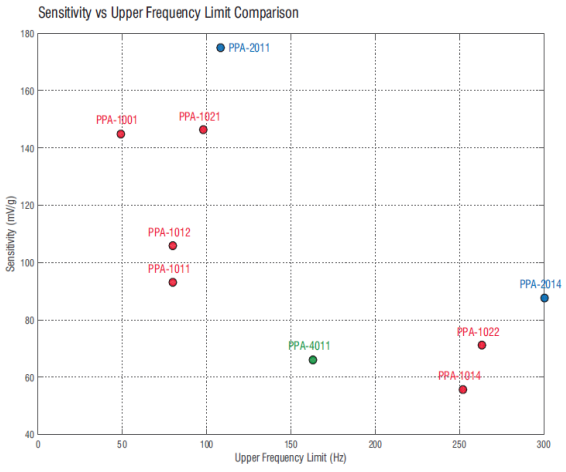
II. ACTUAL WORK, EXPERIMENTATION AND ANALYSIS

Fig. 1. Vibration Analysis Of Sieve Shaker

I. Frequency analysis.
II. Selection of range and equipment for further work.
III. Selection of VEH.
IV. Assembly and clamping.
V. Mounting.
VI. Observations and readings.

III. SENSING

Piezos provide an electrical output when strained and therefore they are often used as sensors. Midé's PPA products size results in a very large output for a given mechanical input. This results in the ability to use piezos as unpowered sensors. This is very useful for applications that require a very long lifetime or where batteries may not be an option. Graph 1 provides a plot comparing the sensitivity of each product to the upper limit of the usable frequency range. This frequency range is defined as when the deviation is within ± 3 dB of the sensitivity.[4] Adding tip mass will increase the sensitivity but it will also greatly reduce the bandwidth of the sensor.



Graph. 1. Sensing Of Different Piezo's.

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Sugarcane Cutting Machine

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Abstract: This research paper helps to design and fabricate small scale sugarcane cutting machine for sugarcane harvesting to reduce farmer's effort and to increase production of agricultural goods. Compared to manual harvesting this machine has a capacity to cut canes in faster rate. It is economical. This paper helps in laying design foundation for any aspiring user to fabricate a machine for application in their farms. It helps improve economic growth of the nation.

Keywords: sugarcane cutting machine, design and fabrication of mini sugarcane cutting machine, force analysis of sugarcane, reduce harvesting time.

I. INTRODUCTION

In agricultural harvesting we require maximum man power, ample money and also it is more time consuming process. In cutting process we face various problems and these are not easily solved. The design of this machine is very simple also easy to implement. In this manner we are designing the Sugarcane Cutting Machine to reduce effort and time. In sugar cane farms we are using this machine for cutting purpose. This is user friendly cutting machine, anyone can handle this machine in any working condition. Skilled persons aren't required for operating this machine.

II. LITERATURE REVIEW

Caryn Elizabeth Benjamin [1] The project here involved the design and testing of a sugar cane yield monitoring system during the 1999 and 2000 harvest year. The system was mounted on a CAMECO CH 2500 1997 sugar cane combine harvester. The sugar cane yield monitoring system consisted of a scale, a data acquisition system, and a differential global positioning system (DGPS). The scale consisted of a weighing machine supported by load cells. The load cells were protected in a enclosed box, which mounted to the frame of this machine. The weighing equipment, which was mounted at the base of the elevator, directly recorded instantaneous figures of the sugar cane yield. A dump wagon equipped with a weighing equipment consisting of load cell was used for each test as the standard.

Experiments were conducted with different conditions of cane maturity, variety, row/section length, and flow rate. For each test, the scale readings were total and compared to the actual yield, which was measured by the weigh wagon. The yield sensor predicted the sugar cane yield with a slope of 0.900 and a R-squared of 0.966. The scale's average percent error was 11.05 percent. It resulted into showing that the different cane varieties had an effect on the scale readings, but the maturity of the cane, section length, and the flow rate did not have a significant effect on the scale readings.

Dr. Sharad S. Chaudhari [2] There project aimed at designing and fabricating small scale sugarcane harvester for sugarcane harvesting to reduce farmer's effort and to increase production of agricultural products. Machine consists of petrol engine and different mechanisms. When compare to manual harvesting by using this machine has a capacity to cut canes in faster rate and it is economical. The machine is helpful for both whom having small or big farms.

Joby Bastian [3] The mechanical properties of the plant material significantly influence the performance of the different unit operation in combine harvester. Hence, studies of these properties were done prior to the design of sugarcane harvesting system. The mechanical properties of sugarcane stalk viz., bending resistance, cutting resistance, penetration resistance and crushing resistance were studied in the laboratory. It is found that the Young's modulus of the sugarcane stalks as 86MPa, The specific cutting resistance varies between 1764.56 and 957.48 kN/m^2, penetration resistance ranging from 29.74kN/m^2 to 56.33kN/m^2 and the crushing force varied from 0.75kN to 1.53kN. this study helped us very much while deciding the forces required to cut the cane in one knocking stroke.

R. R. Price [4] A fiber optic yield monitoring system was developed for a sugarcane chopper harvester that utilized a duty cycle type approach with three fiber optic sensors mounted in the elevator floor to estimate sugarcane yield. Field testing of the monitor demonstrated that there was a zero intercept linear relationship between the optical sensor response and the actual sugarcane yields with an R2 value of 0.98. The average observed prediction error on 0.5 to 1.6 Mg estimates was 7.5%; though, the magnitude of the error decreased as the harvested area (tonnage) increased, with an estimated error of 0.03% for 57.8 Mg loads. Factor testing indicated that the duty cycle reading was not affected by different conditions like sugarcane variety, harvester speed, harvested distance, or direction of cut. Field testing across several locations in the U.S. total was more than 557 h of operation and indicated that the

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Reverse Engineering of Crank Shaft

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Abstract: In automobile industry reverse engineering is the processes of collecting design information from automotive parts and re-producing it or reproducing it with modification. For learning purposes reverse engineering can be used to understand the process and subsequently improve the design. In present work 3D model of old unused crank shaft is created using techniques of reverse engineering. Majority of measurements are taken with help of vernier calliper and micrometer. The critical profile is traced on graph paper X, Y coordinates are determined. The same profile is scanned on coordinate measuring machine and curves are plotted with help of ProE software. The results are compared.

Keywords: Reverse Engineering, Co-ordinate Measuring Machine, Crank Shaft, 3D model.

I. INTRODUCTION

Reverse engineering is process of making components from worn out parts. The process is beneficial when drawing and 3D model of component is not available. Modification of the component is done on the 3D model, analysis can be done on the same, next we can produce it with help of modern additive manufacturing techniques. Principle of reproduction and principle of innovation both can be applied at the same time.
In modern field of design in cut throat competition there is very limited time for launch product in market, RE is tool to reduce time of product to market. With help of RE it is easy to add advances in old design of components.
Scanners are available in market to carry out data collection required for reverse engineering.

Coordinate Measuring Machine (CMM) can be used as scanner. CMM is used to collect data (Coordinates). Different types of probes are available; they are attached to CMM to collect the data. For scanning special machines are available in market e.g. Portable scanner, white light scanner etc. Accuracy of machines is different for different technology. Customers can choose machine as per their requirement.

Collection of points is known as point cloud. Point cloud is processed in software. There are different software available in market t process this data. Many softwares are available which processes this data. Their are many options available in software like Resize, filter, clean, shape etc. which can be used to process the data.

Profile projectors can be used to plot profile of component. Processing of data is followed by generation of 3D model of component. 3D component can be made using point cloud data. In software's like ProE, UG-Nx, 3D model can be made. Taking sections on point cloud, curve making, surface plotting tools can be used to make 3D component.

This 3D model can be compared with point cloud data of component to check accuracy by taking sections or there are different software's available in market for this check. Ebhot et al. studied reverse engineering of Yamaha CY80 clutch basket, they developed permanent mould for the production of CY 80 clutch basket using 7075 Aluminum alloy. They used Creo Element software and r manufactured it by gravitational casting process. They concluded from virtual simulation of the produced component that the design is safe.
Niranjan Singh, and Jagdev Singh et al. used reverse engineering approach for design of brake rod of Bajaj Pulsar 150cc Motor Bike. They used photogrammetry technique to collect data. They created 3D model of by using SolidWorks and Autodesk. They analysed various loads ranging from minimum value to maximum value in order to study the behavior of brake rod.
SureshBatni et al. proposed reverse engg, methodology for recovery of crankshaft its bearing and car piston.
Shashank Alai etal. studied 3D design parameterization and reverse engg. of free from surfaces applied to automotive domain.
A.A.Aishennawy et al. Constructed 3D spare parts by creating 3D solid model from CCD digital camera images. He used spur gear as a spare part.

In this work worn out crank is taken for RE. It is measured manually then profile is traced. Rough drawing is made which is used to create 3D model using ProE software.

II. METHODOLOGY

The old, which is currently not in use, crankshaft is selected for reverse engineering, whose 3D model and two dimensional drawing is to be created. Primary inspection of model shows that there are two main profiles on the crank shaft which are required to trace out. Remaining other dimensions can be easily measured using micrometer and vernier calliper. Following figure shows Photo of the crankshaft and traced profiles of that crankshaft.
The selected part is cleaned and made ready for the inspection.

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Optimization of Surface Roughness using Taguchi Approach with Minimum Quantity Lubrication for Turning EN-8 Steel

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Abstract: Minimum quantity lubrication (MQL) has increasingly found its way into the area of metal cutting machining and in many areas, has already been established as an alternative to conventional wet processing. In contrast to flood lubrication, minimum quantity lubrication uses only a few drops of lubrication (approx. 5 ml to 100 ml per hour) in machining. This paper deals with a view to optimize the pressure (P) and flow rate (Q) of cutting fluid in MQL system with different type of cutting fluid to obtain improved machining performances in turning EN-8 steel by uncoated carbide insert in respect of tool wear. Fluid selection is important for MQL because it must be a superior fluid such as vegetable oil or synthetic oil. The costs of these superior fluids are higher but eliminate the need for costly fluid recycling and disposal services. MQL may be an ideal option because of the elimination of fluid waste while maintaining the benefits of using oil, but the specific fluid delivery method for individual facilities requires an in depth understanding of the technical aspects of MQL that could make it unfeasible to use this method.

Keywords: EN-8, MQL, Tool wear, Taguchi, S/N ratio.

I. INTRODUCTION

Minimum quantity lubrication is a total-loss lubrication method rather than the circulated lubrication method used with emulsions. This means using new, clean lubricants that are fatty-alcohol or ester based. Additives against pollution e.g. biocides and fungicides, are not necessary at all, since microbial growth is possible only in an aqueous phase. The extreme reduction of lubrication quantities results in nearly dry work pieces and chips. This greatly reduces health hazards caused by emissions of metalworking fluids in breathed-in air and on the skin of employees at their workplaces. Metalworking fluids do not spread throughout the area around the machine, thus making for a cleaner workplace. The extreme reduction in lubricant quantities results in nearly dry work pieces and chips. Losses due to evaporation and wastage, which may be considerable with emulsion lubrication (depending on the work piece being processed), are inconsequential with MQL. This greatly reduces health hazards due to emissions of metalworking fluids on the skin and in the breathed-in air of employees at their workplaces.

EN-8 is a very popular grade of through-hardening medium carbon steel, which is readily machinable in any condition. EN-8 is suitable for the manufacture of parts such as general-purpose axles, shafts, gears, bolts and studs. It can be further surface-hardened typically to 50-55 HRC by induction processes, producing components with enhanced wear resistance. In the present investigation, single characteristics optimization model based on Taguchi method employed to determine the best combination of the MQL parameters such as pressure, flow rate and type of cutting fluid to attain minimum tool wear. In order to obtain optimum cutting parameters to achieve minimum tool wear, manufacturing industries have restored to the use of handbook based information and operator's experience.

II. PROCEDURE

To optimize the pressure (P) and flow rate (Q) of MQL system with different types cutting fluid to obtain improved machining performances in turning EN-8 steel by carbide insert in respect of surface roughness this experiment was carried out. The experiment carried out by turning of EN-8 steel rod having initial diameter 40 mm and length 350 mm in a lathe (5 hp) by using carbide insert (SNMG 120408) at constant cutting velocity and feed rate (i.e. optimized value of speed and feed rate obtained from past research) under MQL condition having various pressure and flow rates with different cutting fluids. Depth of cut was kept fixed at 0.4 mm.

a. Design of experimental set-up

Experimental set- up design to optimize the pressure (P) and flow rate (Q) of cutting fluid in MQL system with different type of cutting fluid to obtain improved machining performances in turning EN-8 steel by

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Waste Reduction for Assembly Line Layout with Integration of Lean Tool: Kanban

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Abstract: Assembly line development and line balancing it is seen that there is some scope for research work in this area. It is proposed to carry out some theoretical and experimental studies on assembly line development and line balancing. Its need to providing comfort and improved working conditions so as to channelize the energy, skills of the workers into constructive productive work.Moving parts from one end of the facility to another end does not add value to the product. Thus, it is important to decrease transportation times within the manufacturing process.The elimination of waste by using lean tool is an essential ingredient for survival in today's manufacturing world. Likewise, works-in-progress should be stored as close as physically possible to the place where they will next be used.

Keywords: Assembly Line, Line Balancing, Lean Tool.

I. INTRODUCTION

Lean manufacturing is one of the initiatives that many major manufacturing plants in Asia, especially in Malaysia have been trying to adopt in order to remain competitive in an increasingly competitive global market. The focus of the approach is on cost reduction through eliminating non value added activities via applying a management philosophy which focused on identifying and eliminating waste from each step in the production chain respective of energy, time, motion and resources alike throughout a product's value stream, known as lean. Since the birth of Toyota Production System, many of the tools and techniques of lean manufacturing (e.g., just-in-time (JIT), cellular manufacturing, total productive maintenance, single-minute exchange of dies, production smoothing) have been extensively used. This activity is more towards to Toyota Production System (TPS), a systematic approach to identify and eliminate waste activities through continuous improvement. All these effort is objectively to keep cost down and stay ahead in the race. Lean Manufacturing, also called Lean Production, is a set of tools and methodologies that aims for the continuous elimination of all waste in the production process.

The main benefits of this are lower production costs; increased output and shorter production lead times. More specifically, some of the goals include:

1. Defects and wastage - Reduce defects and unnecessary physical wastage, including excess use of raw material inputs, preventable defects, and costs associated with reprocessing defective items and unnecessary product characteristics which are not required by customers.
2. Cycle Times - Reduce manufacturing lead times and production cycle times by reducing waiting times between processing stages, as well as process preparation times and product conversion times.
3. Inventory levels - Minimize inventory levels at all stages of production, particularly works-in-progress between production stages. Lower inventories also mean lower working capital requirements.
4. Labour productivity - Improve labour productivity, both by reducing the idle time of workers and ensuring that when workers are working, they are using their effort as productively as possible.
5. Utilization of equipment and space - Use equipment and manufacturing space more efficiently by eliminating bottlenecks and maximizing the rate of production though existing equipment, while minimizing machine downtime.
6. Flexibility - Have the ability to produce a more flexible range of products with minimum changeover costs and changeover time.
7. Output – Insofar as reduced cycle times, increased labour productivity and elimination of bottlenecks and machine downtime can be achieved.

II. LEAN PRINCIPAL

1. Elimination of Waste: eliminate any activities that do not add value in an organization it include overproduction, waiting time, processing, inventory, and motion.
2. Increased Speed and Response: better process designs allow efficient responses to customers' needs and the competitive environment.
3. Improved Quality: Poor quality creates waste, so improving quality is essential to the lean environment.

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Foot Steps Power Generation using Mechanical System

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Abstract: In present day, power has become the fundamental need for human life. The availability and its conjunction is regarded as the index of national standard of living in the present day of civilization. Energy is an important input in all sectors of any countries economy. The objective of this project is to design a setup that leads to generating electricity .the energy which is going waste when human climb the stairs. This human energy is utilized and converted into electrical energy. This generated energy is cost effective and nonhazardous for human. Power can be generated through stepping on the stairs, the generated power will be stored and can be used for domestic purpose. To obtain the above purpose, The experimental setup is designed which contains the structure, dome, rack, spur gear, bearings, flywheel, shaft, springs, chain drive and dynamo. The working principle is based on law of energy i.e mechanical energy is converted into electrical energy. When force is applied on footstep rack and spring get compressed therefore the pinion is rotated. This rotates the chain drive arrangement. The flywheel is coupled with chain drive to regulate the fluctuation and finally the dynamo is connected with the shaft. Thus reciprocating energy is converted into rotating energy and mechanical energy is converted into electrical energy. The energy generated is risk free and pollution free. The way of energy generation is eco friendly and nonhazardous to human. The output of energy increases as weight increases. The weight range is from 10 to 15kg. The LED bulb blows is of 9 watt and the rang of voltage obtained is from 8 to 35 v as per the changes in weight. The electricity is produced in low budget when mass production and installation is done. The required area is low, no obstructions in traffic, easy maintenance and construction.

Keywords: Foot step Energy, Eco friendly Power.

INTRODUCTION

In the present scenario, power has become the fundamental need for human life. The availability and its per capita consumption is regarded as the index of national standard of living in the present day civilization. Energy is an important input in all sectors of any countries economy. Energy crisis is due to two reasons, firstly the population of the world has been increasing rapidly and secondly the standard of living of human beings has also increased. India is a country, which majorly suffers with lack of sufficient power generation. The capital energy consumption of U.S.A. is about 8000 K.W.H, where as in India it is only 150 K.W.H. U.S.A. with only 7% of the world's total population consumes about 32% of total power generated where as India a developing country with 20% of world population consumes only 1% of total energy generated in the world. The regular conventional fossil fuels are the main sources for power generation, but there is a fear that they will get exhausted eventually in the next few decades. Therefore investigate some alternative, new sources for the power generation, which will not deplete in the next few years. Another major problem is pollution. It affects all living organisms. Therefore investigate other types of renewable sources, which produce electricity without using any commercial fossil fuels. Already there are such systems using renewable energy such as solar energy, wind energy, OTEC (ocean thermal energy conversions) etc. for power generation. This work generates electric power by simply walking or running on footsteps. In order to develop a technique to harness footstep energy, a foot step electricity generating device was developed in the Reactor Control Division, BARC.

PRESENT THEORY AND PRACTICES

Siba brata Mohanty et al [1] Proposal for the utilization of waste energy of foot power with human locomotion is very much relevant and important. Man has needed and used energy at an increasing rate for his sustenance and well-being ever since he came on the earth a few million years ago. With further demand for energy, man began to use the wind for sailing ships and for driving windmills, and the force of falling water to turn water for sailing ships and for driving windmills, and the force of falling water to turn water wheels. Till this time, it would not be wrong to say that the sun was supplying all the energy needs of man either directly or indirectly and that man was using only renewable sources of energy.

S.D.Mendhule et al [2] various countries draw a large amount of energy from a variety of sources and can be categorized as conventional and non-conventional source

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Waste Reduction for Assembly Line Layout with Integration of Lean Tool: Kanban

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Abstract: Assembly line development and line balancing it is seen that there is some scope for research work in this area. It is proposed to carry out some theoretical and experimental studies on assembly line development and line balancing. Its need to providing comfort and improved working conditions so as to channelize the energy, skills of the workers into constructive productive work.Moving parts from one end of the facility to another end does not add value to the product. Thus, it is important to decrease transportation times within the manufacturing process.The elimination of waste by using lean tool is an essential ingredient for survival in today's manufacturing world. Likewise, works-in-progress should be stored as close as physically possible to the place where they will next be used.

Keywords: Assembly Line, Line Balancing, Lean Tool.

I. INTRODUCTION

Lean manufacturing is one of the initiatives that many major manufacturing plants in Asia, especially in Malaysia have been trying to adopt in order to remain competitive in an increasingly competitive global market. The focus of the approach is on cost reduction through eliminating non value added activities via applying a management philosophy which focused on identifying and eliminating waste from each step in the production chain respective of energy, time, motion and resources alike throughout a product's value stream, known as lean. Since the birth of Toyota Production System, many of the tools and techniques of lean manufacturing (e.g., just-in-time (JIT), cellular manufacturing, total productive maintenance, single-minute exchange of dies, production smoothing) have been extensively used. This activity is more towards to Toyota Production System (TPS), a systematic approach to identify and eliminate waste activities through continuous improvement. All these effort is objectively to keep cost down and stay ahead in the race. Lean Manufacturing, also called Lean Production, is a set of tools and methodologies that aims for the continuous elimination of all waste in the production process.

The main benefits of this are lower production costs; increased output and shorter production lead times. More specifically, some of the goals include:

1. Defects and wastage - Reduce defects and unnecessary physical wastage, including excess use of raw material inputs, preventable defects, and costs associated with reprocessing defective items and unnecessary product characteristics which are not required by customers.
2. Cycle Times - Reduce manufacturing lead times and production cycle times by reducing waiting times between processing stages, as well as process preparation times and product conversion times.
3. Inventory levels - Minimize inventory levels at all stages of production, particularly works-in-progress between production stages. Lower inventories also mean lower working capital requirements.
4. Labour productivity - Improve labour productivity, both by reducing the idle time of workers and ensuring that when workers are working, they are using their effort as productively as possible.
5. Utilization of equipment and space - Use equipment and manufacturing space more efficiently by eliminating bottlenecks and maximizing the rate of production though existing equipment, while minimizing machine downtime.
6. Flexibility - Have the ability to produce a more flexible range of products with minimum changeover costs and changeover time.
7. Output – Insofar as reduced cycle times, increased labour productivity and elimination of bottlenecks and machine downtime can be achieved.

II. LEAN PRINCIPAL

1. Elimination of Waste: eliminate any activities that do not add value in an organization it include overproduction, waiting time, processing, inventory, and motion.
2. Increased Speed and Response: better process designs allow efficient responses to customers' needs and the competitive environment.
3. Improved Quality: Poor quality creates waste, so improving quality is essential to the lean environment.

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Abstract: Assembly line development and line balancing it is seen that there is some scope for research work in this area. It is proposed to carry out some theoretical and experimental studies on assembly line development and line balancing. Its need to providing comfort and improved working conditions so as to channelize the energy, skills of the workers into constructive productive work.Moving parts from one end of the facility to another end does not add value to the product. Thus, it is important to decrease transportation times within the manufacturing process.The elimination of waste by using lean tool is an essential ingredient for survival in today's manufacturing world. Likewise, works-in-progress should be stored as close as physically possible to the place where they will next be used.

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4. Labour productivity - Improve labour productivity, both by reducing the idle time of workers and ensuring that when workers are working, they are using their effort as productively as possible.
5. Utilization of equipment and space - Use equipment and manufacturing space more efficiently by eliminating bottlenecks and maximizing the rate of production though existing equipment, while minimizing machine downtime.
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II. LEAN PRINCIPAL

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Reverse Engineering of Crank Shaft

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Abstract: In automobile industry reverse engineering is the processes of collecting design information from automotive parts and re-producing it or reproducing it with modification. For learning purposes reverse engineering can be used to understand the process and subsequently improve the design. In present work 3D model of old unused crank shaft is created using techniques of reverse engineering. Majority of measurements are taken with help of vernier calliper and micrometer. The critical profile is traced on graph paper X, Y coordinates are determined. The same profile is scanned on coordinate measuring machine and curves are plotted with help of ProE software. The results are compared.

Keywords: Reverse Engineering, Co-ordinate Measuring Machine, Crank Shaft, 3D model.

I. INTRODUCTION

Reverse engineering is process of making components from worn out parts. The process is beneficial when drawing and 3D model of component is not available. Modification of the component is done on the 3D model, analysis can be done on the same, next we can produce it with help of modern additive manufacturing techniques. Principle of reproduction and principle of innovation both can be applied at the same time.
In modern field of design in cut throat competition there is very limited time for launch product in market, RE is tool to reduce time of product to market. With help of RE it is easy to add advances in old design of components.
Scanners are available in market to carry out data collection required for reverse engineering.

Coordinate Measuring Machine (CMM) can be used as scanner. CMM is used to collect data (Coordinates). Different types of probes are available; they are attached to CMM to collect the data. For scanning special machines are available in market e.g. Portable scanner, white light scanner etc. Accuracy of machines is different for different technology. Customers can choose machine as per their requirement.

Collection of points is known as point cloud. Point cloud is processed in software. There are different software available in market t process this data. Many softwares are available which processes this data. Their are many options available in software like Resize, filter, clean, shape etc. which can be used to process the data.

Profile projectors can be used to plot profile of component. Processing of data is followed by generation of 3D model of component. 3D component can be made using point cloud data. In software's like ProE, UG-Nx, 3D model can be made. Taking sections on point cloud, curve making, surface plotting tools can be used to make 3D component.

This 3D model can be compared with point cloud data of component to check accuracy by taking sections or there are different software's available in market for this check. Ebhot et al. studied reverse engineering of Yamaha CY80 clutch basket, they developed permanent mould for the production of CY 80 clutch basket using 7075 Aluminum alloy. They used Creo Element software and r manufactured it by gravitational casting process. They concluded from virtual simulation of the produced component that the design is safe.
Niranjan Singh, and Jagdev Singh et al. used reverse engineering approach for design of brake rod of Bajaj Pulsar 150cc Motor Bike. They used photogrammetry technique to collect data. They created 3D model of by using SolidWorks and Autodesk. They analysed various loads ranging from minimum value to maximum value in order to study the behavior of brake rod.
SureshBatni et al. proposed reverse engg, methodology for recovery of crankshaft its bearing and car piston.
Shashank Alai etal. studied 3D design parameterization and reverse engg. of free from surfaces applied to automotive domain.
A.A.Aishennawy et al. Constructed 3D spare parts by creating 3D solid model from CCD digital camera images. He used spur gear as a spare part.

In this work worn out crank is taken for RE. It is measured manually then profile is traced. Rough drawing is made which is used to create 3D model using ProE software.

II. METHODOLOGY

The old, which is currently not in use, crankshaft is selected for reverse engineering, whose 3D model and two dimensional drawing is to be created. Primary inspection of model shows that there are two main profiles on the crank shaft which are required to trace out. Remaining other dimensions can be easily measured using micrometer and vernier calliper. Following figure shows Photo of the crankshaft and traced profiles of that crankshaft.
The selected part is cleaned and made ready for the inspection.

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Optimization of Surface Roughness using Taguchi Approach with Minimum Quantity Lubrication for Turning EN-8 Steel

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Abstract: Minimum quantity lubrication (MQL) has increasingly found its way into the area of metal cutting machining and in many areas, has already been established as an alternative to conventional wet processing. In contrast to flood lubrication, minimum quantity lubrication uses only a few drops of lubrication (approx. 5 ml to 100 ml per hour) in machining. This paper deals with a view to optimize the pressure (P) and flow rate (Q) of cutting fluid in MQL system with different type of cutting fluid to obtain improved machining performances in turning EN-8 steel by uncoated carbide insert in respect of tool wear. Fluid selection is important for MQL because it must be a superior fluid such as vegetable oil or synthetic oil. The costs of these superior fluids are higher but eliminate the need for costly fluid recycling and disposal services. MQL may be an ideal option because of the elimination of fluid waste while maintaining the benefits of using oil, but the specific fluid delivery method for individual facilities requires an in depth understanding of the technical aspects of MQL that could make it unfeasible to use this method.

Keywords: EN-8, MQL, Tool wear, Taguchi, S/N ratio.

I. INTRODUCTION

Minimum quantity lubrication is a total-loss lubrication method rather than the circulated lubrication method used with emulsions. This means using new, clean lubricants that are fatty-alcohol or ester based. Additives against pollution e.g. biocides and fungicides, are not necessary at all, since microbial growth is possible only in an aqueous phase. The extreme reduction of lubrication quantities results in nearly dry work pieces and chips. This greatly reduces health hazards caused by emissions of metalworking fluids in breathed-in air and on the skin of employees at their workplaces. Metalworking fluids do not spread throughout the area around the machine, thus making for a cleaner workplace. The extreme reduction in lubricant quantities results in nearly dry work pieces and chips. Losses due to evaporation and wastage, which may be considerable with emulsion lubrication (depending on the work piece being processed), are inconsequential with MQL. This greatly reduces health hazards due to emissions of metalworking fluids on the skin and in the breathed-in air of employees at their workplaces.

EN-8 is a very popular grade of through-hardening medium carbon steel, which is readily machinable in any condition. EN-8 is suitable for the manufacture of parts such as general-purpose axles, shafts, gears, bolts and studs. It can be further surface-hardened typically to 50-55 HRC by induction processes, producing components with enhanced wear resistance. In the present investigation, single characteristics optimization model based on Taguchi method employed to determine the best combination of the MQL parameters such as pressure, flow rate and type of cutting fluid to attain minimum tool wear. In order to obtain optimum cutting parameters to achieve minimum tool wear, manufacturing industries have restored to the use of handbook based information and operator's experience.

II. PROCEDURE

To optimize the pressure (P) and flow rate (Q) of MQL system with different types cutting fluid to obtain improved machining performances in turning EN-8 steel by carbide insert in respect of surface roughness this experiment was carried out. The experiment carried out by turning of EN-8 steel rod having initial diameter 40 mm and length 350 mm in a lathe (5 hp) by using carbide insert (SNMG 120408) at constant cutting velocity and feed rate (i.e. optimized value of speed and feed rate obtained from past research) under MQL condition having various pressure and flow rates with different cutting fluids. Depth of cut was kept fixed at 0.4 mm.

a. Design of experimental set-up

Experimental set- up design to optimize the pressure (P) and flow rate (Q) of cutting fluid in MQL system with different type of cutting fluid to obtain improved machining performances in turning EN-8 steel by

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Three Axis Modern Pneumatic Trailer

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Abstract: Trailer has lots of applications in today's world. In industrial and domestic considerations, tippers can pull a variety of products including gravel, grain, sand, fertilizer, heavy rocks, etc. By considering wide scope of the topic, it is necessary to do study and research on the topic of tipper mechanism in order to make it more economical and efficient. In existing system, tipper can unload only in one side by using pneumatic jack or conveyor mechanism. By this research it is easy for the driver to unload the trailer and also it reduces time and fuel consumption. For making tipper mechanism with such above conditions hydraulic jack mechanism can be used. This paper has mainly focused on above difficulty. Hence a prototype of suitable arrangement has been designed. The vehicles can be unloaded from the trailer in three axes without application of any impact force. The Direction control valves which activate the ram of the hydraulic cylinder which lifting the trailer cabin in require side. By this research it is easy for the driver to unload the trailer and it reduces the time.

Keywords: Pneumatic system, valves, trailer.

I. INTRODUCTION

Material handling in construction and civil works is one of the basic necessities. The material supply to civil and construction is provided through trucks, dumper etc. The material should be properly loaded, managed, stacked, transported and unloaded. The dumper carries the material which is loaded from the site, where the material is initially stored. It is then loaded to the dumper and transported to the required site and then unloaded. The major issues raises over here, the incompatibility of the site with the fully loaded dumper causes a lot of settling time for the trolley to get the material properly arranged and transportation time to reach its location. The dumper unloads the material in only one direction.

But this incapability can be full new method mechanism as the 'Three Axis Modern Pneumatic Trailer'. Gothic mechanism is an approach to reduce the idle time to settle the dumper. The material is unloaded in any direction and hence can be boldly stated as 'three axis modern pneumatic trailer'[4].The major outcomes of 'three axis modern pneumatic trailer'. Has overcome space requirement which often result in road blocking. hence, we have inversion in the existing mechanism providing the unloading in 180 rotations. this mechanism prevents blocking of road, saves time and enhances productivity at lowest cost. the automotive sector is fast booming section in India. there are variable in automotive industry light and heavy motor vehicle. heavy duty vehicle support as the backbone and confront to the working. a dumper whose material can easily be unloaded in one direction that is mostly to its rear end. these inefficiency is been overcomes three axis modern pneumatic trailer. Automation can achieved through computers, hydraulics, pneumatics, robotics, etc., of these sources, pneumatics form an attractive medium for low cost automation [5].

Automation plays an important role in automobile. Nowadays almost all the automobile vehicle is being atomized in order to product the human being. The automobile vehicle is being atomized for the following reasons.

- To achieve high safety
- To reduce man power
- To increase the efficiency of the vehicle
- To reduce the work load
- To reduce the fatigue of workers
- To high responsibility
- Less Maintenance cost

II. BASIC IDEA

This idea was came from the visited a constructional site few days ago. There we found that a dumper was unloading loose material such as sand, gravel, and dirt. A trailer is an integral part of any construction work and hence its role is important for completion of work on site. Typical trailer trucks can generally unload material only exactly of its back side. One thing was remarkable that on complicated locations such as on angular sides and directional sides (left and right) of dumper the unloading of material became quite difficult. In suchconditions dumper truck remained ideal. It consumed extra. Trailers are also the most common cause of accidents involving construction site and plant also. A typical dump truck is equipped with a pneumatically operated open box dead hinged at rear. The front of which can be lifted up to allow the contents to be deposited on the ground behind the truck at side of delivery. Nowadays dumpers with swivel skips could be rotated to sideways (3 directional trailer) which become popular, especially for working in narrow

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A Review Paper on Rice Planting and Seed Metering Machine

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Abstract: The performance of the rice planting machine was investigated field conditions to optimize the design and operating parameters for rice planting. The effect of operational speed of the disc, and shape of the entry of plant spacing (coefficient of variation) then crank mechanism put the plant and pushing downward direction. Optimization of the regression equations incorporating speed of the disc and operating vacuum pressure through iteration further revealed that a disc, operating at speeds from 0.34 to 0.44 m/s, yielded similar performance. Based on the optimized operational parameter, performance indices of the rice planting machine were determined under field condition by measuring the distribution of rice plants spacing.

Keywords: Rice planting device,seed metering device, chain drive system.

I. INTRODUCTION

India is a country of villages, having large population around two third of its population are dependent on agriculture. Although agro industry is accreted of lingering peace. The sole culprit for slogging in pace of accretion (in agro industry) is "dependency on traditional approaches and equipment. For enhancing the per capita agricultural production, various innovative efforts are made at national level under the name "AgriculturalRevolution."

Revolution is confined to economic growth which may result from various economic factor but technological progress have been and will continue to be the primary source of development. Technology refers to the application of scientific knowledge for practical purpose as well as industrial process for enacting and enriching goods and services.

For the production of rice and onion, which is gradually a major production crop in konkan the rice should be dropped at a regular interval. But the existing equipment does not fulfill these criteria in India. In existing system, plant are dropped manually at the cross point of longitudinal and lateral cultivation which increase the cultivation time as well as labor cost. But by this device both the operation i.e. cultivation and rice planting can be done simultaneously.

In this system there is no need to drops the rice plant more than one times and no wastage of costly rice plants. And we savethe production cost as well as cultivation time and labor cost. And, get more yields. In existing system there was a possibility to germination of more than one plant at a single position, and transplantation of that extra plant was necessary. But in this system of drilling, this type of problem considered as negligible.

II. LITERATURE SURVEY

M. R. Kotwal [1] "A review paper on various seed sowing metering devices" Seed metering devices are those devices that meter the seed from the seed boxand deposit it into the delivery system that conveys the seed for placement on or in the seedbed. The major functional requirements of seed metering systems are to meter the seed at a predetermined rate/output (e.g. kg/ha or seeds/meter of row length) meter the seed with the required accuracy (spacing) to meet the planting pattern requirements (i.e. drill seeding, precision drilling, etc.); and cause minimal damage to the seed during the metering process. The present review provides brief information about the various types of innovations done in seed sowing machine available for plantation.

Kalay Khan et al [2]"The design and fabrication of a manually operated single row multi crops planter" Manual method of seed planting, results in low seed placement, spacing efficiencies and serious back ache for the farmer which limits the size of field that can be planted. The cost price of imported planters has gone beyond the purchasing power of most of our farmers. . To achieve the best performance from a seed planter, the above limits are to be optimized by proper design and selection of the components required on the machine to suit the needs of crops. This project work focused on the design and fabrication of a manually operated planter sowing for different crop seed that is cheap, easily affordable by the rural farmers, easy to maintain and less laborious to use. The multi-crop planter has the capability of delivering the seeds precisely with uniform depth in the furrow, and also with uniform spacing between the seeds .The seed planter consistof the main frame, adjustable handle, seed hopper, seed metering device, adjustable furrow opener, adjustable furrow closer, drive wheels, seed tube and ball bearings.

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The New Four Planes of Symmetry in Crystallography

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Abstract: The new four types of symmetry elements in a cubic crystal on the basis of planes passing through diagonal of crystal cube and mid-point of its two adjacent edges. The new four elements of symmetry have wide applications in 3D designing, vibrational study of molecules, classification of substances, etc.

Keywords: Crystal symmetry, plane, diagonal, edge mid-point, mirror image.

I. INTRODUCTION

The concept of symmetry is very powerful tool in theoretical physics; as this is manifest that practically all laws of nature initiates in symmetries. The concept of symmetry elements in cubic crystal is first introduced by P W ANDERSON in 1972. There is also Winger's classification, which says that the symmetries of the laws of physics determine the properties of particles found in nature.

In the section of planes of symmetry in symmetry elements of cubic crystal, we discovered new four planes of symmetry.

CRYSTAL SYMMETRY:

As a result of periodic arrangement there is some similarities of atomic arrangements that occur in crystals. This is called symmetry of atomic arrangement. The crystal is said to have a symmetry element corresponding to an operation, if after acting the specific activity the crystal goes into a position identical from the initial position. The most essential elements of symmetry are a center, an axis and a plane[1]. The three basic types of symmetry elements are described below:

1. CENTER OF SYMMETRY:

If a point exists inside the crystal such that the line drawn through it will have analogous condition at both of its ends, then the crystal is said to have a center of symmetry. This means that if there is an atom at some distance at one end, there is also an atom at the other end at the same distance[1]. It is also called the center of inversion. There is only one center of inversion, which is one of the symmetry elements[2].

2. AXIS OF SYMMETRY:

If the crystal is revolved about the axis, the atomic arrangement looks precisely the same more than once during one complete rotation. The diad axis is when the atomic arrangement looks the same two times in one rotation. Likewise, the axis may be a triad axis, tetrad axis, and hexad axis. The diad axis is symbolise by 2, triad axis by 3, tetrad axis by 4, and the hexad axis by 6, comparable to 180^0, 120^0, 90^0, 60^0, rotations severally[3]. There is total 13 symmetry elements of axis of symmetry. As,

2-fold axes (diad axes) :- 6 elements of symmetry
3-fold axes (triad axes) :- 4 elements of symmetry
4-fold axes (tetrad axes) :- 3 elements of symmetry

3. PLANE OF SYMMETRY:

If the crystal can be separated by an imaginary plane into two parts, such that one is the exact mirror image of the other, then the crystal is said to have a plane of symmetry. By the letter 'm' the mirror plane is symbolised[2]. Commonly, the mirror plane is parallel to rotation axis or perpendicular to it.

i. Let us consider a plane such as PQRS (As shown in Figure 1.) in the middle of the cube and parallel to one pair of faces.

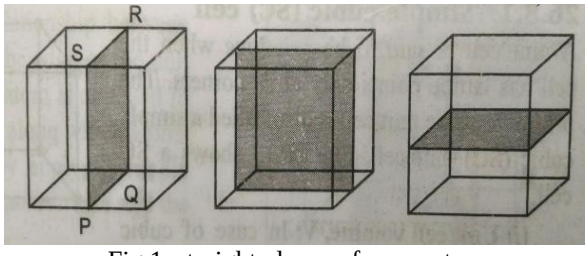

Fig.1. straight planes of symmetry

If it is considered as a mirror plane and one half of the crystal is cut and removed, the plane PQRS forms the mirror image of that half of the crystal in it. That means, the image will coincide with the other half, when we reflect one half of the crystal in plane PQRS. Thus, the plane PQRS is called a plane of symmetry or a mirror plane. There are three such planes of to parallel to the faces of the cube.

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Lean Design of Assembly Line for Promote Continuous Improvement

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Abstract: All of the assembly line layout problems are composed with space of the layout as well as regarding with the flow of the material. The goal of the assembly line layout problem is to meet the minimum requirements of the processing unit while saving space and optimize the degree of logistics costs and non-logistics as possible. It has identified several wastes in the internal material supply chain to latest assembly layout and suspect that there are more to be found. In upcoming assembly line layout the company wishes to reduce or eliminate these wastes in the work region.

Keywords: Line layout, Logistics, Optimize.

I. INTRODUCTION

What was worked out at Ford was the practice of moving the work from one worker to another until it became a complete unit, then arranging the flow of these units at the right time and the right place to a moving final assembly line from which came a finished product. Regardless of earlier uses of some of these principles, the direct line of succession of mass production and its intensification into automation stems directly from what we worked out at Ford Motor Company between 1908 and 1913. Henry Ford is generally regarded as the father of mass production. He was not. He was the sponsor of it." This approach seems particularly well suited assembly line layout to synchronous flow of facilities. The general purpose of assembly line layout planning focuses on equipment's selection, processing alternatives, assignment restrictions etc. To balance assembly line various methods are available including employ trained workers, utilization of high performance machine, applying material handling principles, designing non-adjacent plant layout etc. Yet, there is another method which is the most welcoming among these methods; it is productivity improvement by simulation method.

II. ASSEMBLY PROCESS

Assembly involves the joining together of two or more separate parts to form a new entity (Assembly or subassembly). The processes used to accomplish the assembly of the components can be divided into three major categories.

1. Mechanical Fastening –Mechanical action to hold components together.
- Threaded fasteners - screws, bolts, nuts etc.
- Rivets, crimping and other methods
- Press fits
- Snap fits –temporary interface of the two parts C-ring.
- Sewing and stitching –for soft, thin material.

2. Joining Methods –welding, brazing and soldering
3. Adhesive Bonding –thermoplastic, thermosetting (chemical reaction)

III. TERMINOLOGY

• Minimum Rational Work Element

Minimum rational work element is the smallest practical indivisible tasks into which the job can be divided. These work elements cannot be subdivided further .Work carrier Or Base part in Components added at each station.
Example: drilling a hole, screw and nut etc.

T_{ej}: where j is used to identify the element out of the 'n' elements that make up the total work.

• Total Work Content

Total work, T_{wc}, content is the aggregate of all the work elements to be done on the line.

$$T_{wc} = \sum T_{ej}$$

• Workstation Process Time

Work is preformed either manually or by some automatic device. The work performed at station consists of one or more of the individual work elements.

$$\sum T_{si} = \sum T_{ej}$$

• Cycle Time

Cycle time, T_c, is the ideal or theoretical cycle time of the flow line, which is the time interval between parts coming off the line.
When consider efficiency, E, the ideal cycle time must be reduce.

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Life Cycle Cost Methodology for Mixers based on MTTF Life Cycle Cost Model

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Abstract: Most of the manufacture and mixer users have confusion about selecting the life cycle cost model or life cycle costing of mixers. This paper presents the life cycle costing of mixers based on the MTTF life cycle cost model from the various life cycle cost models. This method or model can also be applied to the static as well as dynamic mixers. This model has five components and these components will be easily collected by the manufacturer data and field data from the end users of the mixers. MTTF life cycle cost model has benefitted to manufacturer and also users to calculating the total life cycle cost of their products.

Keywords: Life cycle cost, Mixers, Life cycle costing, Life cycle cost model.

I. INTRODUCTION

Many terms and definitions are used in the area of life cycle costing. The life cycle cost of a system may be defined simply as the sum of all costs incurred during its life span (i.e., the total of acquisition and ownership costs) [1]. LCC includes all costs incurred from the point at which decision is made to acquire a system through the operational life, to the eventual disposal of the system or product. The term life cycle costing was used for the first time in 1965 in a report entitled "Life Cycle Costing in Equipment Procurement" [2]. This report was prepared by the Logistics Management Institute, Washington, D.C., for the assistant secretary of defence for installations and logistics, U.S. Department of Defence, Washington, D.C.

The objective of LCC analysis is to choose the most cost effective approach from a series of alternatives so the least long term cost of ownership is achieved while considering cost elements which include design, development, production, operation, maintenance, support, and final disposition of a major system over its anticipated useful life span. LCC is the sum of acquisition, logistic support and operating expenses. LCC is the language of money. LCC analysis helps engineers justify equipment and process selection based on total costs rather than the initial purchase price as the cost of operation, maintenance, and disposal costs exceed all other costs many times over [3]. Mixing is avery important unit operation in any chemical process industry, for instance, all operations involving blending, homogenization, emulsion, preparation, extraction, liquid phase reaction, etc. need mixing in one form to another. Broadly, two types of commercial mixing devices are available, that are static and dynamic mixers. Selection of an efficient agitation will depend on the nature of liquid, operation, condition and intensity of circulation and shear [4]. We should apply the same LCC model to both the static and dynamic mixture to calculate the LCC of them. The demands low lifecycle cost of the mixers and hence a mixer is selected for the analysis in order to reduce the LCC and improve the overall profits of the users by reducing the LCC mixers.

II. LIFE CYCLE COST

The life cycle cost of every system/product can be divided into four stages, namely system/product design, production operations and finally retirement. System design can be defined as decision making process that determines the system configuration and reliability and maintainability of the system/subsystem/products, where the goal is to build a system that performs all functions successfully through its life. While functional requirements are easy to capture and quantify, the performance requirements that depend upon reliability, maintainability is not specified explicitly by most of the customers. Apart from the designing for quality, reliability and maintainability, it is also methods necessary for control and assurance be used at the production stage.

After the production stage, the product or system used by the customers, where maintenance and support play a major role. It is this stage of the product life cycle that determines the competitiveness of the product in the market. If a product is designed with due consideration to issues related to support, maintenance, service delivery, and competence and capability of users, it can be a major source of revenue for the manufacturer and users[5]. LCC analysis provides an input in deciding between alternative designs, replacing aging equipment, making purchasing comparisons between equipment, developing operations and support concepts, maintenance methods and preparing

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Design and Vibration Analysis for Shaft with Gear Mountings using Finite Element Analysis

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Abstract: This paper contains the study about design and vibration analysis for automobile gearbox element shaft with gear using Finite Element Analysis (FEA). Analysis include the study of equivalent stress and displacement response of the component. The three- dimensional finite element model is constructed in ANSYS. The model is meshed and the boundary conditions with external loads are applied in ANSYS workbench. With the help of ANSYS software we find out the total deformation, equivalent stress which is response for noise and vibration of shaft with gear mounting.

Keywords: Shaft and Gear Design, Noise and Vibration, Finite Element Analysis, ANSYS Software.

I. INTRODUCTION

Every material structure containing individual mass and stiffness distribution is disposed to vibrate and vibration is a annoying day-to-day problem in design and production of the machinery or mechanical element. The automobile gearbox is a device which is used to transmit the power from one shaft to the other shaft with the help of shaft and gear. Efficiency of the device is one of the important parameter. Gearbox casing is the shell (metal casing) in which a train of gears is mount on the shaft. From the movement of the gear it will produce the vibration to the gearbox casing[4]. The function of gear box casing is to protect and provide a platform for gear transmission. It also provides supports for moving parts and protection from outside environment. It also acts as fluid tight container which holds the lubricant that bathes the gear box parts. Parts such as gears, shafts, pinion shafts, bearings, oil seals etc. These make the gear box housing an essential component in engine of automobile. The gear housing is in the vicinity of the gear box and engine. Hence will get subjected to vibrations so it becomes necessary to evaluate the response of gear housing to such vibrations and also to find out there natural frequency[1]. Most of the times noise and vibration becomes the major problem of system. The conventional gear box gives us the required power and speed ratio but, they require the proper materials and design geometry for their working. Also they possess large number of parts and become bulky. In some applications, the material and dimensions is the important factor while designing the device[5].

Shaft and gear is the most important part in gearbox of automobile. On shaft different gears are mounted to transmit power from input shaft to output shaft with different speed ratio. If specific r.p.m. matches with critical speed which is nearer to first bending natural frequency of shaft will generate excessive vibrations due to resonance[3].The gears generally fail when tooth stress exceed the safe limit. It is essential to determine the maximum stress that a gear tooth is subjected to, under a specified loading. To prevent from failure Analysis is carried on gears[2]. The gears were completely strict and no geometrical errors or modifications were present, the gears would transmit the rotational motion perfectly, which means that a constant speed at the input shaft would result in a constant speed at the output shaft. The assumption of no friction leads to that the gears would transmit the torque perfectly, which means that a constant torque at the input shaft would result in a constant torque at the output shaft. No force variations would exist and hence no vibrations and no sound (noise) could be created. Of course, in reality, there are geometrical errors, deflections and friction present, and accordingly, gears some- times create noise and vibration to such an extent that it becomes a problem and also reduce life of component[7].

Numbers of methods are available for the design optimization of structural system or mechanical element and these methods is based on mathematical programming technique and optimally designed. Using ANSYS software which is based on the FEM[8]. ANSYS software is used to modelling, solving and involves viewing of data files generated by the software during the solution phase of automobile gearbox element such as shaft with gear mounting.

II. PROBLEM DEFINITION

Gearbox housing walls and other elastic structures is very important for the noise and vibration emitted by systems into the surroundings. The noise emitted into the surroundings by the gearbox is mostly the consequence of natural fluctuation of the housing and shaft and gears may be mistuned by mesh stiffness variation, manufacturing defect and assembling errors[6]. It is also compulsory to methodically study natural frequency and vibration mode

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Multipurpose Sand Screening Machine

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Abstract: This paper presents the concept of Multi-Function Operating Machine mainly carried out for production based industries. Industries are basically meant for Production of useful goods and services at low production cost, machinery cost and low inventory cost. Today in this world every task have been made quicker and fast due to technology advancement but this advancement also demands huge investments and expenditure, every industry desires to make high productivity rate maintaining the quality and standard of the product at low average cost. We have developed a conceptual model of a machine which would be capable of performing different operation simultaneously y, and it should be economically efficient .In this machine we are actually giving drive to the main shaft to which scotch yoke mechanism is directly attached, scotch yoke mechanism is used for sawing operation. On the main shaft we have use bevel gear system for power transmission at two locations. Through bevel gear we will give drive to drilling centre and grinding centre. The model facilitate us to get the operation performed at different working centre simultaneously as it is getting drive from single power source. Objective of this model are conservation of electricity (power supply), reduction in cost associated with power usage, increase in productivity, reduced floor space.

Keyword: Sand screening, Wooden cutter, Grinder etc.

I. INTRODUCTION

Industries are basically meant for Production of useful goods and services at low production cost, machinery cost and low inventory cost. Today in this world every task have been made quicker and fast due to technology advancement but this advancement also demands huge investments and expenditure, every industry desires to make high productivity rate maintaining the quality and standard of the product at low average cost In an industry a considerable portion of investment is being made for machinery installation. So in this paper we have a proposed a machine which can perform operations like drilling, sawing, shaping, some lathe operations at different working centers simultaneously which implies that industrialist have not to pay for machine performing above tasks individually for operating operation simultaneously.

Economics of manufacturing: According to some economists, manufacturing is a wealth-producing sector of an economy, whereas a service sector tends to be wealth-consuming. Emerging technologies have provided some new growth in advanced manufacturing employment opportunities in the Manufacturing Belt in the United States. Manufacturing provides important material support for national infrastructure and for national defence

II. LITERATURE REVIEW

Before starting our work we have undergone through many research papers which indicates that for a production based industries machine installation is a tricky task as many factor being associated with it such as power consumption (electricity bill per machine), maintenance cost, no of units produced per machine i.e. capacity of machine, time consumption and many more….

Some research papers which have led us to approach to the idea of a machine which may give solution to all these factors are as follows:

Heinrich Arnold1 November 2001: Rather long re-investment cycles of about 15 years have created the notion that innovation in the machine tool industry happens incrementally. But looking at its recent history, the integration of digital controls technology and computers into machine tools have hit the industry in three waves of technology shocks. Most companies underestimated the impact of this new technology. This article gives an overview of the history of the machine tool industry since numerical controls were invented and introduced and analyzes the disruptive character of this new technology on the market. About 100 interviews were conducted with decision-makers and industry experts who witnessed the development of the industry over the last forty years. The study establishes a connection between radical technological change, industry structure, and competitive environment. It reveals a number of important occurrences and interrelations that have so far gone unnoticed.

Dr. Toshimichi Moriwaki (2006): Recent trends in the machine tool technologies are surveyed from the view points of high speed and high performance machine tools, combined multifunctional machine tools, ultra precision

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Design of Rocker Bogie Mechanism

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Abstract: Rocker bogie are important for conducting in-situ scientific analysis of objectives that are separated by many meters to tens of kilometers. Current mobility designs are complex, using many wheels or legs. They are open to mechanical failure caused by the harsh environment on Mars. A four wheeled rover capable of traversing rough terrain using an efficient high degree of mobility suspension system. The primary mechanical feature of the rocker bogiedesign is its drive train simplicity, which is accomplished by using only two motors for mobility. Both motors are located inside the body where thermal variation is kept to a minimum, increasing reliability and efficiency. Four wheels are used because there are few obstacles on natural terrain that require both front wheels of the rover to climb simultaneously. A series of mobility experiments in the agriculture land, rough roads, inclined, stairs and obstacles surfaces concluded that rocker bogiecan achieve some distance traverses on field.

Keywords: Rocker bogie; Wheel type mobile robot; Stair climbing; Rover.

I. INTRODUCTION

Over the past decade, the rocker-bogie suspension design has become a proven mobility application known for its superior vehicle stability and obstacle-climbing capability. Following several technology and research rover implementations, the system was successfully flown as part of Mars Pathfinder's Sojourner rover. When the Mars Exploration Rover (MER) Project was first proposed, the use of a rocker-bogie suspension was the obvious choice due to its extensive heritage. The challenge posed by MER was to design a lightweight rocker-bogie suspension that would permit the mobility to stow within the limited space available and deploy into a configuration that the rover could then safely use to egress from the lander and explore the Martian surface [4].

When building a robot you'd like it to be as simple as possible. In most cases you'd never need a suspension system, but there were several instances when a suspension system cannot be avoided. The term "bogie" refers to the links that have a drive wheel at each end. Bogies were commonly used as load wheels in the tracks of army tanks as idlers distributing the load over the terrain. Bogies were also quite commonly used on the trailers of semi-trailer trucks. Both applications now prefer trailing arm suspensions.The rocker-bogie design has no springs or stub axles for each wheel, allowing the rover to climb over obstacles, such as rocks, that are up to twice the wheel's diameter in size while keeping all six wheels on the ground. As with any suspension system, the tilt stability is limited by the height of the centre of gravity.

II. LITERATURE REVIEW

The concept of our research work is to create a rocker-bogie drive system based on those of NASA. NASA developed the rocker-bogie suspension system for their rovers and was implemented in the Mars Pathfinder's and Sojourner rover. The rocker-bogie suspension system passively keeps all six wheels on the robot in contact with the ground even on uneven surfaces. This creates for great traction and manoeuvrability (Harrington & Voorhees).

The rocker-bogie suspension mechanism which was currently NASA's approved design for wheeled mobile robots, mainly because it had study or resilient capabilities to deal with obstacles and because it uniformly distributes the payload over its 6 wheels at all times. It also can be used for other purposes to operate in rough roads and to climb the steps. It was having lots of advantages but one of the major disadvantages is the rotation of the mechanism when and where is required. The rotation can be possible by providing individual motors to individual wheels which causes arise in cost and complicacy in design. Here an attempt was made to modify the existing design by incorporating a gear type steering mechanism which will be operated by a single motor which simplifies the design as well as the total cost and operating cost of the mechanism.

In this work the proposed steering mechanism was designed and the modeling was done in CATIA (V-5) and the same was analyzed for static analysis for the proposed torque condition of the motor in ANSYS. All the results in the analysis were analyzed for static analysis [1].

The researchers discusses the concept and parameter design of a Robust Stair Climbing Compliant Modular Robot, capable of tackling stairs with overhangs. Modifying the geometry of the periphery of the wheels of our robot helps in tackling overhangs. Along with establishing a concept design, robust design parameters were set to minimize performance variation. The Grey-

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An Overview of Wind Mills

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Abstract: There are number of sources for generation of power but in the recent years wind energy shown its potential as the clean source of energy and contributing to the high energy demands of the world. In this paper we present an historical background of wind turbine and over view on its type .review of wind mills topic are chosen because wind energy is renewable resource and wind energy is cheap and is largely dependent upon manufacturing, distribution and building of turbines. Wind turbine having main two types that is horizontal axis wind turbine (HAWT) and vertical axis wind turbine (VAWT). The horizontal axis wind turbine cannot be used for household purpose, it required more space for installation.

Keywords: HAWT, Turbine, VAWT, Wind Mill.

I. INTRODUCTION

From 7th and 10th century various sources of wind power are placed in the areas between today's Iran and Afghanistan to use of pumping of water or grind wheat. They had vertical axis and used the drag component of wind power: because of their lower efficiency. After some time work in a proper direction the part rotating in opposite direction compared to the wind had to be protected by a wall. Obviously, devices of this type can be used only in places with a main wind direction, because there is no way to follow the variations. The first windmills built in Europe and inspired by the Middle East ones had the same problem, but they used an horizontal axis. So they substitute the drag with the lift force, making their inventors also the unaware discoverer of aerodynamics.

II. EARLY DEVELOPEMENT

First historical record of a wind mill is found in BC 1700 in Mesopotamia in the present day of iran and eraq. The first one to draw a wind turbine was the great mathematician hero of Alexandria from Egypt in AD 50,it has been discussed whether the wind mill actually existed, or if it was drawing. In seistan AD 700 present day iran , there are records from the first practical wind mills namely "the Persian windmill". The first historical references of a windmill were found in Europe dates to 1185 in Yorkshire, Great Britain.

The first real documentation was of the Chinese statesman Yehlu Chhu-Tshai in 1219. These windmills were quite similar to the Persian windmills, vertically axed. The reduced weighted steel blades where introduced in 1870. The vertical axis wind turbine is first designed to generate the electricity in 1887 by the Scottish professor James Blyth in Glasgow, Scotland. To large scale wind generation of electricity was first attempted by Charles brush in 1887 Ohio, USA. The darrieous wind turbine was first constructed by the French aeronautical engineer Georges jean Marie durries in 1931.The world first mega watt sized wind turbine was built in 1941 and connected to the local electrical distribution system in a mountain in Castleton, Vermont, USA. Up until this point, horizontal axis wind turbine had been rotating counter- clockwise, but from 1978 a shift occurred, and now, in order to present a coherent view, all the major horizontal axis turbines rotate clockwise. The worlds first wind farm was install in southern new Hampshire USA, in 1980 which is consist of a 20 wind turbines rating at 30kw each. In 2008 most powerfull on shore wind turbine having 7 mw capacity which is built up by Enrcon company from germany.

III.ADVANTAGES AND DISADVANTAGES

A) Advantages:

- Wind energy is a renewable resource meaning that the Earth will continue to provide this and it's up to people to use it and harness it to best advantage.
- Wind energy is nothing new. It's a well-known method of using kinetic energy (wind) to produce mechanical energy and has been around for thousands of years since the Persians and later Romans were using windmills to draw water and grind grain.
- Wind energy is cheap and is largely dependent upon the manufacturing, distribution and building of turbines for the initial costs.
- The electricity also produce from coal fired power plant and due to this green house gases are produce global warming instead of this we use wind energy.
- Wind turbines can also share space with other interests such as the farming of crops or cattle.
- Wind energy is creating jobs that are far outpacing other sectors of the economy.

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Foot Steps Power Generation using Mechanical System

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Abstract: In present day, power has become the fundamental need for human life. The availability and its conjunction is regarded as the index of national standard of living in the present day of civilization. Energy is an important input in all sectors of any countries economy. The objective of this project is to design a setup that leads to generating electricity .the energy which is going waste when human climb the stairs. This human energy is utilized and converted into electrical energy. This generated energy is cost effective and nonhazardous for human. Power can be generated through stepping on the stairs, the generated power will be stored and can be used for domestic purpose. To obtain the above purpose, The experimental setup is designed which contains the structure, dome, rack, spur gear, bearings, flywheel, shaft, springs, chain drive and dynamo. The working principle is based on law of energy i.e mechanical energy is converted into electrical energy. When force is applied on footstep rack and spring get compressed therefore the pinion is rotated. This rotates the chain drive arrangement. The flywheel is coupled with chain drive to regulate the fluctuation and finally the dynamo is connected with the shaft. Thus reciprocating energy is converted into rotating energy and mechanical energy is converted into electrical energy. The energy generated is risk free and pollution free. The way of energy generation is eco friendly and nonhazardous to human. The output of energy increases as weight increases. The weight range is from 10 to 15kg. The LED bulb blows is of 9 watt and the rang of voltage obtained is from 8 to 35 v as per the changes in weight. The electricity is produced in low budget when mass production and installation is done. The required area is low, no obstructions in traffic, easy maintenance and construction.

Keywords: Foot step Energy, Eco friendly Power.

INTRODUCTION

In the present scenario, power has become the fundamental need for human life. The availability and its per capita consumption is regarded as the index of national standard of living in the present day civilization. Energy is an important input in all sectors of any countries economy. Energy crisis is due to two reasons, firstly the population of the world has been increasing rapidly and secondly the standard of living of human beings has also increased. India is a country, which majorly suffers with lack of sufficient power generation. The capital energy consumption of U.S.A. is about 8000 K.W.H, where as in India it is only 150 K.W.H. U.S.A. with only 7% of the world's total population consumes about 32% of total power generated where as India a developing country with 20% of world population consumes only 1% of total energy generated in the world. The regular conventional fossil fuels are the main sources for power generation, but there is a fear that they will get exhausted eventually in the next few decades. Therefore investigate some alternative, new sources for the power generation, which will not deplete in the next few years. Another major problem is pollution. It affects all living organisms. Therefore investigate other types of renewable sources, which produce electricity without using any commercial fossil fuels. Already there are such systems using renewable energy such as solar energy, wind energy, OTEC (ocean thermal energy conversions) etc. for power generation. This work generates electric power by simply walking or running on footsteps. In order to develop a technique to harness footstep energy, a foot step electricity generating device was developed in the Reactor Control Division, BARC.

PRESENT THEORY AND PRACTICES

Siba brata Mohanty et al [1] Proposal for the utilization of waste energy of foot power with human locomotion is very much relevant and important. Man has needed and used energy at an increasing rate for his sustenance and well-being ever since he came on the earth a few million years ago. With further demand for energy, man began to use the wind for sailing ships and for driving windmills, and the force of falling water to turn water for sailing ships and for driving windmills, and the force of falling water to turn water wheels. Till this time, it would not be wrong to say that the sun was supplying all the energy needs of man either directly or indirectly and that man was using only renewable sources of energy.

S.D.Mendhule et al [2] various countries draw a large amount of energy from a variety of sources and can be categorized as conventional and non-conventional source

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Multi-Parametric Optimization of WEDM Process Using Desirability Function Analysis

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Abstract: The present research study deals the Wire electrical discharge machining (WEDM) process for High carbon high-chromium steel (D3) with multi-parametric optimization based on the Taguchi method and desirability function analysis. Experiments were carried out based on an L9 orthogonal array. The effect of process parameter such as pulse-on time (Ton), pulse-off time (Toff), current (IP) and wire speed (Ws) were analyzed on the performance measures such as material removal rate, dimensional deviation, gap current and machining time. The optimum cutting conditions are obtained by Taguchi method and desirability function. The analysis of variance (ANOVA) is applied to investigate the effect of input process parameters. Finally, the confirmation experiment was carried out for the optimal machining parameters, and the betterment has been proved.

Keywords: D3 tool steel, Desirability Function Analysis (DFA), Multi-parametric optimization, Wire Electrical Discharge Machining (WEDM).

I. INTRODUCTION

In mechanical industry, the demands for alloying materials having High Strength, High Hardness, High Thermal Resistance, High Abrasive Wear, more toughness, high impact resistance are increasing but, these materials are difficult to be machined by traditional machining methods. Hence, non-traditional machining methods including electrochemical machining, ultrasonic machining, electrical discharging machine (EDM) etc. are applied to machine such difficult to machine materials. WEDM is one of the most popular in all conventional EDM process, which used a wire electrode to initialize the sparking process.

In WEDM Process a small diameter wire range from 0.05 to 0.3 mm (Rao 2011) is applied as the tool electrode. The wire is continuously supplied from the supply spool (Fig. 1), through the work-piece, which is clamped on the table by the wire traction rollers. A gap of 0.025–0.05 mm is maintained constantly between the wire and work-piece. De-ionized water is applied as the dielectric fluid. A collection tank which is located at the bottom is used to collect the used wire and then discard it.

Due to the variation in dimensional accuracy wire which once used cannot be reused again. The dielectric fluid is continuously flashed through the gap along the wire, to the sparking area to remove the byproducts formed during the erosion (Kalpakjian and Schmid 2009).The WEDM is a well-established machining option for manufacturing geometrically complex or hard material parts that are extremely difficult-to-machine by conventional machining processes.

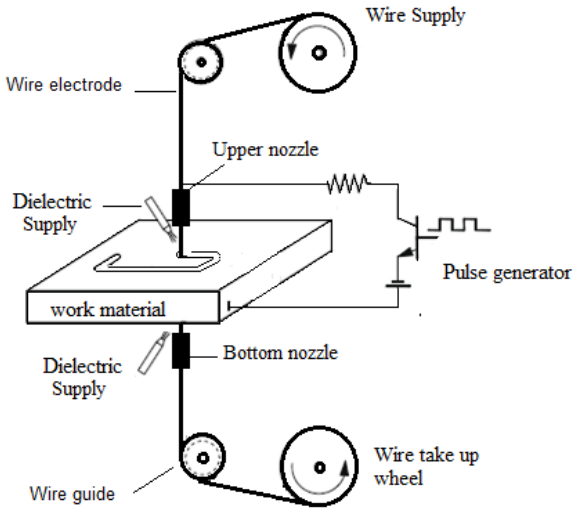

Fig 1: Representation of WEDM process

II. EARLY DEVELOPEMENT

In present work, the experiments were carried out on a WEDM machine (ELCTRONICA EL-CUT 334) of "Electronica Machine Tools Ltd. India". AISI D3 tool steel containing chemical composition C,2.25;Si,0.60,Mn,0.60;Cr,12;Ni,0.30;W,1;V,1;Cu0.25;P, 0.03;S,0.03 having 30 mm thickness has been selected as workpiece material. Using WEDM, work material was machined and samples were obtained in the form of rectangular punch of profile of 20 mm × 20 mm square.
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Development of Plastic Injection Mold using Simulation Technique Analysis Result

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Assistant Professor, Mechanical Engineering Department, DACOE Karad[4]

Abstract: This paper deals with the development of Plastic Injection Mold using Simulation Technique results. In analytical solution Simulation and analysis is carried out with the help of mold flow software. In this work we use Autodesk mold flow software. From the simulation and analysis, the software for flow simulation provides sufficient information regarding filling time, injection pressure, defects like air traps, weld lines, sink mark, warpage etc. With these results, users can avoid the defect of the plastic in actual injection. The analysis will help the to design a mold with minimum modifications and which will also reduce the time and cost. The design will be validated by producing the component with the help of the designed mold.

Keywords: Simulation, Mold flow, Housing retainer, Mold Design.

INTRODUCTION

There are different ways of molding a plastic in to desired shape. Injection molding is the most common and important of all plastic processing processes. The process is extremely versatile, and can produce very complex shaped parts, with the use of multi-sided molds. The main concept of plastic molding is filling a molten state polymer into the mold cavity, allowed to solidify so that the polymer can take the required shape. To avoid the high costs and time delays problems associated with the start of manufacturing, it is necessary to consider the combined effects of part geometry, material selection, mold design and processing conditions. Using predictive analysis tools to simulate the injection molding process can evaluate and optimize interactions between these variables where the cost of change is minimal and the impact of the change is greatest.

COMPONENT DETAIL:

Fig 1 Housing Retainer

Name of Component: Housing Retainer
Molding type- Multi cavity injection mold
Material- Delrin 500P
This part is fixed at the bottom of the housing containing lubricating oil. Typically, the retainer has external treads that engages with the tapping in the Aluminum housing. The part is required to withstand the torque applied during fitment with the housing. Weld line, Warpage also needs to be controlled. The housing retainer is as shown in fig 1

ANALYTICAL SOLUTION

Analytical Solution involve 3D model and mold design created using CAD software such as CATIA. Meshing is carried out using pre-processor software. Analysis/ Simulation can be performed using suitable software in the CAE domain. Moldex or Mold flow are the common and popular software used in industry. For the work we use Autodesk mold flow software. Simulating the injection molding process reduces the need for costly physical prototypes, avoids potential manufacturing defects and helps deliver innovative products to market faster. Autodesk Simulation Mold flow helps to simulate the filling and packing phases of the plastic injection molding process, so we can better predict the flow behaviour of melted plastics and achieve higher-quality manufacturing.

MOLD FLOW ANALYSIS RESULT

1st Iteration

Feeding system is designed with submarine gate having Cold Runner Melt Flow Channel diameter of 5 mm, Gate diameter 1x3mm.The simulation result of 1st iteration is as shown in fig 2

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Cell Phone Controlled Device

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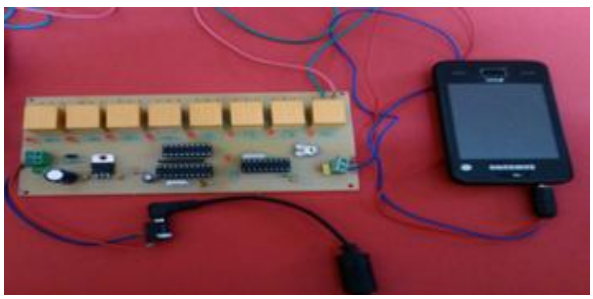
Abstract: This paper represents a novel method which enables users to control their home appliances and systems from remote using a cell phone-based interface. To access the control unit, the user should send an authentication code (DTMF) along with the required/desired function/action to his/her home control system via Global System for Mobile communication (GSM). Upon being properly authenticated, the cell phone-based interface at home (control unit) would relay the commands to a microcontroller that would perform the required function/action, and return a function completion code that would be sent to the source of the original command (user's cell phone).

Keywords: Decoder, DTMF, GSM, Microcontroller, Voltage Regulator, Register.

I. INTRODUCTION

The aim of the proposed system is to develop a cost effective solution that will provide controlling of home appliances remotely by using cell phone. Conventionally, wireless-controlled device or appliance use RF circuits, which have the drawbacks of limited working range, limited frequency range and limited control. Use of a mobile phone for appliance control can overcome these limitations. It provides the advantages of robust control, working range as large as the coverage area of the service provider, no interference with other controllers. Though devices connected as home and office appliances consume electrical power. These devices should be controlled as well as turn on /off if required. Most of the times it was done manually. Now it is a necessity to control devices more effectively and efficiently at anytime from anywhere. In this system, we are going to develop a cell phone based home/office appliance controller. This system is designed for controlling arbitrary devices; it includes a cell phone which is connecting to the system via head set. To active the cell phone unit on the system to call is to be made and as the call is answered automatically, in response to access the system to control devices. As the caller press the specific password, it results in turning ON or OFF specific device. The device switching is achieved by Relays [8]. By using this system we have to operate home or office appliances automatically.



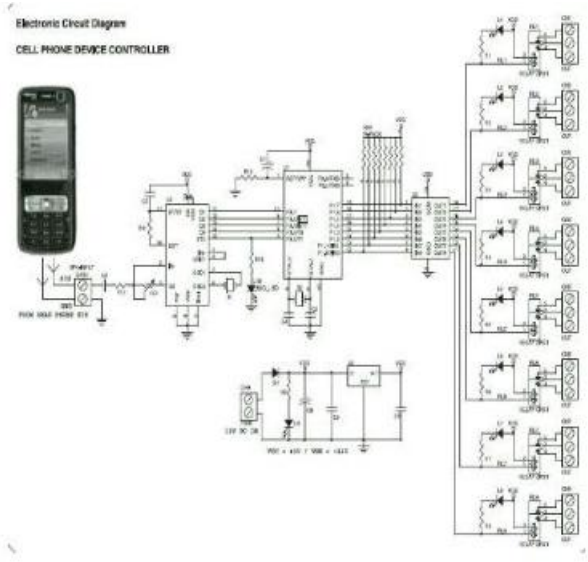


Fig 1. Circuit diagram of device

II. WORKING

In this device, the appliance is controlled by a mobile phone that makes a call to the mobile phone attached to the interface circuits. In the course of a call, if any button is pressed, a tone corresponding to the button pressed is heard at the other end of the call. This tone is called 'dual-tone multiple-frequency' (DTMF) tone. The controller perceives this DTMF tone with the help of the phone stacked in the projects.

The received tone is processed by the AT89xxx microcontroller with the help of DTMF decoder MT8870. The decoder decodes the DTMF tone into its equivalent binary digit and this binary number is sent to the microcontroller. The microcontroller is preprogrammed to take a decision for any given input and outputs its decision

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Farm Mechanization by using Seed Planting Machine

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Assistant Professor, Mechanical Engineering Department, AGTI's Dr. Daulatrao Aher College Engineering, Vidyanagar Extension, Karad, Maharashtra, India[1,2,3,4,5]

Abstract: In the agricultural field, seed planting operation is very time consuming in farming process. Also more labours are required for seed planting. Hence the total cost of the farming increases. The conventional seed sowing machines requires more seed and quantity of seed per unit area increases and this affects the yield. Also conventional seed sowing machines have constraints to use in the ridge and furrow method. But to reduce the risk of draught due to unpredictable rainy season and for irrigation purpose farmers accepts ridge and furrow method. Here in this study efforts are taken to design and develop a seed planting machine which is suitable for ridge and furrow method and also plant the seed at specific distance with specific quantity and reduce the requirement of seed per unit area.

Keywords: Seed Mechanization, Sowing, Planting, Ridge and furrow method.

I. INTRODUCTION

The India is agricultural country. More than 70% peoples depend on the agriculture. To improve the economic condition of India, growth in the agricultural sector is important. To achieve this goal efforts are necessary to reduce the cost of farming process by mechanizing the agricultural operations [1].
Manual seed planting is the one of the operation which is very time consuming and more labours are required for this operation. But this method have a drawbacks like low seed placement, variation in spacing and serious back ache for farmers [2][3][4].

Conventional seed sowing method is available but this has a lot of disadvantages like no control over the depth of seed placement, No uniformity in the distribution of seed placement, Loss of seeds, No proper germination of seeds [5]. Also not useful for ridge and furrow method. Conventional seed sowing machines are not suitable for ridge and furrow method and large quantity of seed is necessary.

In this study focus is on to reduce the disadvantages of manual and conventional method and develop a seed planting machine which is suitable to plant seed at specific interval and also useful to plant seed in ridge and furrow method.

PURPOSE OF SEED PLANTER MACHINE

The objectives of seed planter machine are to put seeds at desired depth with constant seed spacing and covering the seed with soil. This machine is suitable for planting seed in ridge and furrow method, flat arrow method, flat bed method as well as multi cropping. The main objective of this machine is to reduce human effort and back ache of farmers.

II. PROBLEM IDENTIFICATION

The following steps are to be taken to identify the problem

i. The first step is to go to the farmers and find the problems faced by them.
ii. The second step is to choose a problem.
iii. The third step is to collection of data regarding the seed sowing and planting by farmer interview and literature review.

The drawbacks of existing machines are:

a. The spacing between two seeds are uneven.
b. It requires more than two operators.
c. Flow rate of seeds are not controllable.

After the field visits and literature review we are concluded to work on seed planter machine which nullify the previous machines drawbacks.

III. SOLUTION METHODOLOGY

For finding the solution of problem we studied different types of mechanism which is useful and preferable to reduce human effort and above existing machine problems. After comparing the various mechanism and there feasibility we are decided to use scotch and yoke mechanism for seed metering. In existing seed sowing machines impellers are used for seed metering. To take decision regarding row spacing, ridge and furrow dimensions surveying of a nearer farms are carried out.
Also survey regarding the standard material and components available is carried out to fix the dimensions of the seed planting machine. After that the seed planting machine model is developed by using CATIA V5R15 software. This model is modified by analysing the various factors like weight of machine assembly, speed of the movement, bending moment of the rod. After that the model is fabricated and field tests are performed.

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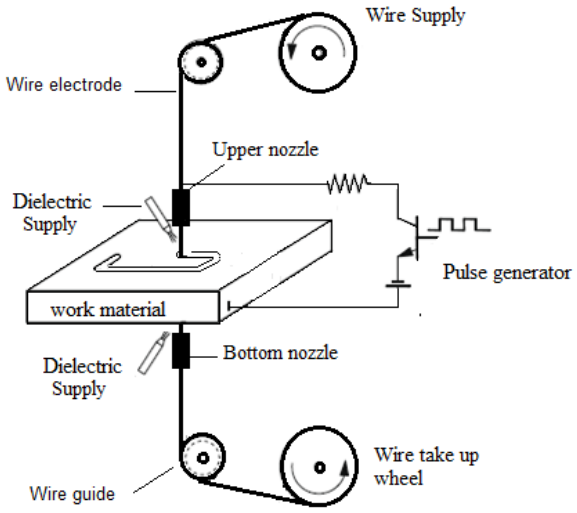

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Automation of Stone Feeding on T8 Honing Machine

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Abstract: Honing is an abrasive machining process that produces a precision surface on work piece by scrubbing an abrasive stone against it along a controlled path. Honing uses a honing stone or a hone, to achieve a precision surface. The hone is composed of abrasive grains that are bound together with an adhesive. It is used for surface finishing outer surface of the inner race and the inner surface of the outer race of taper roller bearings. It is bound to wear and tear. The honing stone is then manually adjusted so that the abrasive surface comes in contact with the material to be machined. Hence, the machine has to be stopped and the operator needs to adjust the stone accordingly. The stopping, adjusting and restarting of the machine increases the idle time of the machine. Therefore, it is necessary to automate this process. We will be using a position based process for the movement of the honing stone after the abrasive material is eroded by 2mm. This will decrease the idle time and increase the productivity.

Keywords: Honing, Bearings, Wear of stone, Automation.

I. INTRODUCTION

Honing is a cutting process where multi-edge tools coated with particles with continuous surface contact between the tool and work piece are used to optimize the dimension, form and surface of pre-machined work pieces. Between tool and work piece a change in direction of the longitudinal movement takes place. The finished surfaces are characterized by a cross-hatch pattern on the surface.
The work process with honing is a combination of stroke and rotation movement of an expandable honing tool with inserted honing stones or diamond sticks. The result is the surface structure with cross-hatch pattern generated by the honing process. The timing of the honing is defined by quick cutting of the peaks of the pre-machined bore surface. This rapidly achieves a smoothing of the surface.

Applications: Finishing of cylinders for internal combustion engines, air bearing spindles and gears. There are many types of hones but all consist of one or more abrasive stones that are held under pressure against the surface they are working on.

SKF India has most important operation of Honing to be performed on internal side of outer race of bearing. After performing grinding on bearing material the honing gives perfect finishing to surface.

As rotation on roller or ball of bearing is necessary to be very smooth & very easy to work with maximum efficiency. Bearing working principle depends on very smooth rolling of supporting rollers or balls. Honing allows to super finish the surface to make it very easy for motion with slight lubrication over it. There are different techniques used for honing operation like Longitudinal Stroke Honing, Short stroke honing, Centreless plunge honing etc.
Honing uses a special tool, called a honing stone or a hone, to achieve a precision surface. The hone is composed of abrasive grains that are bound together with an adhesive. Generally, honing grains are irregularly shaped and about 10 to 50 micrometres in diameter (300 to 1,500 mesh grit). Smaller grain sizes produce a smoother surface on the workpiece.

A honing stone is similar to a grinding wheel in many ways, but honing stones are usually more friable so that they conform to the shape of the work piece as they wear in. To counteract their friability, honing stones may be treated with wax or sulphur to improve life; wax is usually preferred for environmental reasons.

II. PROBLEM STATEMENT

Installation of automatic stone feed mechanism in a T8 channel FTC honing machine.
In SKF honing is used for surface finishing operations of taper roller bearings. A silicon carbide honing stone is used. The stone wears out after machining of around 350 components. The stone has to be moved forward by required distance. Existing tool feeding system is a manual system, which terminates when stone wears out and to manually feed the stone, human efforts as well as time is required. It increases cycle time per product. It affects dimensional accuracy and quality of the product and also reduces the productivity.

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Experimental comparison of PVD, CVD and CERAMIC tool inserts in turning of hardened EN 19/AISI 4140 for optimization of surface roughness and material removal rate

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Abstract: The literature study on optimization of surface roughness states that there are many parameters that affect optimum surface roughness to be reached after machining. It is primarily seen that many researchers carried out their studies on various cutting parameters (viz. speed , feed , depth of cut) as their input parameters and concluded that Feed is important parameter[5][6][8][9][12][14] for optimizing surface roughness and also some researches made clear that depth of cut[2][3][8][10] affects the response of surface roughness.Researches were also carried out by studying the effect of input parameters like changing the tool inserts and also by changing nose radius of various inserts [6][13]. Experiments were also carried out by varying the quantity of lubrication[15] The optimum value of surface roughness was reached by using taguchi[1][3][5][8][9][12] method and response surface methodology[6][8][13] The research carried out on EN 19 / AISI 4140 for optimum surface roughness was studied by taking cutting parameters like speed, feed and depth of cut ,states that the depth of cut is most significant parameter[2][3][8][10] . No research states appropriate tool insert with appropriate nose radius at the optimized depth of cut for EN 19 / AISI 4140 at hardness of 35 HRC.

Keywords: Taguchi, surface roughness, turning, optimization.

I. INTRODUCTION

In manufacturing field, turning operation is a very common material removal technique. Researches on this topic take into account several aspects, such as: geometrical and metallurgical characteristics of the cutting tool, workpiece material influence on the process and process parameters. The interaction of all these factors during a cutting operation causes a series of effects on output parameters that influence the process

Significant advances have been seen in cutting tools and machine tools in recent years. Cutting parameters may be specified according to hardness of materials and roughness of the surface of a work piece. The advantages in machining materials with higher hardness are decreasing machining costs, saving time, improving surface quality, and eliminating of deformities in parts caused by temperature

Surface roughness is one of the most important requirements in machining process, as it is considered an index of product quality. It measures the finer irregularities of the surface texture. Achieving the desired surface quality is critical for the functional behaviour of a part. Surface roughness influences the performance of mechanical parts and their production costs because it affects factors, such as friction, ease of holding lubricant, electrical and thermal conductivity, geometric tolerances and more. The ability of a manufacturing operation to produce a desired surface roughness depends on various parameters. The factors that influence surface roughness are machining parameters, tool and work piece material properties and cutting conditions. For example, in turning operation the surface roughness depends on cutting speed, feed rate, depth of cut, tool nose radius, lubrication of the cutting tool, machine vibrations, tool wear and on the mechanical and other properties of the material being machined. Even small changes in any of the mentioned factors may have a significant effect on the produced surface. Therefore, it is important for the researchers to model and quantify the relationship between roughness and the parameters affecting its value.

II. LITERATURE REVIEW

Meenu Sahu and Komesh Sahir [1]

This paper presents an optimization method of the cutting parameters (cutting speed, depth of cut and feed) in dry turning of AISI D2 steel to achieve minimum tool wear, low workpiece surface temperature and maximum material removal rate (MRR). The experimental layout was designed based on the Taguchi's L9(34) Orthogonal array technique and analysis of variance (ANOVA) was performed to identify the effect of the cutting parameters on the response variables. The results showed that depth of cut and cutting speed are the most important parameter

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Numerical Simulation of Shell and Tube Heat Exchanger by using CFD

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Abstract: Heat transfer is the terms use for thermal energy transfer from a hot to a colder body. Heat transfer is considered as transfer of thermal energy from physical body to another. Heat transfer is the most important parameter to be which is measured as the performance and efficiency of the shell and tube heat exchanger. CFD is the science of predicting fluid flow, heat transfer, mass transfer, chemical reactions, and related phenomenon by solving the mathematical equations which govern these processes using a numerical process. By using CFD Simulation software, it can reduces the operation cost as well as time compared by Experimental in order to measure the optimum parameter and the behaviour of this type of heat exchanger, conclusion from this project work is using CFD analysis instant results can be obtained. Temperature at any moment or point can be procured during the process. Flow patterns can be visualized which is not possible in case of experimental analysis. Also internal geometry is visible.

Keywords: Heat Exchanger, CFD, ANSYS, Fluent.

INTRODUCTION

Heat transfer always occurs from a hot body to a cold one, which is a result of the second law of thermodynamics. Theoretically on a microscopic scale, thermal energy is related to the kinetic energy of molecules. The greater a material's temperature, the greater the thermal agitation of its constituent molecules. Then the regions containing greater molecular kinetic energy will pass this energy to regions with less kinetic energy. So when a physical body likes an object or fluid, is at a different temperature than its surroundings or another body, heat transfer will occurs in such a way that the body and the surroundings reach thermal equilibrium.[1]

Heat transfer always occurs from a hot body to a cold one, a result of the second law of thermodynamics. Where there is a temperature difference between objects in proximity, heat transfer between them can never be stopped but can only be slowed down. Transfer of thermal energy can only occurs through three ways which is conduction, convection and radiation or any combination of that.[2]

The ultimate goal of the field of computational fluid dynamics (CFD) is to understand the physical events that occur in the flow of fluids around and within designated objects. These events are related to the action and interaction of phenomena such as dissipation, diffusion, convection, shock waves, slip surfaces, boundary layers and turbulence .In the field of aerodynamics, all of these phenomena are governed by the compressible Navier – Stokes equations .Many of the most important aspects of these relations are nonlinear and, as a consequence, often have no analytical solution. This, of course, motivates the numerical solution of the associated partial differential equations. At the same time it would seem to invalidate the use of linear algebra for the classification of the numerical methods [1].

LITERATURE REVIEW

The purpose of this chapter is to provide a literature review of past research effort such as journals or articles related to shell and tube heat exchanger and computational fluid dynamics (CFD) analysis whether on two dimension and three dimension modelling. Moreover, review of other relevant research studies are made to provide more information in order to understand more on this research.[2] It is debatable as to who did the earliest CFD calculations (in a modern sense) although Lewis Fry Richardson in England (1881-1953) developed the first numerical weather prediction system when he divided physical space into grid cells and used the finite difference approximations of Bjerknes's "primitive differential equations". His Own attempt to calculate weather for a single eight-hour period took six weeks of real Time and ended in failure! His model's enormous calculation requirements led Richardson to propose a solution he called the "forecast-factory". The "factory" would have involved filling a vast stadium with 64,000 people. Each one, armed with a Mechanical calculator would perform part of the flow calculation. A leader in the center, using colored signal lights and telegraph communication, would coordinate the forecast. What he was proposing would have been a very rudimentary CFD calculation. CFD is now recognized to be a part of the computer-aided engineering (CAE) spectrum of tools used extensively today in all industries, and its approach to modeling fluid

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Design and Analysis of Connecting Rod using Finite Element Analysis

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Abstract: The connecting rod is the intermediate member between the piston and the Crankshaft. Its primary function is to transmit the push and pull from the piston pin to the crank pin, thus converting the reciprocating motion of the piston into rotary motion of the crank. Connecting rod design is very important because of its role in the crank mechanism, so that the research that can be applied in optimal design of connecting rod can lead to increased engine performance. The connecting rod is very hard and strong but sometimes deforms and breaks due to vibration. The determination the natural frequency of components is essential to prevent the resonance phenomenon. Identify the critical velocity of connecting rod for the resonance frequency range is essential. This study incorporates FEA modal analysis and experimental modal analysis of connecting rod. A parametric model of Connecting rod is modelled using Pro-E and finite element analysis is carried out by using ANSYS Software. Finite element method is used to determine natural frequencies of a connecting rod

Keywords: Connecting Rod, crank Mechanism, Natural Frequency, Noise and Vibration, ANSYS Software.

I. INTRODUCTION

The connecting rod is the intermediate member between the piston and the Crankshaft. In a reciprocating engine, the connecting rod connects the piston to the crank or crankshaft. Together with they form a simple mechanism that converts reciprocating motion into rotating motion. As a connecting rod is rigid, it may transmit either a push or a pull and so the rod may rotate the crank through both halves of a revolution. Generally connecting rods are manufactured using carbon steel and in recent days aluminium alloys are finding its application in manufacturing of connecting rod. The connecting rod primarily undergoes tensile and compressive loading under engine cyclic process. The forces acting on connecting rod are forces due to maximum combustion pressure and force due to inertia of connecting rod and reciprocating mass. The connecting rod is very hard and strong but sometimes deforms and breaks due to vibration. The determination the natural frequency of components is essential to prevent the resonance phenomenon. Identify the critical velocity of connecting rod for the resonance frequency range is essential.

Vibration is a mechanical phenomenon whereby oscillations occur about an equilibrium point. The oscillations may be periodic, such as the motion of a pendulum—or random, such as the movement of a tire on a gravel road. There are generally two categories for the vibrations the free vibrations and forced vibrations, free vibrations occur when the system is under the action of oscillating systems and their inherent forces external forces there are controversial.All systems that have mass and elasticity can be whit free vibrations, the vibrations that occur in the absence of external stimulus.Vibrations that occur under controversial foreign forces are called forced vibrations, when the controversial operating system is oscillating with frequency, oscillation can be controversial if the impulse frequency of the system natural frequency is resonance mode occurs and may be dangerous, there are large fluctuations.

Natural frequency is the frequency at which a system tends to oscillate in the absence of any driving or damping force. Free vibrations of an elastic body are called natural vibrations and occur at a frequency called the natural frequency. Natural vibrations are different from forced vibrations which happen at frequency of applied force (forced frequency). If forced frequency is equal to the natural frequency, the amplitude of vibration increases manifolds. This phenomenon is known as resonance.

Numbers of methods are available for the design optimization of structural system and these methods are based on mathematical programming technique and optimally designed using ANSYS software. The finite element method is capable of providing this information but it is time taken, the time need to create such a model is large. In order to reduce the modelling software can be used. One such model is provided by ANSYS work bench.

II. PROBLEM DEFINITION

The connecting rod is under tremendous stress from the reciprocating load represented by the piston, actually stretching and being compressed with every rotation, and the load increases as the square of the engine speed increase. Combination of axial and bending stresses act on the rod in operation. The axial stresses are product due to

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Review of Failure of Grinder Wheel

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Abstract: The findings of this paper are to study failure of grinding wheel by various methods. It also show that during grinding the grain is subjected to forces that create fracture initiation zones in the sharp abrasive grains where tensile and compressive stresses dominate in certain parts of the abrasive grains. The grinding process relies on wear of the abrasive wheel, and the rate of wear plays an important role in determining the efficiency of the grinding process and the quality of the work piece. Vitrified grinding wheels are typically used to remove large volumes of metal and to produce components with very high tolerances. It is expected that the same grinding wheel is used for both rough and finish machining operations. Therefore, the grinding wheel, and in particular its bonding system, is expected to react differently to a variety of machining operations. In order to maintain the integrity of the grinding wheel, the bonding system that is used to hold abrasive grains in place reacts differently to forces that are placed on individual bonding bridges. The structure of a vitrified grinding wheel is composed of abrasive particles, a bonding phase, and distributed porosity to collect detritus and provide access for lubricants. The approach used in this seminar is based on using finite elements to model fracture wear processes in vitrified grinding wheels.

Keywords: Bond Faacture, Wear Model, Failure Model.

I. INTRODUCTION

Formation of cracks, damages of shapes due to excessive stresses in grains of grinder wheel is nothing but the failure of grinder wheel. Grinding wheels are a multipoint cutting tool composed of selectively sized abrasive grains held together by a bonding material. Abrasive materials are Aluminum oxide or Silicon Carbide in conventional range. Grinding is a process of material removal, which happens in the form of chips by the mechanical action of regularly shaped abrasive particles bonded together. Grinding is done to get required Size, Form, and Finish.

The grinding process relies on wear of the abrasive wheel, and the rate of wear plays an important role in determining the efficiency of the grinding process and the quality of the work piece. The structure of a vitrified grinding wheel is composed of abrasive particles, a bonding phase, and distributed porosity to collect detritus and provide access for lubricants. The wear behavior observed is similar to that found in other wear processes; high initial wear followed by a steady-state wear regime. The third accelerating wear regime usually indicates rapid wear of the grinding wheel, which means that the wheel will need to be sharpened. This type of wear is usually accompanied by thermal damage of the machined work piece.

II. OVERVIEW

The overview of this seminar are to model failure of grinding wheel by various methods. In our daily life breaking or damaging of grinding wheel occurs many times. To avoid injuries and to increase efficiency of grinding process it is very important to predict the failure of wheel before its operation. It also show that during grinding the grain is subjected to forces that create fracture initiation zones in the sharp abrasive grains where tensile and compressive stresses dominate in certain parts of the abrasive grains. Analyzing forces acting in grinding mechanism and solve problems by using various techniques like fem, mat lab programming. Experimental processes are ring test, x-ray & ultrasonic monitoring, shadow monitoring etc.

Basically this is a review of all the work done on modelling of failure of grinding wheel. Many scientist have done dominant work on this chapter. Summary all that work is tried to compensate in this seminar. Various methods to detect and analyze the failure are systematically carried out in all this work conducted by such persons. X- Ray method, ultrasonic method, ring test, hardness test are various methods to detect such failure. With the study of this new method is discovered to detect misalignment of wheel. Name of that method is Shadow technique. In future scope main focus will be on new methods to detect failure of wheel and that methods should be cheap.

III. RESEARCH WORK

Alireza Vesali & Taghi Tawakoli [1] created hydrodynamic pressure zone model of grinding. Lubricant plays important role in grinding and also affects the efficiency of grinding process is explained by this two people. In the grinding process, coolant lubricant is used to lubricate and mainly to transmit the heat generated in the contact zone. Grinding wheel accelerates a portion of the coolant lubricant into the contact zone. As a result of the wedge

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Review of State of Art of Friction Stir Welding

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Abstract: Friction stir welding is a solid state joining method of welding invented in 1991 at The Welding Institute that utilizes a non-consumable rotating welding tool to generate frictional heat and plastic deformation.FSW can be used to join difficult to join materials like aluminium alloys, copper, magnesium, zinc, steels, and titanium.This technique overcomes difficulties of fusion welding.FSW found applications in the automobile, aerospace, marine, defence and medical industries. The control parameters rotational speed, axial load, tool geometry, welds speed affects quality of weld obtained. The advantages of Friction stir welding (FSW) are no fumes; uses no filler material; and low cost of operation. FSW sometimes produces a weld that is stronger than the base material.FSW is considerably ecofriendly than conventional "fusion" welding. In this paper, review of state of art, working principle, welding of different materials, work piece material applications etc are presented.

Keywords: Solid State Joining.

I. INTRODUCTION

Friction Stir Welding (FSW) is a solid state joining process which overcomes many issues associated with traditional joining methods. The basic concept of friction stir welding is simple that creates extremely good quality and high strength joints with low distortion. A non consumable rotating tool with special probe and shoulder is inserted into abutting edges of workpiece.FSW produces welds of difficult to weld materials such as aluminium, and becoming the process of choice for manufacturing lightweight structures for automobiles, boats, trains, and aeroplanes. This joining method is energy efficient, ecofriendly, and versatile.FSW is found to be the most significant in metal joining in a decade. Recently, friction stir processing (FSP) was developed for surface modification of metallic materials. A non consumable rotating tool bit is inserted into a work piece. The interaction and rotation of the tool creates friction that produces heat which makes material into a plastic state. As the tool traverses the weld joint, it material flow extrudes in a distinctive flow pattern and forges the material. The solid phase bond obtained joins the two pieces into one.Fig.1.depicts principle of friction stir welding.

II. LITERATURE REVIEW

Ericsson et al (2002) investigated that the fatigue strength of friction stir weld. It is also find the fatigue result for conventional arc welding method. It has no major influence on the mechanical and fatigue properties of f s weld. It has increased amount of heat supplied to the weld per unit

Liu et al. (2003) in their research paper discussed the friction stir weld ability of the aluminium alloy and determine optimum welding parameters, the relations between welding parameters and tensile properties of the joints.

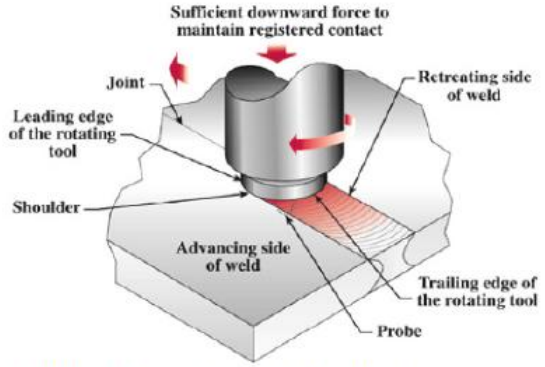

Figure1: Schematic drawing of working process principle of FSW

Researchers found that the tensile properties and fracture locations of the joints are significantly affected by the welding process parameters.

Kovacevic (2003) In their research friction stir welding (FSW) is a relatively new welding process that may have significant advantages compared to the fusion processes as follow: joining of conventionally non-fusion weld able alloys, reduced distortion and improved mechanical properties of weld able alloys joints due to the pure solid-state joining of metals.

Huseyin uzun et al (2004) these investigated that the joining of dissimilar Al alloy using friction stir welding. Hardness and fatigue property of friction stir welding similary checked

Cavaliere et al. (2005) investigate mechanical and micro structural properties of dissimilar aluminium joined by friction stir welding (FSW). The two sheets 2024 and 7075 sheets and joints which are aligned with perpendicular rolling directions and are in tension at room temperature and analyse their response with respect to parent material.

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Experimental Analysis of a Solar Air Dryer with Thermal Energy Storage Unit (PCM)

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Abstract: Among the various renewable energy resources solar energy potential is the highest in the country. The global solar radiation over India varies from 4-7 kWh/sq. m/day. The solar energy is also used for heating the air that air is applied to dry the clothes, food dehydration, natural rubber, etc. Circulation of atmospheric temperature air from solar flat plate collector and then that high temperature air is supplied to room. In India, we have 12 sunshine hours and 12 non-sunshine hours so solar air heater is limited to run only in sunshine hours. To run it night time it required external energy supply, so cost of the solar air heater is increase. Our requirement is to supply the hot air to the room up to 60 ºC to 65 º C temperatures during day and night time. To achieve such high temperature we need to modified the conventional solar air-dryer in such way that it will gives us hot air temperature in the range of 60 ºC to 65 ºC. For the use of Solar Air Dryer during night time, some form of energy storage is required during sunshine hours and that stored energy can be used during non-sunshine hours. Present work is focused towards incorporation of heat pipes with LHTES is of interest. Heat pipes increase heat transfer rates to or from the Phase change material (PCM), while maintaining small temperature differences between the PCM and heat transfer fluid (HTF) in heat pipe. This experimental setup, solar air-dryer assisted with TES unit including PCM and heat pipe. This study focuses on to the performance enhancement of flat plate collector solar air-dryer.

Keywords: Heat pipe, solar air-dryer, Phase change material (PCM), TES.

I. INTRODUCTION

Solar drying is another very important application of solar energy. Solar dryers use air collectors to collect solar energy. Solar dryers are used primarily by the agricultural industry. The purpose of drying an agricultural product is to reduce its moisture content to a level that prevents its deterioration. In drying, two processes take place: One is a heat transfer to the product using energy from the heating source, and the other is a mass transfer of moisture from the interior of the product to its surface and from the surface to the surrounding air [1].

A very common problem in solar drying and various other industrial processes is the existing gap between the period of thermal energy availability and its period of usage. This situation creates the need for an effective method by which excess heat can be stored for later use. Latent heat thermal energy storage is one of the most efficient ways of storing thermal energy through which the disparity between energy production or availability and consumption can be corrected, thus avoiding wastage and increasing the process efficiency [2].

Thermal energy storage (TES) systems provide a good solution to this issue. Latent heat thermal energy storage (LHTES) systems offer the possibility of storing higher amounts of energy per unit of storage material mass in comparison to sensible heat thermal energy storage (SHTES) systems. However, the performance of most commercially viable phase change materials (PCMs) which used as storage media in the LHTES systems suffer from low thermal conductivity. This often leads to much longer charging or discharging process and significant temperature difference within PCM, which in some cases can cause system overheating and material failure [2].

Currently, three types of TES are being considered for solar power generation and other applications: sensible heat thermal energy storage (SHTES), latent heat thermal energy storage (LHTES), and chemical thermal energy storage (CTES) [3]. Of these, LHTES is of particular interest because it is characterized by high energy density and potentially reduced cost relative to SHTES [4]. LHTES has been researched extensively relative to CTES which is in the developmental phase. However, before large LHTES units are constructed, laboratory scale research should be conducted to verify the potential of LHTES as an effective and inexpensive energy storage option. A barrier to the development of large scale LHTES is the low thermal conductivity of most phase change materials (PCMs) and much of the previous research regarding LHTES has focused on reducing the thermal resistance posed by the PCM. For example, Velraj et al. [5] incorporated Lessing rings within the PCM and observed increased heat transfer rates from the PCM to a coolant, making the technique suitable for reducing solidification times. The investigators also considered use of extended surfaces to increase heat transfer, concluding that fins also reduce total solidification times by approximately 75% based upon the predictions of a numerical model. Similar results for LHTES melting (charging) experiments utilizing a finned heat transfer

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Development of Assembly Line Layout for Measurement of Work

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Abstract: Assembly is an important manufacturing process in terms of mass production system. Significant research has been done in the Design and operations of assembly systems in support of high product variety, but many opportunities exist for future research. The paper contains practical mapping and product flow from start to finish. The information would highly assist the researcher to visualize the current state of the activity mapping the material and information flow. In this paper first review the state of the art research in the areas of assembly system design, planning and operations in the presence of product variety. Work measurement is essential for both the planning and control of operation.

Keywords: Design, Planning, Operation, Work measurement.

I. INTRODUCTION

The concept of production assembly line (AL) was first introduced by Henry Ford in the early 1900's as shown in fig.1.1. It was designed to be an efficient, highly productive way of manufacturing a particular product. The basic assembly line consists of a set of workstations arranged in a linear fashion, with each station connected by a material handling device. The basic movement of material through an assembly line begins with a part being fed into the first station at a predetermined feed rate. A station is considered any point on the assembly line in which a task is assembling the part. These tasks can be performed by machinery, robots, and or operators. Once the part enters a main line, a task is then performed on the part, and the part is fed to the next operation. The time it takes to complete a work at each operation is known as the process time. The cycle time of an assembly line is predetermined by a production rate required. This production rate is set so that the amount of end product is produced within a defined time period.

One of the main issues concerning the development of an assembly line is how to arrange the work to be performed. This arrangement may be somewhat subjective, but has to be dictated by implied rules set forth by the production sequence. For the manufacturing of any work, there are some sequences of tasks that must be followed. The assembly line balancing problem originated with the invention of the line. However, during the initial years of the assembly line's existence, only reputable methods were used to balance the lines. Since then, there have been numerous methods developed to solve the different forms of the line balancing. Development of new assembly line and then rebalancing of the assembly line is having need to from the production point of view. As most of the small scale and medium scale industries are not follow the various methods available such that RPW etc, for line balancing or even line developing which may cause the loss of the productivity and time.

Fig.1.1 An old photo of the Ford Model T assembly line

An assembly line balancing (ALB) consists of a finite set of work elements or tasks, each having an operation processing time on work and a set of precedence relations for tasks which specify the required orderings of the tasks. One of the problems organizing for mass production is how to group work tasks to be perform to allocate an equal amount of work to each work station along the assembly line. The fundamental line balancing problem is to assign a set of tasks to an ordered set of work stations, so that the precedence diagrams relations are satisfied and some measure of performance is to be balanced. Process layout, product or line layout and fixed-position layout are 3 basics types of layout. This project is based on product layout. Product layout is defined as shop flower area, where number of stations and work processes are arranged so that the products will pass through several workstations. Due to high demand the resources were rearranged from

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Design Development of Blast freezer

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Abstract: The experimental set up of Cold room, at Dattwad, Tal- Shirol, Dist- Kolhapur (Near Narsobachi Wadi) on prepared model of cold storage, The compressor, condenser unit, evaporation unit, expansion valve are used and special experimental cold storage box is attached with refrigeration system, the device, thermo couple are attached with this cooling unit here the design experiments is based on Air Cooling system. In this paper we are designing the cold storage plant which is maintaining at -25°C. At this temperature all types of foods are stored liked fruits, ice-creams and all dairy products. In this work our main objective is to Optimum insulation thickness, Area of wall, compressor capacity of cold storage. Also this project deals with different aspects of design of cold storage and includes all standard refrigeration principles and heat load factors which are normally considered in a cold storage design.

Keywords: Blast Freezer, Design, Refrigeration, Cold-Storage.

I. INTRODUCTION

This document is a template. An electronic copy can be downloaded from the conference website. For questions on paper guidelines, please contact the conference publications co The cold storage is building designed to stored certain goods like food stuffs, fruits, vegetables, dairy products within well defined temperature range and relative humidity (RH). Cold storage is also an application of air conditioning in a way that the air is cooled by passing it over a cooling of refrigeration plant and supplied back to the room.

The temperature and humidity conditions maintained inside the cold storage The maximum storage period for long term storage ranges from seven to ten days for some sensitive product like ripe tomatoes & up to six or eight months for more durable products such as onions & smoked meat.

When perishable foods are to be stored for long period, they should be frozen and stored in frozen storages. However, some fresh foods like tomatoes are damaged by freezing process and therefore cannot be successfully frozen.

In general, the conditions required for short term storage are more flexible than those required for long term storage and higher storage temperatures are permissible for short term storage.

Thus the conditions required for the storage can be divided in to two categories.

a) Cold storages for products which are to be maintained at temperature of0 °C and 0° C above

b) Cold storages for products which are to be maintained at temperature below 0°C.

It may be noted that the refrigeration does not improve the quality of the food products if only slows down its deterioration. The product must be under refrigeration for the entire course of the passage from the producer to the consumer and this continuity is known as the cold chain.

During storage the vegetables and fruits produce heat of respiration. Thus the refrigeration plant must be designed to take care of this load in addition to the usual heat loads.

a) Cold storages for products which are to be maintained at temperature of0 °C and 0° C above

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During storage the vegetables and fruits produce heat of respiration. Thus the refrigeration plant must be designed to take care of this load in addition to the usual heat loads.

BASICS OF REFRIGERATION

Refrigeration is a process of moving heat from one location to another in controlled conditions. The work of heat transport is traditionally driven by mechanical work, but can also be driven by heat, magnetism, electricity, laser, or other means. Refrigeration has many applications including, but not limited to: household refrigerators, industrial freezers, cryogenics, and air conditioning. Heat pumps may use the heat output of the refrigeration

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Techno-economic Analysis of Solar Photovoltaic Power Plant for Hotel in Maharashtra

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Abstract: In this paper, the potential and the cost-effectiveness of a solar photovoltaic power plant for meeting the energy demand of Hotel in Nashik (India) is analyzed. Also, the energy demand of Hotel for year 2016 was been estimated (68 KW) and the design of the solar PV power plant of 20 KW capacity was proposed and installed Simple payback period is 2.41 years which is quite attractive.

Keywords: Photovoltaic, Solar power plant, Techno-economic analysis, Payback period.

I. INTRODUCTION

Solar photovoltaic power system is the most promising non conventional energy technology. photovoltaic systems range from small, rooftop-mounted or building-integrated systems with capacities from a few to several tens of kilowatts, to large utility-scale power stations of hundreds of megawatts. Nowadays, most photovoltaic systems are grid-connected, while off-grid or stand-alone systems only account for a small portion of the market.

The diagram below shows the basic building blocks of a small stand-alone off-grid photovoltaic power generating system. A grid connected system would not need the battery. They do however need alternative capacity to come on stream to carry the load during the hours of darkness.

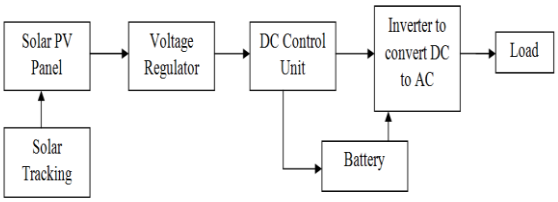

Fig. 1 Photovoltaic Electrical Power Generation

II. DESIGN OF SOLAR PV PLANT

A solar photovoltaic system was installed at Hotel Prestige Pride, Nashik in Maharashtra State. The load study conducted for Hotel is given in Table I. The consumer is a commercial consumer with an average monthly bill of Rs 68,000 per month .The higher tariff of Rs 12 per kWh was because of the differential tariff system levied by MSEDCL. This tariff system provides incentive to consumers to reduce higher energy consumption. To shave off the higher energy consumption the solar PV of 20 kW capacity was designed. The technical specifications of the photovoltaic system installed are included in Table II.

III.TECHNO-ECONOMICS

Component wise cost of PV system was considered for calculating the capital cost. This is included in Table III. The annual energy output after installation of PV system was monitored for four months and the energy bill for the period was noted. Table IV summarizes the average monthly savings.

TABLE I CONNECTED LOAD OF HOTEL

Sr. No.	Connected Load	Power Consumption (Kw)
1.	Lighting	18
2.	Lift	3.7
3.	Air Conditioning	33

TABLE II TECHNICAL SPECIFICATIONS

1.	Present Connected Load	55 Kw
2.	Installed PV System	20 Kw
3.	No. of Panels	64
4.	Peak Power Capacity per panel	315 Watt
5.	Total Capacity	64 * 315= 20160 W

TABLE III BREAK UP OF CAPITAL COST

Sr. No.	Component	Cost (Rs.)
1.	Solar PV Panel	740000
2.	Switch gear (4 pole)	18000
3.	Inverter	240000
4.	L & T Netmeter	22000
5.	Structure of GI	75 (per kg)
	Total Cost	1450000

Cost/kW = 1450000/20
= 72500 Rs./kW

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Disaster Management in Industry: Ergonomic Perspective

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Optimization of Surface Roughness in Turning Operation of EN8 using Taguchi Method

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Abstract: The main aim of this paper is to optimise the surface roughness in conventional turning operation using Taguchi Method for the material medium carbon steel EN8. In this work cutting speed, feed rate and depth of cut are taken as performance parameters to achieve better surface roughness. Taguchi Method is used to obtained the main parametric effect on the surface roughness using there levels and factors. L9 orthogonal array is used to design the experiments. Also analysis of variance (ANOVA) was carried out with the significance factor of 95%. After the experimentation, it was found that cutting speed has more influenced on the surface roughness in conventional turning process than feed rate and depth of cut.

Keywords: Taguchi method, Optimisation, Surface roughness, EN8.

I. INTRODUCTION

In today's manufacturing industrial scenario there is requirement of machining process with the high quality at low cost and wastage. To achieve this requirement there is need of optimisation of performance parameters. In the machining process, apart from obtaining the accurate dimensions, achieving a good surface quality and required metal removal rate are importance characteristics. A machining process involves many process parameters which directly or indirectly influence the surface roughness and metal removal rate of the metal. There are several machining processes like turning, grinding, boring, drilling, milling etc. Mostly in the manufacturing industry turning process is mostly used. Surface roughness and metal removal in turning process are depending on various parameters as feed rate, spindle speed, depth of cut.

Taguchi Method is one of several methods to achieved optimise process parameters of machining. Taguchi Technique is statistical method to improve performance parameters and widely applicable for engineering, biotechnology, advertisement and marketing. Taguchi transformed the manufacturing process in Japan through cost savings. Taguchi methods identified noise sources, which have the greatest effects on product variability. Taguchi method adopted by successful manufacturers around the globe because of their optimised results in creating superior production processes at much lower costs. The main objective of Taguchi method is to design robust processes with different operating conditions.

EN8 is medium carbon steel which is used in applications where better properties than mild steel are required but where the costs do not justify the purchase of a steel alloy. EN8 can be heat treated to provide a good surface hardness and moderate wear resistance by flame or induction hardening processes. From the automotive trade to wider general engineering applications, EN8 is popular steel in industry.

II. PROBLEM STATEMENT & OBJECTIVE

Conventional machining offers different types of operations. In turning operation it is difficult to achieve desired surface roughness with undefined performance parameters.

The objective of this work is as follows,

1. To achieve the desired surface roughness by optimizing performance parameters for turning operations.
2. To study effect of parameters on the surface roughness value (Ra).

The scope of the study was limited up to conventional turning process. The material used for study purpose untreated medium carbon steel EN8. The study focuses on to the optimize performance parameter for conventional turning operation with material EN8.

III.METHODOLOGY

The present work deals with the turning of hard material as EN8 on lathe machine. It is an important engineering material employed in manufacturing of components in automotive industries. The experiment deals with machining of medium carbon steel EN8 was carried out with High Speed Steel tool in conventional lathe. . The chemical composition of EN8 described in table no. I.

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Detection and Classification of Plant Leaf Disease

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Abstract: Plant leaf images is a form of important data and information in biological science. Plant leaf disease affect in both reduction in both in quality and quantity of agriculture products. Automatic plant leaf detection is very important research topic now because our nation's economy is based on an agriculture products. The automatic leaf detection prove number of benefits in monitoring crops and also automatically detect the leaf disease. The developed image processing technique having four steps as below: 1.The input leaf image is first converted into RGB colour transformation structure. 2.Then the green pixels are removed and masked using a specific threshold level. 3.Then the important segments are captured. 4.Finally the statistics is computed. Using this extracted segments the presents leaf disease is evaluated. Database is about 200 plant leaves of 10 different plants are used for experimental results. In India, Farmers are bearing from an issues developing from a few sorts of plant diseases. In some cases plant's specialists are likewise not ready to distinguish the infection that brings about need of acknowledgment of exact sort of sickness and thusly to product ruin if not dealt with at proper time. Thus, we ought to take the upside of accessible innovation in programmed discovery and arrangement of agrarian plants has turned out to be urgent.

Keywords: Plant Leaf Disease, colour transformation, segment, Image processing.

I. INTRODUCTION

Research in agriculture is aimed towards increasing food quality and productivity with increased profit. Farmers have wide range of diversity to select fruit and vegetable crop. Advanced computing system to identify the diseases using infected images of various leaf spots. Such crops caused by fungi , bacteria , viruses. Diseases management is difficult task. Huge number of disease found on leafs.

The image processing is best way to detecting diseases. Images form important data and information in biological science. The proposed system is a software solution for automatic detection of plant leaf diseases. The classification of results accuracy can be achieved is 90.98% and we are developing the new concepts or methods like a HIS transformation is applied to input image and uses the image retrieval content based algorithm. we uses the various concepts or new algorithms for determining or classified the leaf disease. Using image retrieval algorithm feature extraction deals with size, shapes, colors and various spot detected. Finally the classification is done by matching the type of disease found that particular captured images. Plants assume an imperative part in the cycle of nature. The quantity of plant species is assessed to be around 400,000 however there still exist numerous species which are yet unclassified or obscure. Along these lines, plant ID is a critical and testing assignment. With the quick advance of data innovations, many works have been devoted to applying the advances of example acknowledgment and picture handling to plant distinguishing proof. Since leaves are the organ of plants and their shapes fluctuate between various species, the leaf shape gives profitable data to plant recognizable proof. Cell phones are broadly utilized gadgets around. Android, Windows Mobile, and the phone, cell phones are diverse brands which have changed the way we take a gander at versatile figuring. Numerous applications like recreations, long range informal communication, and bank exchanges are utilized on portable today. Today, everybody is utilizing cell phones, including the ranchers. Prologue to Information and Communication Technologies (ICT) has a vital part in everyday existence of ranchers.

Farming segment contributes in day by day needs of populace in India and is principle spine of GDP of Indian Economy. Ranchers are the primary component of Agriculture. Agriculturists are not ready to adapt up to confusions happening because of yield maladies. They need to rely on upon Plant Biologist to determine these issues. Looking at the plant influenced by infection through a Plant Biologist physically is a tedious procedure. Plant influenced by the infection is not analysed inside time then it can influence the nature of the plant.

A System can be given which can automatically get huge components of the plant influenced by malady and registering the transferred infected plant picture. It will effortlessly assist the Plant Biologist with diagnosing the infection of plant and give the agriculturists to take starting careful steps. Recognizing the centrality and strength of Agriculture part, System in light of Content Based Image Retrieval procedures.

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Thrust Area in Data Science-Big Data and Data Analytics

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Abstract: The dawn of big data has arisen. Big data may be defined as a term which indicates large sets of data. The challenges that occur due to the big data are its storage, management, capture, curation, sharing, analysis, security, handling, etc. The old or traditional methodologies are not much capable for the above purpose. Hence, it is necessary to know about the upcoming methods regarding the big data and the paper introduces the brief information about it. The concept of big data is becoming popular because of the constant increase need and creation of data. In general, big data is constantly moving data and its size has almost reached till yotta bytes. Certain tools used such a Hadoop, MongoDB, Cassendra and Apache spark to deal with big data are briefly presented in the paper. Also, the terms such as parameters, applications, storage and growth are described.

Keywords: Introduction to big data, parameters and tools of big data, Hadoop, HDFS, Map-Reduce, Apache Spark, MongoDB, Cassendra.

I. INTRODUCTION

Data can be described as set of values of different quantitative or qualitative variables. Data science can be termed as a field that is a cluster of all types of data [1]. In last two years, the creation of data is almost doubled as compared to its previous years. This data set can come from various sources such as industries, media, satellites, transaction records, etc. Also, the incoming, available or outgoing data can have various forms such as text, video, symbols, images, audio, e-mail etc. This all data when clustered together as large set of data is termed as big data. Big data is one of the upcoming generations of technologies. Big data can be looked upon as a term which doesn't have any specific quantity, so this term is mostly used when talking about zettabytes and yottabytes of data. The current estimated byte for digital information is yottabytes where 1 yottabyte= 10^{24} bytes.

Name	Symbol	Approximate Value for Reference	Actual Value
Byte			8 bits [Store one character]
Kilobyte	KB	About 10^3	2^{10} = 1,024 bytes
Megabyte	MB	About 10^6	2^{20} = 1,024 KB
Gigabyte	GB	About 10^9	2^{30} = 1,024 MB
Terabyte	TB	About 10^{12}	2^{40} = 1,024 GB
Petabyte	PB	About 10^{15}	2^{50} = 1,024 TB
Exabyte	EB	About 10^{18}	2^{60} = 1,024 PB
Zettabyte	ZB	About 10^{21}	2^{70} = 1,024 EB
Yottabyte	YB	About 10^{24}	2^{80} = 1,024 ZB

Fig.1: Storage capacity of data

Almost 500+ terabytes of data is generated per day on considering one single site such as facebook [2]. Hence a massive data is oriented every fraction of second and so it is essential to manage, store, secure, etc., the useful data and flush the unwanted data. For handling this all data which is termed as big data, it is necessary to create big data technologies, so that we get more accurate analysis. Also a concrete infrastructure is needed to store and process this huge volume of data[3].

Big data can be split into three forms:

1) Structured big data – The data which has semantic meaning is termed as structured data.
2) Unstructured big data – The data which has no latent meaning is termed as unstructured data.
3) Semi-structured big data – The format of this type of data between structured and unstructured format.

The major parameters to be considered for estimating big data are:

1) Volume – It is the quantity of data. Frequently, volume is the main parameter in deciding whether the data to be considered is the big data or not.
2) Variety – The big data can be there in various forms like texts, numbers, images, videos, audios, etc. which leads to different varieties of data.
3) Velocity – In case of big data, velocity is the speed of data flow from different sources.
4) Variability – The term refers to data whose meaning is changing constantly.
5) Veracity – Noise and abnormality present in data is known as veracity in data [4].

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Accident Detection System using Android Application

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Abstract: The rapid growth of technology has made our easier this advancement in technology also increased traffic hazarded. Hence ratio of road accident increases. Most of the Time loss of life due to poor emergency facilities. Our research provide a solution for accident detection and preventation of human life safety. The application has been divided into four module based on functionalities. This module is designed to built up and integrated system to cover various aspects of android based Automatic vehicle Accident Detection By Using Android application. The application is designed using location tracking using GPS technology.

Keywords: Android Smart Phone, GPS (Global Positioning System), GSM (Global System for Mobile Communication).

I. INTRODUCTION

Vehicle is the main mode of any type of transportation. There is a need of proper ride as well as security is the main issue today's life's. There is a no any system which alert when accident was happened.

There is a need to design system that will help to victim who suffering for accident. This system design help to send actual accident location and also send emergency message to people who specified in emergency contact list of victim. It is possible an automatic vehicle accident detection by using GPS and GSM module design . We are concerned with the method to use GPS technology.
Here main advantage our system is that to provide immediate hospital service, police service and immediate location tracking of where accident occurs. Thus the main need of project our system is in police station, Hospital etc. Also the main need of our system is for the human life safety. System is useful in different area such as traffic,

Hospital and Transportation etc. If an accident occur in rural area or populated area, this application is more useful for victims. In world there is increase use of vehicle, such resulting increased traffic as well as rise of road accident. This system provide fast availability of safety.

II. LITERATURE SURVEY

The accident detection and alert system provide emergency responders with crucial information at the earliest possible time. Reducing the time between when an accident takes place and when it is detected can reduce mortality rates. The entire works have to be integrated with the automobile to validate its functionality and reliability. Thus this work will reduce the accident death ratio in considerable amount even in rural roads. Then it has a great importance in day to day life of the people in the country like India. This proposed work will provide vital information about the accidents even in unpopulated area.[1]

An automatic accident prevention and reporting system is designed and implemented using wireless technologies like SONAR to prevent accident, GPS modem for finding the location of vehicle in terms of latitude and longitude, as well as GSM for sending message on mobile at the receiver end.[2]

The proposed model for accident detection system can prove to be an important aid in constructing smart transport systems in near future if implemented properly Also the system can be used by the owners of the transport companies etc to monitor the vehicle speed, track its real time location etc using the android app. These features can also help in case of vehicle theft etc.[3]

The paper gives a design which has many benefits like low cost, portability, small size. The system uses the microcontroller in conjunction with vibration and alcohol sensor; GPS and GSM .interfacing which reduces the alarm time to a large level and gives the location of accident accurately. It can also overcome the issue of lack of automated system for the detection of the site of accident. The time for detecting the site is reduced and the person can be treated as soon as possible which will save many lives.[4]

III. GPS TECHNOLOGY

GPS stand for Global Positioning System is a satellite based navigation system .Now a day this is widely used in android phone. This enables GPS receiver to determine their current location time.

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Survey on Detection and Classification of Plant Leaf Disease in Agriculture Environment

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Abstract: In the agriculture environment, the detection and classification of the plant disease system plays very important role. In this first leaf image is captured and uploaded to the system where this image is compared with another image which is stored in the database. Comparison is take place with the help of algorithm which is named as content based histogram algorithm. For detecting the leaf disease image processing is used. The Image processing consist color extraction and then affected area is compare. The system helps to initial precautionary measures. If proper care is not taken then it will affected on quality, quantity and finally on productivity. This paper presents survey on different detection and classification techniques for plant diseases and also image processing technique which is used for automatic, fast and accurate detection as well as classification of plant leaf diseases.

Keywords: K-Mean's clustering, Otsu Method, Fuzzy logic, Artificial Neural Network, Probabilistic Neural Network, Super Vector Machine, Plant leaf diseases.

I. INTRODUCTION

As we know, India is one of the agriculture based country which will help to increase the nation growth. Most of the people are depends on the agriculture for their live hood. So loss of crops from plant disease may result in hunger and starvation. Leaves are important because they are the primary source of photosynthesis, which is how plants feed themselves. Control of plant disease is a crucial to the reliable production of food. It is very difficult to the farmers to diagnose the disease only with the help of observation. Identification of diseases of plant leaf is a very important and challenging task. To overcome this, we are developing a system which will help to detect and classify the plant leaf disease in agriculture. Research in agriculture is aimed towards increasing food quality and productivity with increased profit. Farmers have wide range of diversity to select fruit and vegetable crop. Advanced computing system to identify the diseases using infected images of various leaf spots. Such crops caused by fungi, bacteria, viruses. Diseases management is difficult task. Huge number of disease found on leafs. Hence, detection of that disease on particular plant with their solution and also with some preventation technique is very necessary.

The existing method for diseases detection on different plant is simply naked eye observation with the help of experts through which diseases identification done but, this requires continuous monitoring which is very time consuming process and quite expensive in case of large farms. In some countries,
At the same time when detection is done with eye observation, farmers don't have proper idea and facilities that they can contact to experts due to which consulting experts cost is very high and it is time consuming.

By using histogram and content based Image Processing algorithm with building the useful web service or tool for "Detection and classification of plant leaf diseases. Plant leaf disease classifications have wide applications in various fields such as in biological research, in Agriculture etc. In modern agricultural field, various computational methods have been developed to help farmers to identify diseases on plant and to monitor the proper growth of their crops. Therefore identification of plants, leaves, stems and finding out the diseases, percentage of the disease incidence, symptoms of the disease attack, plays a key role in successful cultivation of plants. Hence there is scope for working on development of innovative, efficient and fast interpreting algorithms which will help to detecting diseases. The proposed system is a software solution for automatic detection and computation of texture statistics for plant leaf diseases.

II. LITERATURE SURVEY

Savita N. Ghaiwat, Parul Arora presents and K-nearest neighbor (KNN) method for predicting the class of test example. This is very time consuming method. Also they used Support vector machine (SVM) techniques which have more accuracy in prediction. Another technique they used is Self Organization Map and Probabilistic Neural Network. It requires large storage space. One more desirable techniques they used known as Fuzzy Logic.[1]

According to the Renuka Rajendra Kajale, she introduces the different application of texts sure analysis in detecting the plant disease. For detecting the plant disease she used image Processing technique. In this paper classification is achieved with the help of HSI transformation. [2]

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A Big Data Analytics - Challenges With-in New Data, Metadata Management & Analysis Platforms

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Abstract: Nowadays, the information technology spreads very fast due to most generated digital data and the exchanged on Internet day-to-day so large volume of data indicates the new age of the big data management. The world's effective capacity to exchange information through telecommunication network and amount of internet traffic; the data growth has increased up to Exabyte annually. So there are big issue to deal with big data and metadata management. In Big data environment; also need to develop analytical platforms which perform corrective analysis with faster response time. So, the paper is focused on the challenges with-in new data, metadata management and analysis Platforms in a Big Data Analytics.

Keywords: BD (Big Data), BDA (Big Data Analytics), EB (Exabyte), IDC (International Data Corporation).

I. INTRODUCTION

In a digital world, where the data from many resources e.g. telecommunication network contains signal or sensor data or information. The huge data growth due to Internet data which are in many forms. The dataset contains its original data and metadata which means the information about dataset. So for any knowledge discovery the data governance plays an important role in the database engineering.

Big data is collection of large and complex datasets which sizes beyond the ability of commonly used software tools so difficult to analyse within a tolerable elapsed time or small response time; so big data and data analytics are the emerging trends in the information technology domain.

The properties of big data specify with the 5V's model as follows:

- Volume: Data at rest i.e. large volume of data
- Velocity: Data in motion i.e. streaming or real time data
- Variety: Data in many forms i.e. structured, unstructured and semi-structured data
- Value: Data importance i.e. Meaningful data and Validity of data
- Veracity: Data in doubt i.e. finding inconsistencies in data

So, big data has increased the demand of not only the data and information management specialists but also the data analysts. Due to 5Vs (Volume, Velocity, Variety, Value and Veracity) properties of the big data; the Big Data is the big issue in new digital age.

To solve these issue; there is need to develop some suitable and optimized platforms for management of the new data, metadata and information analysis which improve the process of the Big Data Analytics.

Fig 1: 5V's Model to specify properties of Big Data

II. BACKGROUND & MOTIVATION

Within the last two decades, the WWW, more commonly known as the web, has become the main platform for deploying business, social application and organizational information systems. Many organizations have extended the scope of their web-based systems.

As per the report of IDC; developed economies increasingly use data-intensive technologies. 4.6 billion mobile-phone subscriptions worldwide, and between 1 billion and 2 billion people accessing the internet so it marketing of big data is about $16.1 billion in 2014 it will grow up to $32.4 billion by 2017 these forecasts indicates that the scope of big data will be grown rapidly in forthcoming future.

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Automatic Extraction of Top-K Lists from Web

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Abstract: This Now a days there is very busy schedule and all the users wants to complete their task within a less time. Whenever users fire any Top-k query as an input on World Wide Web then they got number of links as an output. The links which are received by users may contain non-useful information or garbage data. Sometimes these links may contain audios, videos, and Twitter and Facebook comments which is not useful for users. To overcome these problems we develop new proposed Top-k extraction system with better performance. By using this system, user wills saves it's time to get proper result. By using this system, when user enter Top-k list as a query it will give user direct Top-k list as a result in tabular format. For obtain this result Top-k extraction system we use Top-k extraction algorithm. This system includes all web pages. The web pages is in the structured, unstructured and semi-structured format. Also gives results in less time. This paper is summaries with data which is useful to user that are extract from top-k web pages, which are web pages that web pages includes top k instances of a query which is user fire on web. That's why top-k lists are highly valuable, give richer data and information.

Keywords: Extraction of web information, Top-k lists, Extraction of list, Web mining, Data mining, Context, Web pages.

I. INTRODUCTION

This Now a days the largest source of information is World Wide Web. A lot of recent work has concentrated on earning knowledge from structured information on web, in particular, from web tables. However, it is problematic how much valuable knowledge we can extract from lists and web tables. It is true that the total number of web tables is bulky in the entire collection, but only a very poor percentage of them contain exact information. An even smaller percentage of them contain information understandable without context.

In this paper, on behalf of focusing on structured data (such as tables) and avoiding context we concentrate on text that we can know, and then we use the context to represent less structured or almost free-text data, and guide their extraction. Specifically, we focus on a beneficial and useful source of information on the web, which we call top-k web pages.

A top-k web page specifies k items of a exact interest. In most conditions, the information is in simple language text which is not directly machine understandable, although the information has the same format or different style. But most considerable, the title of a top-k page often clearly discovers the context, which makes the page understandable and extractable.

For obtaining our goal to find top k instances, when we enter search query we get unstructured data from web. Parser parse unstructured data and show top 10 closest URLs with titles. Algorithm find dust within URLs and removes that dust. Levenshtein algorithm sorts those URLs according to distance and display that distance. HTML parser parse pages, extract data and display expected result. If that pages does not contain expected result, then parser display closest page according to search query.

II. LITERATURE SURVEY

An Automatic Extraction of Top-k Lists from the Web
Important source of structured information on the web is links. This paper is concerned with "top-k list" pages, which are web pages that specify a list of k instances of a particular query. Examples include "the 10 tallest building in the world" and "the top 20 best cricket players in India". We present an efficient algorithm that fetch the target lists with great accuracy even when the input pages contain other non-useful data of the same size or errors. The extraction of such lists can help develop existing knowledge bases about general consideration.

AUTOMATIC EXTRACTION OF DATA FROM DEEP WEB PAGE
There is large amount of information accessible to be mined from the World Wide Web. The information on the Web is in the form of structured and unstructured objects, which is known as data records. Such data records are necessary because essential information are available in these pages, e.g. lists of products and there detail information. It is important to extract such data records to provide proper information to user as per their concern. Manual approach, supervised learning, and automatic techniques are used to solve these problems. The manual method is not relevant for huge number of pages. It is a challenging work to retrieve appropriate and beneficial

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Dynamic Provisioning of Resources in Hybrid Cloud using Aneka Platform

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Abstract: Many vendors are offering subscription-based computing services through the Infrastructure as a Service (IaaS) model. Users can purchase resources from different vendors and get the best from each of them to run their applications. But is very complex task to deploy applications in multi-cloud environments. Therefore, application platforms are necessary to help developers succeed. Developer use Aneka to deploy their applications in multi-cloud environments because Aneka provides platform as service. It can be used to provide resources from different cloud providers and can be configured to request resources dynamically according to the needs of specific applications. This paper introduces extensions built into Aneka to support the deployment of applications in multi-cloud environments. The first extension shows the flexibility of the Aneka architecture to add cloud providers. We also discussed the inclusion of public IPs to communicate resources located on different networks. We are reducing the total execution time of an application composed of independent tasks when deployed in the multi-cloud environment created by Aneka using Azure and EC2-supplied resources.

Keywords: IaaS, PaaS, Aneka, Map Reduce.

I. INTRODUCTION

In infrastructure-as-a-service (IaaS) Model, there are more than 50 vendors that offer computing Resources in the form of subscription for payment for use model. This poses a challenge in the selection of Cloud, but at the same time opens up an opportunity for applications can provide resources from multiple cloud providers. Running applications in cloud and multi-cloud environments brings significant benefits. However, they must be developed in order to exploit the main features of the cloud. Therefore, software applications must have the ability to acquire resources automatically without human intervention. According to their current needs, they should add and release resources dynamically by measuring and monitoring the use of these resources. Aneka is a platform as a service (PaaS) that helps Programmers to create applications that take advantage of clouds. It also helps developers build applications using different distributed programming models. It provides support for scheduling and deploying tasks on cloud resources and provides services to dynamically acquire and free these multi-cloud resources. Aneka components can be easily deployed to a virtual machine provided and support the monitoring of the resources in which applications are deployed. There are various public resource providers which work on the pay-per-use basis. Amazon EC2, GoGrid and Xen are the service providers that provide dynamic resources publicly in the form of pay-per-use.

Aneka allows exclusive kind of packages to be accomplished at the same grid infrastructure. A good way to guide such flexibility is to by provide the execution models. Currently Aneka supports three extraordinary execution models:

1. Task Execution model

Task programming affords developers with the ability of expressing packages as a set of impartial obligations. Every task can perform a special operation, or the equal operation on different data, and may be accomplished in any order by means of the runtime environment. That is a scenario in which many clinical applications suit in and a totally popular model for grid computing. This software model permits to speedy prototype disbursed applications with minimal implementation and management efforts and is specifically desirable for compute extensive programs where the computation can be prepared in numerous devices of execution. Also, challenge programming allows the parallelization of legacy applications at the cloud. Numerous software domains endorse challenges that may be solved through using mission programming, among them we will take into account clinical computing, monetary packages, media rendering and transcoding, and so on. This version is the most famous and well known in dispensed computing and may be used a starting point for implementing fashions with more complicated necessities along with workflows or parameter sweep.

2. Thread Execution model

This software version presents developers with the capability of strolling multithreaded applications on a allotted environment consisting of the Aneka cloud. The primary abstraction of this version is the concept of thread

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Survey on Resource Provisioning of Hybrid Cloud with Aneka

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Abstract: Scientific applications often require large computational power and availability massive numbers of processing data intensive applications. Traditionally these needs were addressed using grids, clusters and supercomputers for processing and managing large scale applications, but cloud computing offers users with a new model for utilizing computing infrastructure. Scientific applications include mathematical model and numerical solutions techniques to solve engineering and scientific problems. That model often required large number of computing resource and to cut down such computing complexities a dedicated high performance infrastructure such as the grid, clusters were used. The resources for execution of scientific application may be seen in some parts of the year which can lead to long waiting times for utilization of these resources ,or the available resources for one applications Mayer be insufficient to complete the applications before its deadline. In these cases, scientific resources may be complemented by cloud resources. Leasing cloud computing services on pay per use basic, even minor institutions can easily access a large number of resources, which are utilized and paid for only for the time they are actually utilized.

Keywords: Paas, IaaS, Service Level Agreement.

INTRODUCTION

Scientific applications required large computing power traditionally exceeding the amount that is available within the premises of a single institution therefore, cloud can be use to provide. Extra resources whenever required. For this vision to be achieved however, requires both policies defining when and how cloud resources are allocated to applications and a platform implementing not only these policies but also the whole software stack supporting management of applications and resources Aneka is cloud applications platform capable of provisioning resources obtained from a variety of sources, including private and public cloud, cluster, grids and desktops grids. Aneka are also used hybrid cloud that is combination of public and private cloud.Using Aneka platform dynamic provisioning of resource in hybrid cloud.

EXISTING SYSTEM

Grid computing is the collection of computers resources from multiple locations to reach a common goal. The grid can be thought of as a distributed system with non-interactive workloads that involve a large number of files. Use of grids in scientific application led to high utilization rates along with technical and bureaucratic issues.

For this vision to be achieved, however, middleware supporting provisioning of resources from both local infrastructures and public clouds (known as hybrid clouds) is required, so that applications can transparently migrate to public virtual infrastructures It increases the cost where huge resources are not required quite often.

LITERATURE SURVEY

Before starting our work we have undergone through many research papers which indicates that for a dynamic provision to using differ ways. Resource provisioning means the selection, deployment, and run-time management of software (e.g., database management servers, load balancers) and hardware resources (e.g., CPU, storage, and network) for ensuring guaranteed performance for applications. This resource provisioning takes Service Level Agreement (SLA) into consideration for providing service to the cloud users. This is an initial agreement between the cloud users and cloud service providers which ensures Quality of Service (QoS) parameters like performance, availability, reliability, response time etc. Based on the application needs Static Provisioning/Dynamic Provisioning and Static/Dynamic Allocation of resources have to be made in order to efficiently make use of the resources without violating SLA and meeting these QoS parameters. Over provisioning and under provisioning of resources must be avoided. Another important constraint is power consumption. Care should be taken to reduce power consumption, power dissipation and also on VM placement. There should be techniques to avoid excess power consumption.….Some research papers which have led us to approach to the idea of a machine which may give solution to all these

Bhavani B H And H S Guruprasad was explained which paper title "Resource Provisioning Techniques in Cloud Computing Environment: A Survey" which Resource Provisioning Techniques in Cloud Computing

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Abnormal Behaviour Detection using Mobile Cloud Infrastructure

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Abstract: Now days, some mobile services are changed with cloud-based mobile services with richer communication and greater flexibility. So, we now present new mobile cloud infrastructure with including features of mobile devices and cloud services. With cloud computing this infrastructure provides the virtual mobile instance. For commercialize new services, service providers should be aware from security obstacles. Hence we introduce new mobile cloud services with mobile cloud infrastructure and defines possible security problems with use of some service scenario. Hence, we introduce methodology and architecture for detecting abnormal behavior through the monitoring of host and network data. To validate our methodology, we used machine learning algorithm to detect the abnormal behavior that arose from these programs.

Keywords: Mobile devices, Random Forest Machine Learning algorithm, Abnormal Behaviour.

INTRODUCTION

In normal mobile devices, most current vaccine applications detect malware through a signature-based method. Signature-based methods can detect malware in a short period of time with great accuracy, but they cannot detect new malware whose signature is unknown or has been modified. If mobile cloud services are provided, there may be possibility of malicious applications may appear including new and modified malware.[1]

Vaccine applications cannot detect with only signature-based method in the future. Moreover, mobile cloud infrastructure supports a maximum number of virtual mobile instances. When a malware is compromised on a virtual mobile instance, it can be delivered to other virtual mobile instances in the same mobile cloud infrastructure. Without monitoring the network behaviour in mobile cloud infrastructure, the malware will spread over the entire infrastructure.
The cloud infrastructure is vulnerable if specific security measures are not implemented.

RELATED WORK

Mobile devices with cloud based services are very effective. Mobile cloud infrastructure is recently introduced where mobile devices and cloud services are combined together. As it a commodity, service providers should know the security issues.

In various security threats are mostly discussed based on its situation. A new methodology is introduced in order to detect the abnormal behavior. By detecting the host and the communicating devices certain malicious programs are injected in the test bed to identify the abnormal behavior. Using machine learning algorithm, these suspicious programs are detected. For finding the next neighboring node and to detect the fault, FDMC algorithm is implemented.

Algorithm Implementation

This Random Forest (RF) machine learning algorithm to detect the behavior with our collected data which is present on the mobile cloud services applied on the infrastructure. The RF algorithm is a combination of decision trees that each tree depends on the values of a random vector sampled independently and with the same distribution for all trees in the forest. We represented the collected features as a vector with the data subsequently used to train our collected data set. This algorithm was introduced by Breiman which describes about the many random classification of trees

The random classification contains the dataset that is formed by combining with position replacement in the training set. In our proposed system, we used malware detection for the applications it describe about the security threats for the existing system and applications on mobile cloud instances. It create based on the malicious software that is installed on the mobile cloud services. In our proposed system we detect the normal behaviour by introducing signature based method. But this method is not applied for modified cloud instances and new malware which is unknown for the cloud service scenarios explained about the mobile cloud services i.e. vaccine applications so it is better to causes on future proposals. If malware is present on the cloud instance then it is applied on other mobile cloud service provider which is present on the similar host and it also useful for detecting malicious programs and the abnormal data to be monitored through

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Web Embedded Server for Remote Access Monitoring and Controlling

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Abstract: Embedded Web System is a smart system designed to perform one or a few dedicated functions, often with real-time computing constraints. An embedded system is usually embedded as part of a complete device including hardware and mechanical parts. Instead of PC oriented servers, the ARM processor based servers are becoming trend of today's market. Due to its reduced cost and size high performance is achieved using ARM processor along with Ethernet module as Embedded Web Server. Some Embedded Systems are mass-produced, benefiting from economies of scale. Idea is utilized for monitoring and controlling maximum number of home appliances as well as industry devices. Since the Embedded System is dedicated to specific tasks, for industry automation, instrumentation and household devices control etc, this is an optimized solution by engineer, reducing the size and cost of the product, or increasing the reliability and performance. System home page can be accessed using web browser. For sensing the temperature, light and humidity different sensors installed at working place. The different electronic devices are connected to ARM through UART ports. The data from these electronic devices are stored in ARM micro controllers through RS-232 serial bus communication.

Keywords: ARM, DACs, Embedded Web Server (EWS), Monitoring.

I. INTRODUCTION

Web server is nothing but it is a one kind of host machines (a web site) that provides reliable services for only requesting clients. Web server should consist of intelligent operating system, with faster processor speed, special purpose of hardware, large amount of memory storage, running applications and few web pages etc. Microcontroller or ARM processor is an embedded network that creates a way for easy controlled activities of any device from any remote location. Such servers designed using very low resource usage, are highly reliable, portable and secure systems. The EWS provides an Ethernet connection between the IGC100 and a network. The EWS allows monitoring and control of the IGC100 (and vacuum system) from a local network or the world-wide web.

Such Web Servers are developed using specialized or advanced computers. They use different kind of operating systems such as UNIX, Linux, and Windows, NT etc.

For example, handheld computers share some elements with embedded systems such as the operating systems and microprocessors.

The web server gives us the reliability and flexibility of monitoring and controlling the electronic devices/ appliances from every nook and corner of the universal world. Such web server systems apply typical client-server architecture where the client request to the server and accesses the server through the LAN router and the global Internet. Multiple clients send the request to the server. Firstly that request is processed by the router to connect to the Internet. Then the web processes the request made and finally connects to the desired web server. At last the Requested data is sent to the client through web server. An Embedded Web Server ARM processor that includes software and application code to monitor and control the systems.

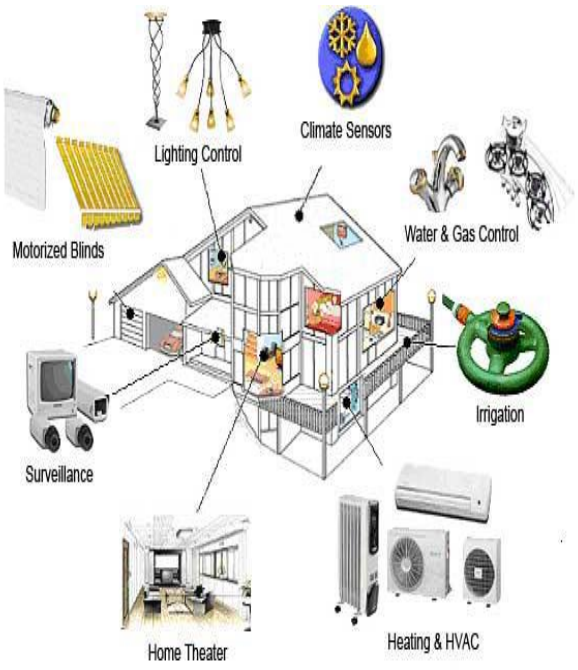

Fig.1: Different Devices Connected For Automation.

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Survey on Hybrid Recommendation System with Review Helpfulness Features

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Abstract: There are numbers of services available on the internet. Recommendation system helps to user to choose products, services according there interest among the huge amount of available items. As the increasing use of the internet as well as the increasing number of user there are some challenges to recommendation system. There must be quick recommendation for the large amount of data. For performing recommendation there are different techniques like collaborative, content based, knowledge based and other techniques. In hybrid recommendation this methods are combined to improve the performance of recommendation. Services contains lots of data i.e. big data, big data is unstructured manner that cannot be manage or handle easily. In this paper, we introduce the topic of hybrid recommendation system with review helpfulness features. It provides way to overcome cold-start problem, sparcity problem & also improve the efficiency, accuracy of recommendation system.

Keywords: Collaborative filtering; Content-based filtering; filtering technique; Recommendation systems.

I. INTRODUCTION

Recommender System is used to a suggestion of users for items or products in order to generate meaningful recommendations according to their requirements. In Recommender System there are number of techniques and applications which aid to user for decision making process where they want to punches some items from alternate products or services. Recommender system has the ability to predict whether a particular user would prefer an item, and also not based on the user's profile. Decision making process and quality is proved by Recommendation system. Recommender systems support users by allowing moving beyond catalog searches. For provider and users Recommender systems are beneficial.

In online shopping they reduce transaction costs of finding and selecting items.

There are number of recommendation techniques:-

1) Collaborative Recommendation:-This technique is most probably familiar and most widely implemented. This system aggregate recommendation of objects or rating. It recognize common between users on basis of their rating and generate new recommendations.
2) Demographic recommendation:-This system aim to categories user based on personal attribute and make recommendations based on demographic clusters. Demographic techniques from people to people correlations .It collaborative once, but different data use. The benefit of this approach is it may not require a history of user ratings. This type needed by collaborative and content based techniques.
3) Content based recommendation:-This is a continuation and outgrowth of information filtering research. In this system, object of interest defined by their associated features. For example text as a feature. According to Schafer, Konstan and Riedl call this '' item –to –item correlation''.
4) Utility based recommendation:-This technique does not attempt to build long-term generalization about their user, but rather their advice or an evaluation of match between the set of options and users need available. The central problem of this system is how to create utility function to each user.
5) Knowledge- based:-This system attempt to suggest object based on interferences about users' needs and their preferences. In some techniques sense all recommendation techniques could be described as some kind of interference.
6) Item-based: - Item based algorithm recommends a user the item that is similar to users preferred before.

II. BACKGROUND AND MOTIVATION

The main important concept for motivation is Recommendation. It generates meaningful recommendations according to their requirements. It reduces the human efforts of doing analysis process while searching products online by providing recommendations. Improve the accuracy of recommendation in big data application. Big Data is the data that exceeds processing capacity of regular database. It is difficult to transport anywhere. Data is unstructured.

III. RELATED WORK

The course "Interactive web-based systems design" and masters works in this sectors were implemented many other web-based recommender systems. Recommendation

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Copyright Protection for Multimedia Content on Cloud

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Abstract: Cloud computing is the Internet regarded as a shapeless omnipresent space for processing and storage. Cloud computing can be defined with having two word which includes "cloud" means internet and "computing" means operations. In short, Cloud Computing can be defined as an internet based operations. Multimedia copyright protection on cloud is a legal way of protecting user's data which means that whatever data the user has created and uploaded cannot be used or published by anyone else without the consent of the user. The development of Internet has led the multimedia computing to emerge as a technology for generating, editing, processing and searching contents of media like image, audio, video, graphics and such others. This system explores detection of copyright violation of multimedia content like images and videos and will create a method to deny access for uploading such copyright violated images and videos. To keep uploaded data to be copyright protected and deny uploading of copyright violated data by other user's, various methods have been proposed in this literature.

Keywords: cloud, multimedia, DES, security, copyright.

I. INTRODUCTION

There has been tremendous benefits for multimedia cloud computing and has much challenges like Network heterogeneity, Device heterogeneity , Multimedia and service heterogeneity, Security, Power Consumption, QoS heterogeneity which has to be met. But besides this there is also a big challenge for data security and access control when users upload their data which can be in the form of multimedia content for sharing on cloud. This system travels through a new method of creating and comparing signatures of data on cloud for enhancing security for copyright protection of multimedia content like images and videos. This system can be deployed on private and/or public clouds. The system has two new components: (i) method of creating signatures of multimedia content (ii) distributed matching engine to match the signatures. The signature method will create a strong and unique signature while uploading multimedia content like image and video and this method will be used for computation and comparing. The distributed matching engine obtains high scalability. Development in storing and processing data of multimedia content and due to the availableness of free online hosting sites has led to easeful of duplicating the copyrighted multimedia data such as images and videos.

Such unauthorized redistribution of multimedia content on the cloud can led to eloquent loss of revenues for the owner of data. Since there is large amount of multimedia content residing over the internet and finding unauthorized copies over the internet is very complex task and comparing of unauthorized copies with authorized copies is very complex and will be very costly which is not affordable. We design a system for multimedia copyright protection on cloud infrastructure. The system can be used to protect the copyright of multimedia content like images and videos. The system can run on private or public cloud or even in any combination of public and private clouds. Since our system is based on infrastructure of cloud which provides fast access to computing software and hardware resources hence there is assurance of fast deployment of multimedia copyright protection. As in cloud, computing resources are used on demand basis, our system is cost effective. The system can provide scalability by scaling up and down for supporting large volumes of multimedia content to be copyright protected. The proposed system is somewhat complex since it includes two components which include: (i) a method to create signature of multimedia content like images and videos while uploading the content on any online hosting site on cloud and (ii) distributed matching engine will store signatures of authorized uploaded multimedia content and will match them against unauthorized multimedia content. Through performing experiments on multimedia content like images and videos, we show the more accuracy and scalability and even elasticity of the proposed system. We performed experiment of copyright protection by uploading images and videos on DriveHQ Cloud File Server and achieved success in it. Firstly we choose animal called koala and choose Flicker as a hosting site and uploaded that image on DriveHQ Cloud File Server.

Then one signature was created for the uploaded image which was saved in the database. Then we tried to upload the same image of koala with the same hosting site as well we tried with different hosting site, then the signature was created and we received one message that this image already exists, and image failed to upload hence we

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Survey: Multimedia Copyright Protection on Cloud

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Abstract: The Internet regarded as an amorphous omnipresent space for processing and storage is called as Cloud computing. In other words Cloud Computing is defined as operations which are based on internet. Cloud computing allows consumers and businesses to use applications without installation and access their personal files at any computer with internet access. A legal way of protecting user's data which means that data the user has created and uploaded cannot be published by anyone except the user without his permission is Multimedia copyright protection on cloud . The development of Internet has led the multimedia computing to emerge as a technology for generating, editing, processing and searching contents of media like image, audio, video, graphics and such others. Multimedia cloud computing has much challenges like Network heterogeneity, Device heterogeneity , Multimedia and service heterogeneity, Security, Power Consumption, QoS heterogeneity which has to be met. Besides this there is a big challenge for data security and access control when the user uploads any data in the form of multimedia content for sharing on cloud. In this paper we can see detection of copyright violation of multimedia content like images and videos. This paper proposed a new method of creating and comparing signatures of data on cloud. This paper travel through a method for enhancing security for copyright protection of multimedia content like images and videos.

Keywords: Cloud, Multimedia, DES, Security, Copy Detection.

I. INTRODUCTION

Due to the availability of free online hosting sites that has led to very easy way of duplicating the copyrighted multimedia data such as images and videos, development is needed for storing, recording and processing data of multimedia content. Such illegal change or reposition of multimedia content on the cloud can led to the loss of revenues for the actual owner of data. Since there is much more amount of multimedia content occupying over the internet and finding illegal copies over the internet is very complex task. Also comparing of unauthorized or illegal copies with authorized copies is very complex and it will be very costly which is not affordable. We design a novel system for multimedia copyright protection on cloud infrastructure. The system can be used to provide the protection to the copyright of multimedia content like images and videos. The private or public cloud or even in any combination of public and private clouds the system can run. There is guarantee of fast deployment of multimedia copyright protection due to novel system is based on infrastructure of cloud which provides fast access to computing software and hardware resources.

As in case of computing resources, resources are used on demand basis in cloud, hence the system is cost effective. By scaling up and down for supporting large volumes of multimedia content to be copyright protected i.e. the system can provide scalability. The proposed system includes two components which include: (i) a method to create signature of multimedia content like images and videos at the time of uploading the content on any online hosting site on cloud and (ii) distributed matching engine which stores signatures of authorized uploaded multimedia content and will match them against unauthorized or illegal multimedia content. Through performing experiments on multimedia content like images and videos, we show the more accuracy and scalability and even elasticity of the proposed system. We performed experiment of copyright protection by uploading images and videos on DriveHQ Cloud File Server and achieved success in it. Firstly we choose image file as animal called koala after that we choose Flicker as a hosting site and start uploading that image on DriveHQ Cloud File Server which is Cloud File Server. For the uploaded image the signature was created with the help of signature creation method which was saved in the database.

Then we tried to upload the same image of koala with the same hosting site as well we tried with different hosting site, then the signature was created and we received one message that this image already exists, and image failed to upload hence we achieved copyright protection. Again we tried to upload the same image which is saved with different name and tried with different hosting sites, then again we received the message that this image already exists, and image failed to upload hence we achieved copyright protection. Then for the further testing we tried to upload the same image with editing also we converted into different format and saved it with different name and tried with different hosting sites, then the signature was created and image was uploaded. Here the concept of

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Hybrid Recommendation System with Review Helpfulness Features

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Abstract: As there are millions of product available online it is not easy for the customer to find the best products. Recommendation system is an information filtering system. Many Recommendation system are Collaborative Filtering Algorithm However it still has a problem such as a cold-start problem and sparsity problem. In this paper we proposed Hybrid recommendation system with review helpfulness feature. We can construct the hybrid model. In this system we use the three recommendation technique like as an item based, content based and knowledge based. The result of this system provide the accurate and meaningful service recommendation to active user.

Keywords: Collaborative filtering, big data application, cluster.

INTRODUCTION

In hybrid recommendation system for semantic clusters big data is required as a prerequisite condition. It's having lots of data that exceeds processing capacity of regular database it can unstructured manner and difficult to transport anywhere. In big data application has hugely data collection and it beyond ability of commonly used software to capture to manage and process that data. The most challenge for big data application is explore the large volume of data and remove useful information or knowledge for future action. Recommender system are techniques and intelligent application to guide users in decision making process where they want to select some item alternative services or products.

Recommender system has two main challenges for big data application.1) within acceptable time to make decision 2)from so many services ideal recommendation can be generated. Big data can be categorized in three ways volume, velocity and variety. Volume is category while surveying the clustering in terms of big data volume is the way of big data. The second category is Velocity it refers the speed of data processing. And last category is Varity which refers no of types of data. In Previous system there may be two problems are occurred Sparsity and new Cold-start problem. In Sparsity Problem this is issue take to place. When the user/items matrix extremely sparse i.e. user can rate only a small no of items so accuracy of recommendation system will be decreased. In most of these system the percentage of the system of rating assigned by user is very small compared to percentage of rating in system has to predict. Hence accuracy of recommender has to predict. In cold-start problem the performance of these system suffers new user or item. When new user enter system it is difficult to find similar one because there is no enough information about user or items history in system.

RELATEDWORK

Hybrid recommendation system studied the clustering methods. In the E-commerce recommendation system designed a neural network based clustering collaborative filtering algorithm. The cluster analysis collect user with same characteristics according to web visiting message data. However, it is difficult to say that user preferences relevant to purchasing preferences. To partition movie k-means clustering algorithm are applied. It can requested by user to provide some extra information it require user to incorporate multidimensional clustering into collaborative filtering recommendation model. In the first stage user and item profile was collected in background data. Using semantic cluster AHC algo can clusters similar feature of product/item in second stage. An item prediction was made by performing weighted average of deviations from the neighbours at the third stage. Data providing services can represent in the term of relation between input and output and semantic relation between them. Using the semantic cluster merging the similar services into the same cluster. Network clustering technique on logical network to identify neighbourhood & use CF algorithm to generate recommendation social relationship between this users this work can depends high dimensional parameter used. Hierarchical clustering algorithm it require only implicit feedback on past user purchase to discover the relationship. Then AHC algorithm is applied on services within the same cluster. The content based collaborative filtering approaches having same limitations to avoid these limitations hybrid approach has been introduced. In this approach are combine to gain better performance and eliminate some of drawbacks.

EXISTING SYSTEM

In this existing system when user can enter the system collect the data from user that means user profile and

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Customized Task Scheduling Algorithm for Scientific Application using Aneka

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Abstract: Cloud computing is emanate technology in IT domain. The scheduling of the cloud services to the consumers by service providers significance the cost benefit of these computing paradigms. Cloud computing is a recent technology that are used for online distribution of computing resources also services on pay- per- use basis. Task scheduling as well as provision of resources are main problem areas in cloud computing. There are many algorithms like Min-Min, Max-Min, Suffrage, Shortest Cloudlet to Fastest Processor (SCFP), Longest Cloudlet to Fastest Processor (LCFP), Ant-Colony Optimization. Priority Based, First Come First Serve (FCFS) etc. These dynamically scalable resources within a cloud are handled by cloud service provider and distributed among the number of users according to the contract known as Service Level Agreement (SLA). After recognition of benefits of cloud computing, a large number of users using cloud services are increasing tremendously. Therefore task scheduling plays important role in allocating and scheduling the cloud resources among the users efficiently. A capable task scheduling policy provides proper resource utilization, load balancing and optimization of execution time and cost. In this paper, we have given an overview of research work done by several researchers in the area of cloud task scheduling.

Keywords: Cloud computing, job scheduling, scheduling algorithm, cloud services, Service Level Agreement, task scheduling, resource utilization.

INTRODUCTION

Big data is most important technology that has the potential for frequently changing the way organizations use information to enhance the customer experience and transform their business models. Big data is complex market. It is a combination of data-management technologies that have evolved over time. Big data enables organizations to storing, handle, and manipulate vast amounts of data at the right speed and at the right time to gain the right insights. The term "cloud" originates from the world of telecommunications that providers launch using virtual private network (VPN) services for data communications.

Cloud computing is a type of Internet-based computing that provides shared computer resources and data to computers and other devices on demand. It is a model for enabling pervasive, on-demand access to a shared pool of configurable computing resources examples are computer networks, servers, storage, applications and services which can be rapidly provisioned and released with minimal management effort.

It deals with computation, software, and data access also storage services that may not require end-user knowledge of the physical location & the configuration of the system that is delivering the services. Cloud computing is a modern trend in IT that turn computing and data away from desktop andportable PCs into large data centres.[3]

There are following four cloud deployment models which are used to show the ways through which cloud services are used by end users.

Private Cloud: Private cloud is build for the exclusionary use by single organization. The private cloud provides the resources accesses as well as used only by users organization who own that cloud. Main advantage of private cloud is its security since its resources are used within different users of same organization. Another benefit of private cloud is its capacity to provide customization which allows organization to design it according to specification. Private cloud is providing the less scalability.

Community Cloud: Community Cloud enable for sharing its resources among the users of multiple organizations which are having similar specification and objectives. This cloud divides initial formulation cost among several organizations. These clouds provide somewhat more scalability of resources than private cloud.

Community cloud in computing is a collective efforts in which infrastructure shared among the number of organization from particular community with common concerns that is security compliance etc.it is internally managed by third party and hosted internally or externally.

Public Cloud: Public cloud provides huge amount of storage, services and computing environment to the all users over world through web on pay-per-use basis. Public clouds are built and managed by third party agencies. It provides more scalability, availability and flexibility than private clouds. But less security is a major problem with

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ANEKA Is a Compatible Platform for Cloud Development Application

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Abstract: Aneka is a platform used to develop and manage cloud computing. Aneka is used as PaaS. The feature of the Aneka is used for provisioning resources on public & private cloud. Such as Amazon EC2, Windows Azure etc. Aneka cloud computing use a larger number of resources (computers) to execute their application in distributed &parallel. Aneka is a market oriented cloud development & management platform with rapid application and workload distribution capabilities. Aneka is integrated middleware seamless package which allows you to build &manage interconnect network. It is market oriented; it allows you to creating, scheduling, monitoring & provisioning result using pricing &accounting in private & public cloud. Aneka is freely available with different version. Aneka is a specially designed to work with the popular environment like .net and provides a choice of programming models to ensure that, your application can get all of the benefits that cloud computing.

Keywords: Cloud computing, jobs cheduling, scheduling algorithm, cloud services, Service Level Agreement, task scheduling, resource utilization.

I. INTRODUCTION

ANEKA is a patented Grid/Cloud computing technology. It has been developed over many years by a number of talented institutes and researchers within the University of Melbourne, led by RajkumarBuyya[3].
This research is supported by the DIISR (Department of Innovation, industry, Science & Research). It has its roots in open source Gridbus technologies also arising from Dr. Buyya and his team's research since 2002.

ANEKA was created with the aim of providing a set of services that made easy development of cloud construction and applications without sacrificing flexibility, scalability and extensibility [3].

Cloud computing is the way the tobuilt traditional software systems and running a utility-based model for IT infrastructure, platforms, applications, and services. When providers began using virtual private network (VPN) services for the data communications, the term cloud originates from the word of telecommunication [4].

The key features supported by ANEKA are:

- An Aneka container provides pluggable services, persistence solutions, and security and communication protocols.
- Programming models including File –based task model, object oriented thread model.
- Authentication mechanisms such as role based security and Windows domain-based authentication.
- It provides multiple options like RDBMS, SQL Express, MySQL and flat files[3]. Applications Of Aneka:

II. ANEKA ARCHITECTURE

There are mainly three programming models in ANEKA.

1. Task model

The task model is an application as a collection of task. The task are independent work unit that are managed in any order by the scheduler. The task model included all the components require for its execution on a node.
The task model is the solution for when the distributed application consist of a collection of jobs that are executed on node whose result are submitted and composed together by end user.
In this scenario user creates number of task, it submitted to the Aneka, and wait for the result. The task model will be a specific unit called Aneka task, a task scheduler, a task Executor and Task Manager.

2. Map reduce

MapReduce is a processing technique and a program model based on java for distributed computing. In this model two important tasks, namely Map and Reduce used in algorithms. In this model Map takes a set of input and converts it into another set of data, elements are broken down into tuples (key/value pairs) by this model. The MapReduce library groups together all input values associated with the same key and passes them to the Reduce function. The Reduce function, also written by the user, accepts an intermediate key and generate the set of values for that key. It combines together these values to form a smaller set of values. Typically just zero or one output value is produced by the MapReduce. The average values are supplied to the user's reduce function via an iterator.

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Survey on Student Attendance System based on Data Analytics

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Abstract: As Attendance is mandatory in every schools and colleges we developed Student Attendance System Based on Data Analytics which is developed with both web interface and mobile application. With the help of web interface admin registers the authorized faculty to the system. Mobile application is used by faculty to take attendance with the help of a smart phone and save it to the server. Admin has the privileges to view the attendance uploaded by the faculty, to make any changes in the attendance and finally generate the report and also maintain database.

Keywords: Data Analytics, Mobile application, Web interface, Internet.

I. INTRODUCTION

Student Attendance system based on Data Analytics is a project where the attendance is taken and maintained digitally without any involvement of paper work. In this system we have two main modules: admin and faculty. Admin module does the work of registering the faculty members so as to avoid any unauthorized access to the system. The registered faculty signup to the system with its unique username and password to mark the attendance of students and submits it to the database. The attendance can also be stored in phone's internal or external memory in case of server failure. Faulty can view the attendance date wise, subject wise, session wise. Admin can view and also can edit the attendance. Reports can be generated here by only admin in just single clicks. Admin uses the web interface and faculty uses mobile application. This web interface is developed to run on different platforms and the application provided can be installed and run on all Smartphone.

II. BACKGROUND AND MOTIVATION

There are various educational institutions that use [1] Radio Frequency Identification and Detection (RFID) technology to record their student's attendance. In this RFID reader and RFID chips are used. Reader is located on fixed location sends signal to passive RFID chip detected in range of reader. Chip re-transmits the acknowledgement signal with its unique Identifier code, hence chip is identified. Also, a single reader can identify many numbers of chips in very short period of time.

However, RFID technologies incur cost of providing each individual with RFID card that has chip implemented. RFID reader should be sufficiently enough to capture each RFID chips acknowledgement. In case there are different departments within same infrastructure each RFID reader should detect RFID chip uniquely according to respective department, which could be cumbersome.

Apart from that, [2] biometrics technology is used for attendance reporting and tracking. Most of the biometrics technology use thumb scanner. This allows a fair and reliable attendance to be recorded. Fingerprint peripheral is used to record the attendance and sent the data into system using wireless or wired technology. However, it requires fingerprint peripheral which incurs cost; in case of hardware failure the whole attendance has to be taken manually.

III.RELATED WORK

Student Attendance system based on Data Analytics focuses mainly on taking attendance and generating report in minimal time. Report generation is done using data analysis tool. Zeppelin is the tool which is used for analysis. As said before there are two modules: admin and faculty. Admin's are Head of Department of the various departments who are the persons to get access to the system through web interface. Admin has the privilege to register the authorized faculty to the database. Once registration is done, faculty can take attendance and upload it, which will be saved to the database. All the faculty needs is a Smartphone and an Internet connection to upload the attendance to database. In case of server failure or no Internet connection at moment faculty can save the taken attendance to phone's memory to upload it later.

Faculty's work is done here. Admin further views the attendance according to the year, semester, student or time. If admin has to do any changes to the uploaded attendance by the faculty then he/she has these privileges here to change it with the help of faculty. Later the report generation which is usually done manually and then later it is submitted to admin in paper form is done in this system with just single click; no need to do tedious calculation or sit for hours to generate excel reports.

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Student Attendance System based on Data Analytics

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Abstract: The Student Attendance System Based on Data Analytics is developed with both web interface and mobile application. With the help of web interface admin registers the authorized faculty to the system. Through mobile application the registered faculty can login to the system and then they can take attendance with the help of a Smartphone and save it to the server. Admin has the privileges to view the attendance uploaded by the faculty, to make any changes in the attendance and finally generate the report and also maintain database.

Keywords: Data Analytics, Mobile application, Web interface.

I. INTRODUCTION

Student Attendance system based on Data Analytics is a project where the attendance is taken and maintained digitally without any involvement of paper work. In this system we have two main modules: admin and faculty. Admin module does the work of registering the faculty members so as to avoid any unauthorized registration access to the system. The registered faculty signup to the system using mobile application with its unique username and password to mark the attendance of students and submits it to the database. The attendance can also be stored in phone's internal or external memory in case of server failure. Faulty can view the attendance date wise, subject wise, session wise. Admin can view and also can edit the attendance. Reports can be generated here by only admin in just single clicks. Admin uses the web interface and faculty uses mobile application. This web interface is developed to run on different platforms and the application provided can be installed and run on all Smartphone

II. LITERATURE SURVEY

The literature survey is an examination of previous information available of the specific project. It is reviewing of what is already known, and not what is supposed to be assumed.

There are various educational institutions that use [1] Radio Frequency Identification and Detection (RFID) technology to record their student's attendance. In this RFID reader and RFID chips are used. Reader is located on fixed location sends signal to passive RFID chip detected in range of reader. Chip re-transmits the acknowledgement signal with its unique Identifier code, hence chip is identified. Also, a single reader can identify many numbers of chips in very short period of time. However, RFID technologies incur cost of providing each individual with RFID card that has chip implemented. RFID reader should be sufficiently enough to capture each RFID chips acknowledgement. In case there are different departments within same infrastructure each RFID reader should detect RFID chip uniquely according to respective department, which could be cumbersome. Apart from that, biometrics technology is used for attendance reporting and tracking. Most of the biometrics technology use thumb scanner. This allows a fair and reliable attendance to be recorded. Fingerprint peripheral is used to record the attendance and sent the data into system using wireless or wired technology. However, it requires fingerprint peripheral which incurs cost; in case of hardware failure the whole attendance has to be taken manually.

III. PROPOSED METHODOLOGY

Student Attendance system based on Data Analytics focuses mainly on taking attendance and generating report in minimal time. As said before there are two modules: admin and faculty. Admin's are Head of Department of the various departments who are the persons to get access to the system through web interface. Admin has the privilege to register the authorized faculty to the database.

Once registration is done, faculty can take attendance and upload it, which will be saved to the database. All the faculty needs is a smartphone and an Internet connection to upload the attendance to database. In case of server failure or no Internet connection at moment faculty can save the taken attendance to phone's memory to upload it later. Faculty's work is done here. Admin further views the attendance according to the year, semester, student or time. If admin has to do any changes to the uploaded attendance by the faculty then he/she has these privileges here to change it with the help of faculty. Later the report generation which is usually done manually and then later it is submitted to admin in paper form is done in this system with just single click; no need to do tedious calculation or sit for hours to generate excel reports.

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Online Establishment Automation System

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Abstract: The existing system is not a complete automated system for that matter their leave management, document management is totally manual and it takes a long time to process a leave request. In the proposed system a leave application has to go through a long chain of official and as a result, several time the competent authorities get manipulated information. The proposed system is used to solve the identified problems. The proposed system will minimize the paperwork. It will help management in decision making as they will get up-to-date report. The aim of this paper is to develop a web based application that can access through internet from anywhere. This Online Establishment Automation system can generate reports for every month and year. The proposed system also provide the facility to manage their profile.

Keywords: Automation, Leave, Controlling officer, HoD, paperwork.

I. INTRODUCTION

Online Establishment Automation System will develop to upgrade the current leave application and record which is manually processed. The proposed system will minimize the problem currently faced by existing system.

The function of the system is to simplify leave application through online, for improving the mechanism of receiving, approving and rejecting leave application to enable the admin to record inapplicable leave, to generate report of employees in order to be use in evaluating the performance.

II. PROBLEM DEFINITION

The "Online Establishment Automation System" is designed to manage the information of employees i.e. employee record such as educational details, profile, leave record etc. This system is time consumable, wastage of paper etc.

III. LITERATURE REVIEW

The main objective of this online establishment automation management system is that managing employee details such as employee information, documents, leave details, leave approval, leave cancellation and generating the report for every month and yearly basis.

Managing employee details manually is a time taking process and data is not secured, finding old records are not easy. By considering issues in manual method the online establishment automation system developed to help in document management, information storing, leave balance and in generating leave balance. The existing manual management system is initiated with the submission of a leave application by an employee for leave.

This application is submitted to the controlling officer at least two days head (with exception of casual leave and the quarantine leave) from the date of commencement of the leave applied for.

The controlling officer is responsible for checking out the eligibilities of the employee for the type of leave and he/she has applied for. If the applicant employee is eligible then the controlling officer submits the application to the HoD of the Department. The work of the HoD is the most complicated as employee responsible for the synchronization of the leave.

In case of Earned leave with full pay, Medical leave, Quarantine leave and Casual leave the HoD has the sole authority to approved or refuse the leave.

If the HoD allows the user for leave, employee should inform the principal by submitting a report which will contain the details about the approved leave by the HoD. Then Principal takes their decision and let the HoD know the result by an Officer letter. Then the HoD let know the result to leave applicant employee manually

In the existing system, the user submits their documents such as their Mark sheets, Research papers to the Controlling officer manually. User can also request for documents like Experience Letter, Salary Certificate and Form No.16 to the Controlling officer manually.

Hence for creation of more transparent and accurate leave process, reduce the number of request that controlling officer handle manually. By the online Establishment automation system more no. of the task done automatically by system also the time required for controlling officer to process a leave request can decrease to less than five minute.

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Internet of Things: "Research and Innovation Agenda"

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Abstract: Internet of Things (IOT) today, is actuation, sensing, communication, and control become ever more elegant and omnipresent, there is established overlap in these communities, sometimes from slimly different perspectives. More cooperation between communities is encouraged. To provide a basis for discussing open research problems in IOT, a visual sense for how IOT could change the world in the distant future is first presented. The Internet of Things is a system of computing devices, and digital machines, mechanical objects, animals or human that are provided with incomparable identifiers and the ability to transfer data over a network without necessary human-to-human or human-to-computer interaction IOT has rotated from the convergence of wireless technologies, micro-electromechanical systems (MEMS), micro services and the internet's, allowing unstructured machine-generated data to be analysed for insights that will drive improvements. The Internet of Things term has been used from marketing combination all the way to research publications. We thought it would be helpful along with a Short Internet of Things history to explore the variety of ways people have been defined the term in the wild.

Keywords: Internet of Things (IOT), micro-electromechanical systems (MEMS), information and communications technologies (ICTs).

I. INTRODUCTION

In 1999, the Internet of Things has been in development for decades. IOT was still considered with a certain degree of disbelief. The IOT Is Defined by ITU and IERC as a Dynamical Global Network Infrastructure with self-Configuring capableness based on their Standard and interoperable Communication Protocol where Virtual sand Physical things have identities ,Physical attributes and Personalities use intelligent interface into the Information Network. IOT is a system of computing devices, mechanical and machines, objects, animals or people that are provided unique with identifiers and the ability to transfer data over a network without requiring people-to-people or people-to-computer interaction. The Internet of Things, can be a person with a heart monitor implant an automobile that has built-in sensors to alert the driver when tire pressure is low or any other natural or human-made object that can be assigned an IP address and provided with the ability to transfer data over a network. Today computers the internet are almost wholly dependent on human beings for information. The Internet of the Things Tomorrow embedded in smart Environment's and Smart Platforms forming a smart web of everything as one of the next big concepts to supports societal changes and economic growth, Which will support the Citizen in their professional and domestic/Public life. On the other Words "platform for Connected Smart Objects" Today, IOT can Progress very well and solve many problems. They Progress in the WI FI connectivity devices. IOT show the general concepts of the network devices and collect information from the world and share that information across the internet commercial applications, devices of IOT manufacturing Technology in the world. The IOT is not limited to business, industrial, application also useful for many devices.

II. MODALITY AND IOTSCOPE

On the Most people including myself, hold the view that cities and the world itself will overcharge with sensing and actuation, many embedded in "things" creating what is referred to as a smart world. Also it is important to note that one key issue is the degree of the denseness of sensing and actuation coverage we believe that there will be a transition point when the degree of coverage triples or cubic from what we have today. At that time there will be a qualitative change. For example, today Most house, buildings, collages, schools, etc. already have sensors for try to save energy home automation is occurring cars, taxis, and traffic lights have devices to try and improve safety and transportation people have smart phones, Mobile phone, Laptops with sensors for running trust on increased home sensing to support remote medicine and wellness However, all of these are just the tip of the berg. They are all still at early stages of evolution. The steady increasingly density of sensing and the sophisticated of the associated processing will make for a significant quality change in how we work and live. It will truly systems-of-systems that synergistically interact to form totally new and unpredictable services. Sensing and propulsion in the form of an IOT platform will become a utility. IOT will

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Research Paper on Java Interactional Development Environment Programming Tool

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Abstract: Java language is become very popular and research project deal with improvement of the language or its run time behaviour. A Java IDE (Integrated Development Environment) is a application which enables users to more easily write the code and debug Java programs. its also helpful for beginners. In this IDEs provide features like syntax highlighting and auto code completion, which help the user to code more easily. The IDE is a Free and Open Source IDE for software developers. The IDE runs on many platforms including Windows, GNU/Linux and Mac OS X. It is easy to install. You can easily create Java applications for mobile devices using Mobility Pack in JIDE. With the IDE has become one of the most preferred development tools, whether it be designing a Swing UI, an enterprise application or using it as a platform for creating your own IDE

Keywords: Integrated Development Environment (IDE), Hypertext Mark up Language (HTML), Abstract Window Toolkit (AWT), Java Virtual Machine (JVM).

I. INTRODUCTION

Now a days the largest source of information is World Wide Web. A lot of recent work has concentrated on earning knowledge from structured information on web. However, it is problematic how much valuable knowledge we can extract from lists and web tables. An even smaller percentage of them contain information understandable without context. In implementing computer-based information systems, specialized approach must be given to software support the user interface as we have seen various software like Net beans, Eclipse, Form Designer etc, which creates various GUI with readymade code. An Integrated Development Environment or development interactive environment is a software application. This IDE provides overall facilities to computer developer for develop software program. An IDE contain of a source code editor, build automation tools and a debugger. Most IDEs have intelligent code completion facility. As Net beans helps to design the Graphical Design Interface with creation of code automatically at background. Its providing a JIDE which is itself a java program. It provides you the flexibility to produce the graphical view which is auto generated. Also it is providing mechanism for automatic creation of HTML pages to just select type of objects and specify the values of attributes. The Java is target and interpreted programming language with a small and easy-to-understand set of instructions (the byte code) programmers can implement and test their concepts in a very dignified way. The Java Organized Devolution scene programming tools is a very useful tool, used by Java applets and applications to help manage getting the right version of Java for a user's system. For programmers, it also provides a auto code generation. The interface automatically generates the HTML code.

II. RELATED WORK

Thus, the challenge in supporting event-driven software development is to provide tools and frameworks with zero runtime overhead or performance penalty.

- When design any java application give full code must be written in the text file then it has to be saved and run it from command prompt.
- There is a simple way to providing a JIDE which is itself a java program. It provides us the flexibility to produce the graphical view.
- In this graphical view can produce various types like Button, Frame, Text Field, Text Area, Checkbox, and Labels.
- It select the type of application i.e. Applet, Swing, HTML, or Editor; they can directly make any graphical look in that application.
- JIDE automatically provides the source code at the background which can be seen on code window.
- For HTML section the created file is saved as .html format, and we have to simply open it and saw the output.

IDE Tools: There are many IDE tools available for source code editor, built automation tools and debugger. Some of the tools are,

1. Eclipse
2. NETbeans
3. Code::Blocks
4. Code Lite
5. Dialog Blocks

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Location Aware MobiFeed System for Mobile Users

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Abstract: A location aware MobiFeed system enables convenient customers to share geo-marked customer delivered messages, e.g., a customer can get nearby messages that are the most noteworthy to her. Existing LANF structures simply send the most appropriate geo-marked messages to their customers. Shockingly, the genuine confinement of such a present approach is, to the point that, a news reinforce may contain messages related to a comparable territory (i.e., reason for interest) or a comparative order of regions (e.g., food, incitement or wear). We battle that varying qualities is a basic component for zone careful news sustains in light of the way that it helps customers find new places additionally, exercises. In this paper we propose MobiFeed framework which permit the client to choose the classification and in view of that classification client can get news of his/her decision.

Keywords: Location Aware, MobiFeed, Location Aware News Feed.

I. INTRODUCTION

An area mindful news sustain framework empowers portable clients to share geo-labelled client produced messages, e.g., a client can get close-by messages that are the most applicable to her. In this paper, we display MobiFeed that is a system intended for booking news nourishes for portable clients. MobiFeed comprises of three key capacities, area expectation, significance measure, and news nourish scheduler.

The area forecast capacity is intended to foresee a versatile client's areas in light of a current way expectation calculation. The pertinence measure capacity is actualized by joining the vector space demonstrate with non-spatial and spatial variables to decide the importance of a message to a client. The news sustain scheduler works with the other two capacities to produce news bolsters for a versatile client at her current and anticipated areas with the best general quality. To guarantee that MobiFeed can scale up to a bigger number of messages, we outline heuristic news sustain scheduler.

A news encourage is a typical usefulness of existing area mindful informal organization frameworks. It empowers portable clients to post geo-labeled messages and get close-by client created messages, e.g.," Alice can get 4 messages that are the most important to her among the messages inside 1 km from her area at regular intervals". Since an area mindful interpersonal organization framework as a rule has an enormous number of messages, there are many messages in a questioning client's region. Combined with client portability, a key test for the area mindful news encourage framework is the way to effectively plan the k most significant messages for a client and show them on the client's cell phone.

In spite of the fact that area mindful news bolster and interpersonal organization frameworks have pulled in a considerable measure of consideration from various research groups, none of these applications has concentrated on the most proficient method to calendar news bolsters for portable clients. As opposed to GeoFeed MobiFeed concentrates on difficulties in giving area mindful news nourishes to versatile clients. We outline an area mindful MobiFeed scheduler that works with our area expectation and message importance measure capacities to give newsfeeds to portable clients. In this paper, we exhibit MobiFeed system intended for informal community frameworks to calendar news nourishes for portable clients.

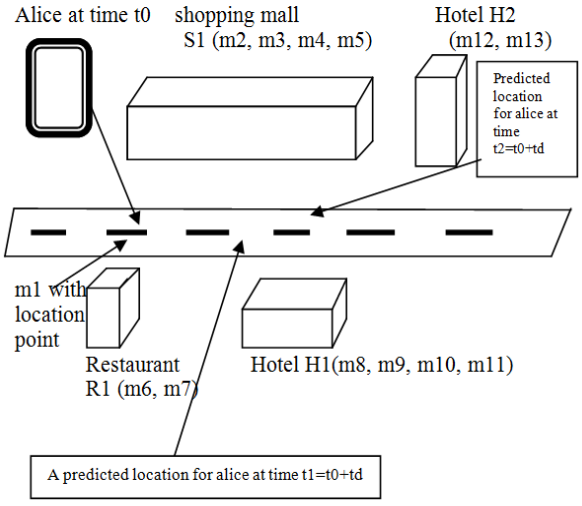

Fig.1. Location aware news Scheduling

Fig.1. portrays an application situation or a scene as its geo-area. Alice can likewise issue Location aware

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Quick Business Information Retrieval using Dot Lucene

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Abstract: This system works on indexed data so it is easy and fast retrieval system over large data with millions and trillions of columns. This system will provide the highly accurate and semantic result with minimal time. Two major components of search engines are the indexing and query process. The indexing process aims to create data structures or the indexes that allows the searching. The querying process will use the structures and user queries to generate a ranked list of documents. Search engines should include the concept, models, techniques and the processes of IR. Search function is an interface between a search engine and users. This function receives user's queries and returns relevant pages to the queries. The pages usually are sorted according to some criteria. Firstly, we should build a text database which is used to store all information retrieved by the user, then determine text model of retrieval system, create index with the model according to the text of database. Ordering can enormously enhance the speed of data recovery which way do you utilize and relies upon the size of data recovery framework. After indexing the documents search requests are submitted by the users and information recovery frameworks and seek the data in the long run return to client.

Keywords: Search Engine, Indexing, Paging, Lucene.

I. INTRODUCTION

Lucene is a Java library which is able to perform the indexing and searching process. Lucene full text search is mainly composed of searching, indexing and analysis three modules. Searching module is mainly used for interacting to users. Analysis module is responsible for preprocessing document information. The principal role of indexing module is to enhance the speed of retrieval. It allows the development of a content-based information retrieval systems or applications such as search engines. Information retrieval (IR) is a field concerned with the structure, searching, organization, analysis, and retrieval of information. It emphasizes on the process of match user queries to the index in finding relevant documents. Lucene is an open source Java library which supports the process and techniques of information retrieval. Lucene is able to index text from a various formats such as HTML, PDF and Microsoft Word, and also in various languages. Applications for example, Amazon are among the business application that utilizations Lucene for indexing and permitting effective searching.

II. RELATED WORK

An Kongres Pengajaran dan Pembelajaran UKM, 2010[1]

Text acquisition are identifies and stores documents for indexing. Documents are in various formats such as websites, email, memos, letters and articles. The text transformations are transforms documents into index terms or features which involves lexical analysis. Index creation is takes index terms and creates data structures (indexes) to support fast Searching. User interaction Supports to the creation and refinement of query and display of results. Ranking uses query and indexes to generate ranked list of various documents. Evaluation monitors and measures effectiveness and efficiency.

Application of Full Text Search Engine Based on Lucene Rujia Gao1, Denying Li2, Wanlong Li1, Yaze Dong3[2].

With the fast advancement of web information and internet, internet clients how to remove the polluting influences rapidly and effortlessly to pick up the data they require in the unlimited data. The centre of data inquiry is recovery innovation search technology gave us with the information retrieval tool according to the content of information rather than the external features based on a variety of computer data such as text. Create all the possible terms in the index network users to quickly and easily retrieve any information they need. Lucene has become one of the most highly praise and most popular information retrieval library. Firstly, we should assemble a text database which is used to store all data recovered by the client, then determine text model of recovery system. Create index with the model related to the text of database. Indexing can improve the speed of information retrieval. Which way do you use depends on the scale of information retrieval system. After indexing the information, you can start to search information you need. Search requests are given by the users and information retrieval systems to process and search the information and return the result to the user.

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A Survey on Development of Search Engine

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Abstract: Search engine is the procedure used to improve the visibility of the search result for a free search engine or website and webpage .This paper aims to improve the search time of search engine, search function is an interface between a search engine and users. This function receives user's queries and returns relevant pages to the queries. There are some notable open source search engine projects but due to their complex design and implementation this project are still not a good for web search engine technology. There are lots of open source frameworks available to build an inverted index of web documents used for information retrieval.

Keywords: Search Engine, Open source frameworks, Information retrieval.

I. INTRODUCTION

A web search engine is an information retrieval system designed to help information find which is stored on World Wide Web (or simply the web). Due to fast growth in the size of the web, web search engines face a big performance challenges such as storage requirements, data retrieval rate, query processing time. Large search engines have to be able to processes tens of thousands of queries per second on tenss of billions of documents, making query throughput a critical issue.

To satisfy this heavy workload web search engines use variety of performance optimization including query optimization, high-speed processing. Web based search engine are related to their effectiveness in retrieving the closely relevant information with efficiency over the internet. For the instance a Google has done the great job in improving both the effectiveness of information retrieval and the efficiency of the query performance.

II. LITERATURE SURVEY

An Kongres Pengajaran dan Pembelajaran UKM, 2010.[1]

Documents are in various formats such as email, websites, memos, letters and articles. The text transformation transforms documents into index terms or a feature which involves lexical analysis (parsing-tokenizing-stop word removal-stemming). Text acquisition identifies and stores documents for indexing. Index creation Takes index terms and creates data structures (indexes) to support fast Searching.

User interaction Supports creation and refinement of query, display of results. Ranking Uses query and indexes to generate ranked list of documents. Evaluation Monitors and measures effectiveness and efficiency.

Application of Full Text Search Engine Based on Lucene Rujia Gao1, Danying Li2, Wanlong Li1, Yaze Dong3 [2]

With the rapid development of Internet and web information, Internet users how to remove the impurities and quickly and easily to gain the information they need in the vast ocean of information to become a hot research topic in this field. The core of information search is retrieval technology. Search technology provided us with the information retrieval tool according to the content of data rather than the external features based on a variety of computer data such text. Create all the possible terms in the index which are searched by network users as well as help people to oversee and arrange broad data and empower organize clients to rapidly and effortlessly recover any information they need. Lucene has become one of the most highly praise and most popular information retrieval library. Firstly, we should build a text database which is used to store all information retrieved by the user, then determine text model of retrieval system. Create index with the model according to the text of database. Search requests are submitted by the users and information retrieval systems to preprocess and search the information eventually return user the information. Indexing can greatly improve the speed of information retrieval. Which way do you use depends on the scale of information retrieval system. After indexing the documents, you can start to search information you need.

A Novel Compressed Index-Query Web Search Engine Model [3]

At the point when the record is prepared the looking procedure can be performed through question interface, a client enters an inquiry into a web index (ordinarily by utilizing watchwords), the motor looks at its file and gives a posting of best coordinated Web pages as per its criteria, typically with a short synopsis containing the record's title and in some cases parts of the content. At this stage, the outcomes positioned, where positioning is a relationship between an arrangement of things with the end goal that,

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Android Based Public Transportation System using GPS Technology

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Abstract: Now a day's everyone is using an android phone for variety of needs. Also in today's era android phones become the basic need. In most of the city's public transportation has increased due to increase in the population. In rural area and smaller town has triggered a greater need for the organized public transport system. Android based auto rickshaw booking system has been gaining more importance because they provide accurate information of route as well as the drivers and other required details at any anytime. The application has been divided in into two parts based on functionalities of the system. These modules is designed to build up an integrated system to cover various aspect of the android based auto rickshaw booking system. The android application includes a form which will be able to filled by customer according to his requirements. Later the driver will go through it and notify to the customer. The application is designed using location tracking using GPS technology.

Keywords: GPS, Android, LBS, Shortest Path Algorithm.

I. INTRODUCTION

Auto Rickshaw services in Karad city are predominantly unorganized in nature, wherein services are provided by individual providers and operators competing against each other for the passenger market. This structure, coupled with an improper governance framework, has created significant problems for both drivers and passengers, and is resulted in negative externalities in the economics, environmental and social realms.

The trigger behind Auto Rickshaw Services initiative was a bitter personal experience of our project members with auto rickshaw driver's overcharging and rudeness at the Bus Station of Karad during travelling to our college from auto. It is a concept where in auto rickshaw drivers offers an safe and reliable ride to the passengers. Indeed Auto Rickshaw Services is endeavouring to solve the problems of accessibility, transparency and safety for auto rickshaw users. In other hand its focuses is also provide security, prosperity and dignity to auto rickshaw drivers.

There is no system available in Karad City for booking an auto rickshaw from doorstep of the passenger at any time. Also the drivers fare as per his own preference. Today's system is very time consuming and also there is no guarantee of routes.

To overcome all this issues there is need to design a system from which people will get affordable ride as well as get satisfaction from it. Under this service, passenger can book and locate nearby auto rickshaw 24*7 through this application. This system is reliable and highly effective in local delivery.

In the present system, no work is done related to this kind of application in Karad City. This is a whole new idea for the application of the transportation system. Travelling is the basic need of humans nowadays. We are focusing on reserving an auto particularly, because there is not a single application for this purpose, whereas there are thousands of applications for cab services, bus services. To overcome the issues Auto Rickshaw services allows you to book on demand, affordable and safe rides without the hassles of getting overcharged. Simply tap and a certified driver reaches your desired pick up location within minutes

II. LITERATURE SURVEY

Applications can be developed on Android platform of Open Handset Alliance led by Google. Google provides simulated environment and standard development kit for developing Android applications.

The LBS application can help user to find hospitals, school, gas filling station or any other facility of interest indicated by user within certain range. Just like a GPS device its location will also be updated as soon as user changes his/her position.[1]

Android based transportation system is an application which will be used to order a transportation heavy goods anytime anywhere via vehicles.

The application of the transportation system including shifting of all the household goods at a single time. [2]

Manav Sighai, Anupam Shukla implement the location based service using Google We Services and Walk Score Transit APIS on Android phones which is useful for the multiple services that want by the user based on their location. Android Location API is used to retrieve the location information of the user.

Google Place API is service returns data about place. It has limitations that user are allowed only 1000 request in a day.

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Effective ERP Web Application for Construction

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Abstract: Inventory Management Software is a computer based system for tracking inventory levels, orders, sales and deliveries. It can be also used in the manufacturing industry to create a work order, bill of materials and other production related documents. Companies use inventory management system to avoids product overstock and outage. Companies often use inventory management system to reduce their carrying cost. The software is used to track the products and parts as they are transported from a vendor to a warehouse, between warehouse and finally to retail location to directly to the customer. This software is also useful in picking, packing and shipping items from warehouse. It is useful to avoiding missing out on sales due to out-of-stock situation. The system that we are developing is whole based system.

Keywords: Web Technology, Inventory, Stock, Performance.

I. INTRODUCTION

In "Web Based Inventory System for Construction" a admin can use his\her Manage privileges online without any difficulty. He\She has to fill a registration form to register himself\herself. All the entries is checked in the database which has already all information about the administrator. If all the entries are correct then a User Id and Password is given to the sub admin, by using that User ID and Password he\she can use his\her rights. If conditions are wrong then that entry will be discarded efforts reduces. Admin can do registration of sub admin and sub admin can register to the user. This system contain management of the construction related inventory and maintaining the stock. Traditional System, in which Manager take place with traditional rules, such as papers, and register that maintain the use of material and maintaining the stock. That system takes more time and requires human's resources. False Manager introduce the problems in construction system was inefficient.

To reduce the problem of traditional construction inventory system , new technique was introduced which reduces work on paper, extra time required, wastage of money & resources, more human efforts .The intelligent made simple software for construction system in which all information stored on database .To make fulfill featured software. The calculation of vote easily handled & result displayed to users in very few seconds. After that web solution was aroused for inventory.

II. LITERATURE SURVEY

There no current system in use, all the work is done by the means of documents So we are developing this system. So that the paper work and work time could be saved.

We referred previously deployed system Web Based Inventory Management System used in West Virginia State Police.[1]

This describes the conversion of a DOS-based database system to meet very specific web-based database requirements of the West Virginia State Police. The need for conversion was proposed by the West Virginia State Police in January of 2007. The conversion process given here: allows for normalization of all data; to make the process of inventory management easier for employees of the West Virginia State Police (WVSP); enumerates inventory management problems currently being faced by the WVSP; present a brief explanation of databases and the database model being used; and provides the initial requirements, specifications for this system These requirements for the new database system will minimize current problems faced by the WVSP. A first prototype was developed and is presented as well as part of this thesis.

Syed Jamal Abdul Nasir bin Syed Mohamad, Nurul Nadia Suraidi, Nabihah Amirah Abd. Rahman, and Raja Durratun Sakinah Raja Suhaimi findings of an applied research on inventory management at a textile chain store in Malaysia. It specifically examined the relationship between inventory management and company's performance. This paper also provides recommendation to the company and for further research.[2]

Tom Jose V, Akhilesh Jayakumar, Sijo M T analyzing different inventory control techniques for efficient inventory management system. In this they used ABC analysis and FSN analysis. The ABC system is a widely used classification technique to identify various items of inventory for purposes of inventory control. All the items in the inventory are not required at the same frequency. Some are required regularly, some occasionally and some very rarely. FSN classifies items into Fast moving, Slow moving and Non-moving. [3]

Abisoye Opeyemi A., Boboye Fatoba, Abisoye Blessing O has designed a Computerized Inventory Management

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A Review Paper on General Concepts of "Artificial Intelligence and Machine Learning"

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Abstract: Long days ago, there was all kind of work which is only done by the humans. There were no such machines and technologies like today. At that time, science is not developed and technologies were not invented. So the working is totally dependent on the peoples and humans have recognised that "Today's science is the tomorrow's technology". New superiorly advanced technologies are not less than blessing of god. Adaptive inventions for reducing the human work and bright future were invented which is simply called as Artificial Intelligence and Machine learning. Even though there were many false assumptions at the early beginning, we are witnessing a new era of errorless technology and superior science. This review involves the general concepts of artificial intelligence and machine learning.

Keywords: Digitalization, reasoning, general AI, supervised learning, unsupervised learning, humanoids.

I. INTRODUCTION

As the humans have proved their presence on the earth, it is important that every individual should understand what artificial intelligence and machine learning is going to mean for the human race .As a nice poem summarized by W. H. Auden which gives the relationship between human life and robotics:

Those who will not reason
Perish in the act;
Those who will not act
Perish for that reason.

The poem explains that "Fittest survival" i.e. only those humans/machines will survive who prove their existence by their best performance, high intelligence and maximum capacity. Hence it's high time and precipice of one of the most magnificent discoveries of supremacy since man learnt to create tools and fire. It is a road that once we walk ahead; there will be no turning back, once we achieve machine super intelligence which will be self-learning, completely automatic and self-improving.

As we see any sci-fi movie like iron man, star wars, terminator etc. Which vary in completely equipped super hero's to the world destroying super robots .Even if anyone has seen missile or space shuttle launching, automatically driven cars, or simple robots which help in household chores to hard power full muscle works, which are very great examples of human intelligence. No doubt that artificial intelligence and machine learning are the two hottest buzzword all over the world right now, and often seem to be used interchangeably.

II. RELATED WORK

Peter Norvig and Stuart Russell [1] in their research paper "Artificial intelligence: A modern approach" have implemented the basic perspectives of artificial intelligence. They concluded that the artificial intelligence is a combination of reasoning, learning, perception, linguistic approach and problem solving.

Niklas Lavesson[3] also have described about the supervised type of machine learning .The ambition of this review is to introduce the types of machine learning such as supervised, unsupervised and reinforcement etc. The review also explores the applications of AI and machine learning in real time.

George F Ludger [10] who described structures and strategies for artificial intelligence. The review also contains the methodologies of artificial intelligence such as weak artificial intelligence and strong artificial intelligence. It also considers the current real world applications and current processes in artificial intelligence.

III .ARTIFICIAL INTELLIGANCE (AI)

According to father of artificial intelligence John McCarthy, who coined the term "Artificial intelligence" in 1956, said that "It is the combination of science and engineering to make intelligent devices for human welfare."

"Artificial intelligence is an intellect [13] that is much smarter than the best human brain in practically every field, including computer science and linguistic logic."It is a modern method of machines which will do muscle work and illustrate complex questions in a "intellectual" manner. It is concerned with the basic and most important aspects in our life i.e. philosophy, computer science, mathematics, linguistics, biology, neuron science, sociology etc. AI plays a very important role to exhibit intelligent behaviour, to learn, demonstrate and give advice to the user.

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Efficient Extraction of Top-k Instances from Web

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Abstract: Finding proper information from web pages is very difficult. Because we face problems such as most of available data contains unnecessary information such as some product advertisements, Facebook or twitter posts. One more problem is, obtained data is not in structured format. To overcome these problems, we introduce a system which mainly focuses on extracting exact information in top-k list format. List data is very eventful source to retrieving information. This paper work on information extraction from top-k web pages which contains top-k instances for open domain knowledge based. For example- "Top 10 IT companies in India". As compare to structured information from web, Top-k list data is cleaner and ranked. Top-k data has interesting semantics. We propose a system which gives direct top-k list when user enters a search query within minimum time. Extraction of top-k list depends on 1] Extracting web URLs and its titles 2] Removing dust from web URLs 3] Using extraction algorithm extract exact top-k list.

Keywords: Top-k list, structured data, data extraction, DOM parser, top-k web pages.

I. INTRODUCTION

Recently, World Wide Web (WWW) is voluminous source of information. Information on web is in the form of structured and unstructured data. Extraction of data from the web pages is called web mining. Extraction of data unstructured data is very difficult structured data is in the form of HTML and XML language which contains tag such as <ul>, <li>, <table>. [2] [4] [5]
How we know the extracted data from list and tables is valuable or not. The quantity of data available on web is dilated. But most of data is worthless and very small amount of data interpretable without context. Web contains large number of tables and most of them are not relational tables. It is easy to interpret relational tables. In relational table we consider rows as an entity and column as attribute of an entity.

Suppose we have a extracted table which contain 3 rows and 3 columns of names "mobile", "company", "price" respectively. Still we can't understand why these 3 companies are grouped together (e.g. are they have good storage capability, maximum battery backup, famous companies, same feature) how we should interpret their price. From this we can't understand which context of the information is helpful for us. Understanding of context is essential for interpretation. But most of time the context is in natural languages or unstructured text which cannot be interpreted by machine. So that we focus on context which we can easily understand and use that context for information extraction.

Proposed system takes top-k pages from web which is rich source of information. This system work for getting result in top-k list from web which contains expected result. Top-k list is very high quality and cleaner. Information in top-k list has interesting semantics. Some examples of top-k list are-

- Top 20 dangerous animals in India.
- Top 15 tallest mountains in world.
- 10 best players of cricket.

There top-k pages consist three important fragments-
1) The value of k. e.g. 15, 10 as shown in above examples which indicate number of items.
2) A topic or concepts. Example- animals, mountains, players.
3) Ranking Criterion. Example-dangerous, tallest, best.

There are two additional fields' time and location which are optional.
Today's technology is much faster and advanced. On the web, when user enter search query, user gets lots of links from search engine. Users have to go and check first link. If users get proper result then search is stopped. Otherwise, users have to go in second link to check whether it has expected result or not. If it has proper information then search stopped. This process is continued until user get exact result. This entire process is very time consuming and lengthy.

Due to this reason the system is focusing on rich and precious data from web that we get from top-k list. Therefore we get top-k pages for information extraction. We choose top-k list for data extraction for following reasons-

1. Top-k information is cleaner than different types of information on the web. As we know a large portion of the information on the web is in free content, and free content is difficult to decipher. Web tables are organized, however just a little rate of them contain important and helpful data. Interestingly, Top- k information is much cleaner.

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A Survey Paper on Internet of Things based Healthcare System

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Abstract: IOT is the advanced network infrastructure of connectivity, transportation and technology. IOT smart devices can implement the facilities of remote health monitoring and also emergency notification system .IOT has appreciable application of smart healthcare system. In the healthcare system the highlighted policies and strategies that help to the researchers and scientists and experts who develop smart device which is the up-gradation to the existing technology. This survey paper states that how IOT interrelate to various system including the smart healthcare which is one of the prevalent system. Healthcare system has the surveillance that proposed the need of smart devices and smart objects to decrease the inefficiency of available healthcare system. The IOT based healthcare has enhanced technology which is exclusive from the traditional healthcare and whole medical system.

Keywords: Internet of things (IOT), surveillance, smart devices, smart healthcare.

I. INTRODUCTION

This paper includes the webbed health care and that has the complete base of internet of things .Kelvin Ashton's proposed Internet of things is a concept reflecting a connected any set of anyone, anything, anytime, anyplace, any service, and any network. IOT services network correspondence for system devices and service that override the margins of machine to machine mechanism. IOT allows the object to be sensed to control that creating opportunity for direct integration of physical world into computer based system performance, meticulous and economic benefits.

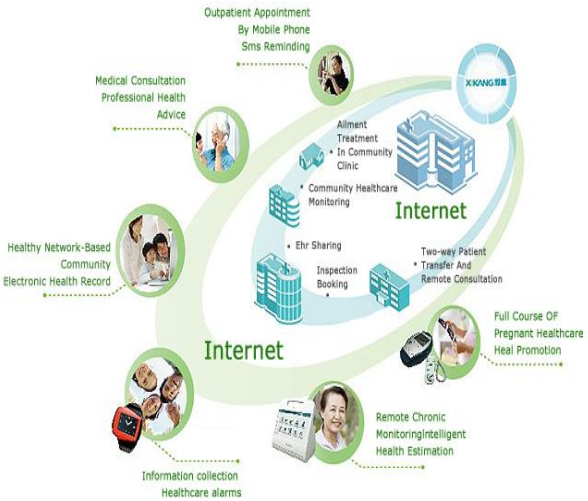

Figure 1. Internet of things and healthcare

II. RELATED WORK

- Intelligence wallet for an individual to store big signal and wallet shares.[6]
- For elderly or chronic patients some sensors have developed for human activity monitoring. The role of this system is the continuous monitoring of physiological parameters.[5][1]
- Health care monitors system is mostly depend on wireless sensor network that's why it gives advantage of reduced energy consumption and extend the communication coverage.[4]
- Developing countries have to face the problems like less innovated technology , least availability of smart devices and smart object which is the prevalent need of smart healthcare.[7]
- Developing devices like heart monitoring devices using a wireless sensors and smart phones. It detects the threatening arrhymains when it reaches at the certain threshold value its alarm alerts to patient.[2]
- Applying IOT for personalised health care in smart homes gives service and technology of layered approach.[6]
- Approach of IOT is an IOT aware architecture for smart health system using sensors like temperature sensors, barometric pressure,and ECG sensor. It gives facility like remote monitoring and management of emergency situations [8].

III. IOT- HEALTHCARE

Smart servers fix time and passing datato the smart backbone. In current existing health care system due to lack of awareness , poor facility with undeveloped technologies .it the need of the smart health care system . On network hospital help patients and doctors for remote handling of services. Using smart phone applications related to health care system patients may get guidance to

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Improving Data Integrity for Storage & Recovery Security in Cloud Computing

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Abstract: The cloud computing has been developed as the next generation architecture in IT industry. In addition to traditional solutions where IT services are under control of physical/ logical/ personal controls. Cloud computing moves to the application software as well as databases to the large data centres, where large amount of data and services manage properly. These maybe not fully trusted. So, that causes to introducing new challenges in cloud era. In this paper we are focusing on Cloud Security, Data Integrity, authentication, authorization. Here basically storage correctness, fast localization, dynamic data support, dependability are take into consideration.

Keywords: Cloud Computing, Cloud Service Provider, Cloud Security Services, Data Integrity, Data Recovery, Third Party Auditor.

I. INTRODUCTION

Cloud computing becomes more popular in recently, also it provides storing data of various types on the cloud servers or cloud storage. Basically cloud computing is the network driven technology. Cloud storage acts as pool between hardware resources and software resources present on local computer and server computer. Cloud computing as a new generation Technology promises to achieve the need of security for storing and accessing data on cloud. Cloud is highly scalable and provides infinite computing services and resources as per user needed at any time. All the resources are available at any corner of world. All the resources are highly scalable and integrated on environment. Cloud computing resources are provided by internet. Online storage can eliminate overhead of storing and accessing data on local machine. Cloud provides number of benefits such as flexibility, integrity and pay as per use of basis. The major problem of data security is crucial part when the data is confidential.

However maintaining security is a challenging task. There exist many systems to solve the problem of data integrity. The auditing can be performed in two ways private and public. Public audit ability is more convenient and preferred than private. In some situation if data is lost then it is available on cloud service provider (CSP).Traditional cryptographic primitives for the purpose of data security protection cannot be directly adopted due to the users' loss control of data under Cloud Computing. Therefore, verification of correct data storage in the cloud must be conducted without explicit knowledge of the whole data. Considering various kinds of data for each user stored in the cloud and the demand of long term continuous assurance of their data safety, the problem of verifying correctness of data storage in the cloud becomes even more challenging. Cloud Computing is not just a third party data warehouse. The data stored in the cloud may be frequently updated by the users, including insertion, deletion, modification, appending, reordering, etc. To ensure storage correctness under dynamic data update is hence of paramount importance. In this paper, we used models which are shared data on different computer devices by executing system models on IIS base. For that purpose we are uses the OTP (One Time Password) system. This will be also helpful for the better security purpose.

The main aim of this paper is:

The challenge in our work further provides localization of Data Error.

- We propose Efficient Method for Data Encoding stored in cloud.
- We propose Efficient Method for Data Recovery in case of data lost.
- To Achieve public and private auditability and for Detecting Third Party (hacker) who achieve the data and also block that hacker.

II. RELATED WORK

Cloud computing is basically a system which consist of some basic entities that as follows,

1] **Client (User):**

A client or user is the entity of network whose store the data on to the cloud and depend on that cloud for maintenance of that data.

2] **Cloud Service Provider (CSP):**

CSP is the one kind of server of cloud that provides sufficient space for storage, various resources and maintenance for the client or user data.

There are various services that are used in to the cloud computing,

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Image Retrieval System based on Colour Shape and Texture Attributes

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Abstract: In general, Image retrieval is well-known research and development field in information management. An image contains several types of visual features which are difficult to extract and combine manually by humans. These papers introduce some visual features of an image: color, shape and texture. There is several method of extraction of an image features and study or learning algorithms for retrieving image. Various methods have been proposed and investigated. These papers introduce, color histogram which is mostly used because of their efficiency, robustness and insensitivity to small changes in camera viewpoint.A color histogram store image's overall color composition. So images with many different appearances can have similar color histogram. Colour histogram is constructed by counting the no of pixels of each color of image. Edges are detected in areas of the image where the intensity level fluctuates sharply, the more rapid the intensity changes the stronger the edge. Texture of each sub-block is obtained by using gray level co-occurrence matrix. A one to one matching scheme is used to compare the query and target image.

Keywords: features extraction, histogram, precision.

I. INTRODUCTION

Image retrieval system have been developed like IBM QBIC system developed at the IBM Alma den Research Centre, the VIRAGE System developed by the Virage Incorporation, the Photo book System developed by the MIT Media Lab, the Visual Seek system developed at Columbia University, the WBIIS System developed at Stanford University, and the Blob world System developed at U.C. Berkeley.

The common for all of these are to extract signature (color, shape, texture and any other information with which two images could be compared.) for every image based on its pixels values and to define rules for comparing images. Image retrieval systems search through a database to find out images that are perceptually similar to a query image. Nowadays many people give interested in using digital images. So, the size of the image database is grows fast. There is a great need for developing an efficient technique for finding the images.

Image Retrieval approach employs that to search through a database to find images that are perceptually similar to a query image. It is an important to traditional text-based image searching and can greatly enhance the accuracy of the information being returned. It aims to develop an efficient visual-Content-based technique to search.

II. FEATURE EXTRACTION

Feature extraction can be referred as extracting beneficial information from images. This information is used as a signature for the image. Each image has its identical feature.

A. Colour:

The Colour is an important visual feature of an image. The extraction of color feature from images depends on understand and learning the theory of color and the representation of color in images. Image retrieval system uses color histograms for color feature extraction. Colour histogram is constructed by calculating RGB value of each pixel of image. Colour spaces are another important part of relating color to its representation in digital form.

Colour space defined as a model for representing color in terms of intensity value. Colour space defines One to Four dimensional space. A color component or color channel is one of the dimensions. Only three-dimension color spaces use RGB and HSV.

B. Shape :

Shape feature is more effective in characterizing the content of an image Compared to the other features like texture and color. However, it is a challenging task to accurately extract the shape information from an image. It is a key feature for computer vision applications. However, it is a challenging task to accurately extract the shape information from an image.

The construction of shape descriptors is even more complicated when invariance with respect to a number of possible transformations, such as scaling, shifting and rotation is required. Object contours are invariant to extreme illumination conditions and large variations in texture or color and for some categories shape is more generic than appearance. Automated comparison and grouping of shapes is very often the basis is the areas of