2012

PROJECT VBIT

Project

VBIT

DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

DEPARTMENT OF ELECTONICS AND COMMUNICATION ENGINEERING

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

DEPARTMENT OF INFORMATION TECHNOLOGY

DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

1. FAULT ANALYSIS ON TRANSFORMER

A.Seetharami Reddy, P.Dinesh Kumar, M.Murali, S.Thenendar Kumar
S.Ranjith Kumar

Abstract

The basic idea of this project to protect the transformer from several faults like over loading, winding temperature high, earth fault and in-phasing / out of phase of transformer.

The transformer is a static electrical device which transforms electrical energy from one circuit to another circuit without change in frequency .It works on the principle of mutual induction by the faradays laws of electromagnetic induction.

In the way of power distribution and transmission the transformer is most essential, without using of transformer we cannot obtain the required level of voltages. In this voltage / power supply transmission and distribution problems occurs when the transformer is connected in line. Which causes the connected equipment to the transformer gets damaged. So proper protection must be implemented for the transformer by the economical and sophisticated manner. This is what exactly provided to the transformer of whatever we have been designed and implemented gadget of this project.

This project hardware completely designed and developed on the basis of electromagnetic static relays along with fault reorganization illustrated with LED's using this fault annunciation display we can identify and rectify the adopted problem easily with a less period of time, thereby the breakdown time can be minimized and we can eliminate the accidents in the field of electrical power transmission and distribution.

Using this project we can supply the uninterrupted power supply to the consumers without environmental pollution and destruction.

2. Mitigating Low Frequency Oscillations Using Fuzzy Logic Based Interline Power Flow Controller to Enhance Power System Stability

G. Madhu Babu, Ch. Rajendhar, R. Chiranjeevi, V. Chitti Babu

Abstract

Present day interconnected power systems consist of a large number of generators connected together through a high-voltage long transmission network, supplying power to loads through lower-voltage distribution systems. The phenomenon that is of great concern in the planning and operation of interconnected power systems is the low frequency electromechanical oscillations. These oscillations are the consequence of the dynamical interactions between the generator groups. These low frequency oscillations constrain the capability of power transmission, threaten system security and affect the efficient system operation of the power system. For this reason, the use of controllers to provide better damping to the power system oscillations is of importance.

FACTS devices have found a wide spread application in the power industry for active and reactive power control. Among the group of converter based FACTS devices Interline Power Flow Controller (IPFC) provides comprehensive power flow control scheme for a multi-line transmission system unlike other FACTS controllers (STATCOM, SSSC, and UPFC) which are developed primarily for the control of a single line. IPFC designed with a supplementary controller can help to dampen the low frequency oscillations in the power system while meeting it's the primary goal i.e., power flow control. A lead lag controller whose parameters are designed using phase compensation method based on the linearized power system has been suggested in the literature.

In this project fuzzy logic technique has been employed to design IPFC based supplementary controller. A fuzzy logic based IPFC controller is designed to mitigate the low frequency oscillations for the power system consisting of a single machine connected to an infinite bus via three transmission lines and installed with an IPFC. In the proposed controller, the generator speed and its integral are used as the inputs to the fuzzy controller. The output of the controller modulates the input signal of the IPFC and thus dampens the low frequency oscillations in the system. The effectiveness of the controller in improving the power system stability is validated and compared through time domain simulations for various disturbances and operating conditions.

3. Reduction of Harmonics in Converters.

Abstract

The aim of this project determines and explains Harmonics and unwanted EMI (Electromagnetic Interference) reduction using R-C network in Inverter Drive Circuit. This is a new implementation and advanced technology Inverter Circuit. This Inverter module can produces noiseless output and performs instant power supply output develops without stroboscopic effect.

This Inverter Circuit fully protected with snubber and buffer Circuits interrelated by the R-C logic network. This Inverter drive module works with a high rating SCR cum UJT in a sophisticated manner.

4. Remote Control Operation of HT/LT Circuit Breakers in Electrical Substations

L.Eswar Reddy, T.Swetha, A.Venkat Reddy, K.Vidya

Abstract

During the operation of power system, it is often desirable and necessary to switch on (or) off various circuits (transmission lines, distributors etc) under normal and abnormal conditions. In earlier days, this function is performed by a switch and a fuse placed in series with circuit. Such a means of control has two major disadvantages. Firstly, when a fuse blows, it takes quite sometime to replace it and restore supply to customers. Secondly, a fuse cannot successfully interrupt heavy fault currents. Due to these disadvantages, the use of switches and fuses is limited to low voltage and small capacity circuits.

With the advancement of power system, the lines and other equipment operate at very high voltages and carry large currents. The arrangement of switches along with fuses cannot serve the desired function of switch gear. So, we need to employ on the use of circuit breaker.

A circuit breaker can make or break a circuit either manually or automatically under all conditions such as no-load, full-load, and short circuit conditions. This characteristic of the circuit breaker has made it very useful equipment for switching and protection of various parts of the power system.

The aim of this project is designing a module that operates LT/HT circuit breakers (VCB's, ACB's, MOCB's, BOCB's and SF6 Gas Circuit Breakers) from a remote location with the help of a remote. The module detects the earth fault and over current faults. The occurrence of earth fault and over current fault is displayed on the module by the glow of corresponding led's. After detection, the faults are cleared and the circuit breakers are closed with the help of a remote. By implementation of this logic design and operation we can minimize the man power and save time. This module is useful for every power distribution substations.

5. Smart Solar Light.

R. Surya Prabhakar, V. V. Sunil, Ahmed Mohammed, C. Suresh Babu

Abstract

The basic idea of this project of automatic control of street lights when the sun shine comes on the earth by using solar energy.

Using this project control the street lights ON/OFF automatically without man power requirement, we designed this project with very few electronic components along with electromagnetic Relay. And LED Pattern of 32 LED`s. The entire project operates / works according to the LDR signals that means the light object / sun shine comes on the IC 555 of estable multi vibrator its output reaches to the transistor 222 then the output of the transistor triggers the 12V DC relay.

According to the relay ON & OFF status positions many resulted due to this operation the relay connected load of the street lights power supply can be ON & OFF. So the LDR as to be works according to the weather & climate conditions that means whenever sun light goes to dark as soon as the LDR receives the signal due to no light falling on the LDR surface thereby the relay gets energized. According to the voltage signal received the coil of relay via IC 555 and Transistor 222 and whenever recons the sun-shine and falls the light on the beam of the LDR it's activated signal send to the relay via IC 555 and transistor 222 accordingly the relay get de-energized as soon as the street lights getting OFF.

Using of this project we can save the man power. Hence this project implementation is most useful and needful for everywhere.

Transformer less Designed Power Inverter.

E. Shiv Raj, C. S. Madhavi, D. Anantha Chaitanya, T. Santosh Kumar

Abstract

It is well known that any electronic equipment cannot run directly on AC supply semi-conductor parts of electronic equipment do not function on AC supply practically. So all electronic equipments are run on DC supply only directly or indirectly.

This circuit used to convert AC to DC is called the rectifier circuit and the DC supply is converted into AC supply is called inverter circuit. The act of AC getting from the DC is called inversion and the equipment to perform this act is called Inverter.

An Inverter produces AC supply through a DC source it's working system in theory is just like a Oscillator. This modern inverter circuit consists of many electronic components like high rating power transformer, MOSFET, Driver transformer and designed RC snubber circuit for the protection of the gadget.

This simple circuit implemented by using MOSFET. The complete name of MOSFET Metal Oxide Semi-Conductor Field Effect Transistor. The MOSFET gate does not required has much power has the power required by the Bipolar transistor.

In our Country there are many areas where AC supply is not available which areas most useful for the use of inverters. Using this inverter we can fulfill the time of power failure.

Uninterrupted power Supply using Solar

M. Anvesh Kumar, A. Neeharika, N. Srinivas, K. Srikanth Reddy

Abstract

The Aim of the project explains straightly regarding the Solar Energy System. It is one of the Non – Conventional Energy sources. The task of this project deals solar energy system illustrates that the solar energy directly converted into electrical energy by means of the photo voltaic cell effect. That is the conversion of sun light (or) Other electro Magnetic radiation into electricity.

The photo voltaic effect is defined as the generation of an electro magnetic force as a result of the absorption of ionizing radiation. In this gadget solid state Inverter / Converter used for as solar energy storage system. Thus it is typically a DC / AC converter it may also contains suitable output device. This project existing technology is if whenever entire module kept in sun light / heat radiation once then charges the Battery & as well as directly electrical power also developed / produced from the module as soon as this storage power can be utilized when absence of sunlight. That means using this project we can generates and transmutes uninterrupted power supply to the consumers.

DEPARTMENT OF ELECTONICS AND COMMUNICATION ENGINEERING

TCP / IP BASED INDUSTRIAL AUTOMATION

Subramaniam Balaji, Rapolu Harikrishna, Harinarthini Praveen

Abstract

Ethernet is the most widely used local area network (LAN) technology. The original and most popular version of Ethernet supports a data transmission rate of 10 Mb/s. Newer versions of Ethernet called "Fast Ethernet" and "Gigabit Ethernet" support data rates of 100 Mb/s and 1 Gb/s (1000 Mb/s). An Ethernet LAN may use coaxial cable, special grades of twisted pair wiring, or fiber optic cable. "Bus" and "Star" wiring configurations are supported.

This small Ethernet remote device opens a completely new world of fantastic applications. It's small, it's easy to build and there are endless possibilities to use it. The communication is fast! There is no delay between the sending of the command and the answer. That is very different from RS232 at standard 9600 baud as used for most microcontroller communication.

Modbus allows for communication between many devices connected to the same network, for example a system that measures temperature and humidity and communicates the results to a computer. Modbus is often used to connect a supervisory computer with a remote terminal unit (RTU) in supervisory control and data acquisition (SCADA) systems.

The main aim of the project development is to implement the compact Ethernet based Industrial automation. This high performance unit is possible by interfacing a Ethernet controller to the high speed AVR controller. And for Modbus communication we are using ATmega8 microcontroller In order to implement this we have to select one Ethernet controller which is SPI (Serial Peripheral Interface) based and is easy to interface with microcontroller.

The ENC28J60 is a stand-alone Ethernet controller with an industry standard Serial Peripheral Interface (SPI). It is designed to serve as an Ethernet network interface for any controller equipped with SPI. ENC28J60 can support either full duplex mode or half duplex mode. It will take transmitting/receiving 8Kbytes. ENC28J60 has internal DMA for fast access data.

Industrial sequential control systems adopt a master-slave centralized control approach. A central controller master (server) makes major control decisions and controls of low-level I/O devices via point-to-point connections. Industrial equipment vendors and users were primarily concerned with inherent nondeterministic performance of industrial communication network characteristics. Therefore, new protocols and methods have been developed to overcome these limitations. With the

development of the computer network technology and intelligent sensors and actuators, Modbus technology is being used. Modbus is a network for connecting field devices: sensors, actuators and field controllers such as Microcontrollers, regulators, driver controllers and so on. Microcontrollers which controlling different parameters, this controllers are connected to master (server) through a Modbus protocol. Using this protocol master monitor the operation and stores the data from microcontrollers in this project we are using two microcontroller units with separate measuring parameters, Modbus protocol.

The module allows a user to interface devices and sensors to the internet. The project is designed for a generic devices and sensors so the only user option is to turn it on/off and getting the data from the sensors. By selecting the data from web page, we can send the packet of information to the LAN. Microcontroller collects this packet, processes it and put it on the Modbus. The devices which are connected to this Modbus get the data and it will do the appropriate action.

The point of this project is to create two modules for industry one is interfaced to internet and another module is connected to devices.

AUTOMATION OF CHEMICAL CLEANING OF OPTICAL COMPONENTS IN A CL-100 ROOM.

U.Divya, V.Krishna Chaithanya

Abstract

The main objective of the project is the automation of chemical cleaning of optical components by an autonomous robot. The delicate nature of the instruments like ring laser gyroscopes made of various optical components requires some special procedures to be followed in order to maximize their performance and lifetime. Chemical cleaning process plays a vital role in manufacturing ring laser gyroscope.

Presently all operations are being carried out manually using several chemicals like acetone, hydrochloric acid, chromic acid which are placed in ultrasonic bath with in-built heater facility. While operating the ultrasonic baths and during loading and unloading, there is chance of inhalation of hazardous fumes by the person who is operating. The Ring Laser Gyroscope should be free from even tiny dust particles for its efficiency. So an urgent need to improve the system has been felt where the human intervention is very less, and fumes extraction is very effective and even the gyroscope is free from any kind of dust particles.

This project deals with one of the application of robotics. Here the control system involves programming the robotic arm according to our requirement. The two finger gripper holds the optical component that is to be cleaned and dips in one of the tanks containing the acids and switches from one tank to another according to the requirement.

The operating speed of the pick up arm can be varied to suit the requirement. The project is flexible enough because the hardware is generic: Any further enhancement to the project can be done just by changing the logic.

ADAPTIVE CRUISE CONTROL AND KEY LESS ENTRY FOR AUTOMOBILES

S.Balashiva, S.Chanakya Jaganath

Abstract

Modern automobiles are combination of mechanical and electronic control systems. The future of automobile industry is paving steps to incorporate electric vehicles. Controlling and embedding different sensors into electric cars is easy and low cost compared to embedding mechanical subsystems. Implementing electronics in automobiles will add luxury, safety, convenience and security. Automatic cars – long held dream of humans can be only achieved by sophisticated electronics and sensors embedded with mechanical control systems.

The main aim of this system is to control the speed of the vehicle by using respective sensors and keyless doors & ignition control system.

A new generation keyless control system is implemented in this system. The user is provided with a wireless transmitter unit and the vehicle has a receiver which automatically senses the presence of the user in the nearby area of the vehicle. So, when the user enters some predefined area near the car, the door locks automatically opens and vice-versa. The ignition of the vehicle is also controlled by sensing the driver in the driver's seat wirelessly.

This automatic system uses a unique feature called "Cruise Control" by which the vehicle can be set into any constant speed without using the accelerator pedal. It also has a feature of auto speed control by which if any vehicle is in front of our vehicle, it will sense the distance of it and warns the driver to slow down the vehicle. If the drivers doesn't decreases the speed of the vehicle, and if the distance between the two vehicles decreases further, our system will automatically decreases the speed of the vehicle until the obstacle is present.

PERFORMANCE ANALYSIS OF ROUTING PROTOCOL IN MANETS

Abstract

A Mobile Ad-Hoc Network (MANET) is a collection of wireless mobile nodes forming a temporary network without using any centralized access point, infrastructure, or centralized administration. To establish a data transmission between two nodes, typically multiple hops are required due to the limited transmission range. Mobility of the different nodes makes the situation even more complicated. Multiple routing protocols especially for these conditions have been developed during the last years, to find optimized routes from a source to some destination. The scope of this project was to test routing performance of three different routing protocols (AODV, DSR, and DSDV) in variable network sizes up to hundred nodes. Simulations of these protocols are performed by using network simulator-2.35.quality of service parameters calculated are throughput,packet delivery ratio,jitter etc.

OPTIMIZATION OF ENERGY CONSUMPTION BY ADDING RELAY NODE IN WIRELESS SENSOR NETWORK

Kulkarni Anuradha, Challa Harika, Rupavath Praveen Kumar

Abstract

The main objective of the project is to reduce the power consumption by adding additional node in a wireless network.

The main objective of the project is to optimize the energy consumption in a wireless network by adding relay nodes. The type of network is Ad-hoc type sensor network. Now-a-days there had been a wide development of the wireless sensor networks. These sensor networks applications became popular due to their easy and rapid deployment process.

A wireless sensor network (WSN) consists of spatially distributed autonomous sensors to monitor physical or environmental conditions, such as temperature, sound, vibration, pressure, motion or pollutants and to cooperatively pass their data through the network to a main location.

The development of wireless sensor networks was motivated by military applications such as battlefield and today such networks are used in many industrial and consumer applications, such as industrial process monitoring and control, machine health monitoring, and so on.

The WSN is built of "nodes" – from a few to several hundreds or even thousands, where each node is connected to one or sometimes several sensors. The unconnected network can be divided onto segments. We establish a mathematical model to characterize the energy consumption for each node in one segment and optimize by adding additional relay nodes which lead to minimum average energy consumption.

Here the focus on the optimal transmission power of nodes by installing additional nodes to maintain network connectivity.

Topology control plays an important role in wireless sensor networks that helps in reducing transmission power by confining interference. Some popular algorithms are analyzed for optimizing the power consumption.

The type of algorithms commonly used are Relative Neighborhood Graph(RNG),Local Minimum Spanning Tree(LMST) and Gabriel Graph(GG).This algorithm is usually referred as Power-Sensor(PS) algorithm.

Power-sensor algorithm has good stability of network and promotes the energy-efficiency and throughput of whole network.

Methods such as MinMax and Min Total are used as metrics to analyze and compare various algorithms. The topology of the WSNs can vary from a simple star network to an advanced multi-hop wireless mesh network.

Advantages of using these networks reduces energy consumption, improves the BER thereby reducing interference. They also work under extreme conditions such as noise and hostile atmosphere.

In this project we analyze popular algorithms that help in reducing the power consumption which is traded by adding additional relay nodes and implement them in an network simulator to obtain the result. Here the algorithm that place almost minimum number of additional sensors required to make network connected is designed.

In order to evaluate the performance of the proposed algorithms, the project is implemented by using software where extensive simulations have been performed and compared with various algorithms.

BOW-TIE ANTENNA

Avinash.M, Chandra Shekar, Rajesh .T.V.S.S

Abstract

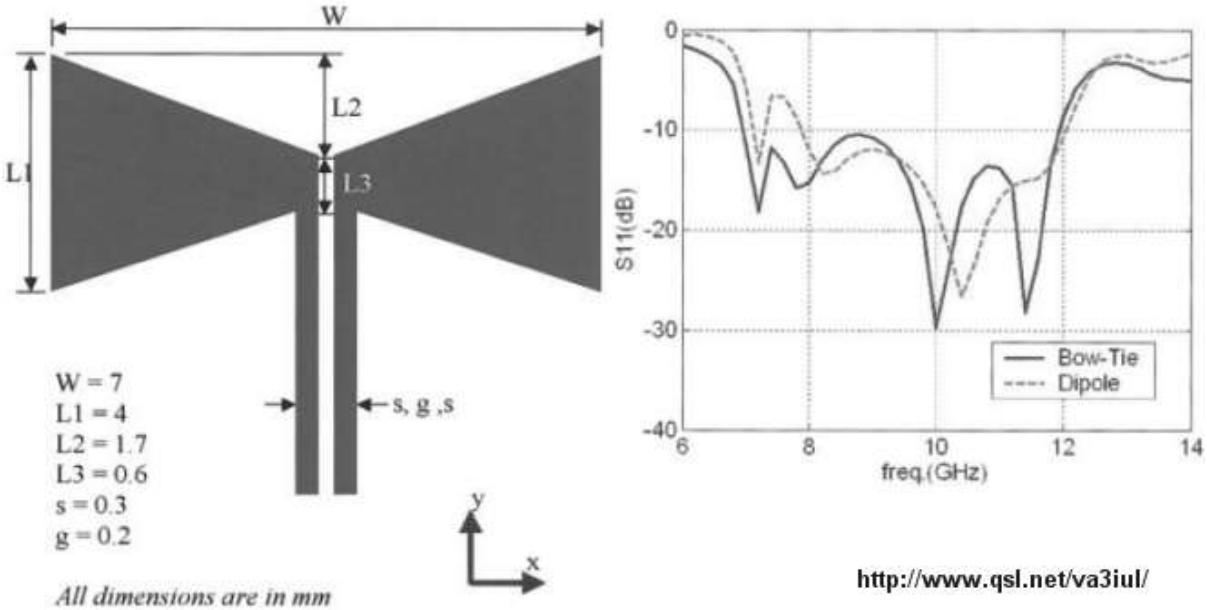
A microstrip-fed printed bow-tie antenna is presented in order to achieve wide bandwidth, high gain, and size reduction.

OVERVIEW OF THE PROJECT:

Printed microstrip antennas are widely used in phased-array applications because they exhibit a very low profile, small size, light weight, low cost, high efficiency and easy methods of fabrication and installation. Among the most widely used printed antennas in phased-array systems are printed dipoles and quasi-Yagi antennas fed by coplanar strip line (CPS), which are usually used to yield end-fire radiation patterns. In order to feed this antenna, some researchers suggest microstrip-to-CPS transition that includes a180° phase shifter.

A comparison between the bow-tie and the quasi-Yagi (dipole and director) antennas shows that the bow-tie antenna has a wider bandwidth, higher gain, lower front-to-back ratio, lower cross-polarization level, and smaller size. Two-element arrays are designed and their characteristics are compared. The bow-tie antenna yields lower coupling for the same distance between elements.

BOW TIE ANTENNA FIGURE:



SPECIFICATIONS:

- *wider bandwidth*
- *higher gain*
- *lower front-to-back ratio*
- *lower cross-polarization level*
- *smaller size*

OBJECT RECOGNITION BASED VISION ASSISTANCE SYSTEM

N. Abhinav Karthik

Abstract

This paper is intended to put forward a vision based assistance system-thus bringing to the surface a nascent concept called 'Intelligent Environments'. The project aims at developing a system that interacts with the user's environment and extracts user related information as and when required. The ability of the system to converse with the user in a human like voice further bridges the gap existing today in Human Computer Interaction. The system is a form of Machine Learning system that, through an image sensor, can see the environment in mono as well as stereo, and extracting user related information from the objects present in that environment. The area of Object Recognition forms the foundation on which this system will be built.

The system adapts to the user and learns his environment by asking the user about various objects it finds interesting. This is primarily done by finding out some good features to track in an image frame from the camera and asking the user what it is. The really interesting aspect of this system is the freedom that it is given (though with some restrictions). The freedom is provided via mounting the cameras on a pan and tilt mechanism that the system itself can control. The system may also interactively point to object and communicate with the user though the provision of a laser pointer and the pan-tilt mechanism provided.

The system interaction with a multitude of information via the internet opens up a whole new level of possibilities for interacting with information. The system may actively search for much needed information required by the user. It may also passively try and find information about interesting objects to avoid frequent training from the user side. As said, this system opens up a new level of possibilities in HCI and can perfectly work as an assistance system for the visually challenged.

RC4 STREAM CIPHER FOR SECURED MESSAGE DATA TRANSMISSION

M.Ravi Kiran, M.Suresh, S.Umesh Chandra

Abstract

Encryption is mainly used to ensure secrecy.RC4 method falls into the category of substitution cipher algorithm for symmetric encryption key. Symmetric means that the encryption and decryption use the same key, which must be available to anyone who encrypts data and decrypts them for whomever, and yet, it must save main feature of cryptography. This is the method which has an extremely high speed operation but it is very easy to cryptanalysis. Security of the wireless sensor network is one of many important issues studied for deployment of practical wireless sensor networks. In this research work I am proposing an efficient implementation of the RC4 stream cipher for encryption/decryption of sensor data which provides high security, requires less memory, and requires less key setup time.RC4 is a stream Cipher and is one of the simplest methods of encrypting data where each bit of the data is sequentially encrypted using one bit of the key. RC4 algorithm is a variable key-size stream cipher scheme based on a secret internal state of 256 bytes and two pointers. The data is encrypted by XORing data with the cipher stream generated by RC4 from an RC4 key. RC4 includes two parts: a Key-Scheduling Algorithm (KSA) which turns a random key into an initial permutation S, and a Pseudo-Random Generation Algorithm (PRGA) which uses this permutation to generate a pseudo-random output sequence to be the cipher stream.

DESIGN AND TESTING OF DIRECTIONAL COUPLER

K.Chandana, U.Dharani

Abstract

Directional couplers are passive devices used in the field of radio technology. They couple a defined amount of the electromagnetic power in a transmission line to another port where it can be used in another circuit. An essential feature of directional couplers is that they only couple power flowing in one direction. Power entering the output port is not coupled.

Directional couplers are most frequently constructed from two coupled transmission lines set close enough together such that energy passing through one is coupled to the other. This technique is favored due to the microwave frequencies the devices are commonly employed with.

Common properties desired for all directional couplers are wide operational bandwidth, high directivity, and a good impedance match at all ports when the other ports are terminated in matched loads. The coupling factor represents the primary property of a directional coupler. Coupling factor is a negative quantity, it cannot exceed 0 dB for a passive device, and in practice does not exceed −3 dB since more than this would result in more power output from the coupled port than power from the transmitted port – in effect their roles would be reversed. Isolation of a directional coupler can be defined as the difference in signal levels in dB between the input port and the isolated port when the two other ports are terminated by matched loads.

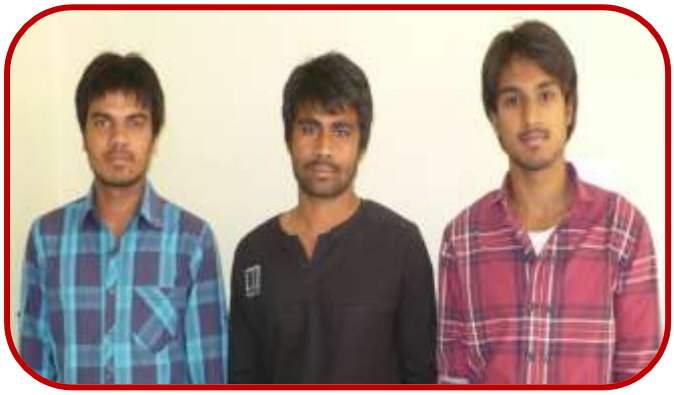
Directional couplers have many applications and these include: providing a signal sample for measurement or monitoring, feedback, combining feeds to and from antennae, antenna beam forming, providing taps for cable distributed systems such as cable TV, and separating transmitted and received signals on telephone lines.

IMPLEMENTATION OF AES USING VHDL

K Srinvasa Babu, R Ravindra, S Subbarayudu

Abstract

Advanced Encryption Standard (AES), a Federal Information Processing Standard (FIPS), is an approved cryptographic algorithm that can be used to protect electronic data. It was announced by National Institute of Standards and Technology(NIST) and approved by National Secret Agency(NSA) of the US government to replace the Data Encryption Standard(DES). The AES algorithm is a block cipher that can encrypt and decrypt digital information capable of using cryptographic keys of 128 bits. This algorithm is based on design principle known as Substitution-Permutation Network. AES has no academic weaknesses worse than Exhaustive Key Search.



The Advanced Encryption Standard can beprogrammed in software or built with pure hardware. One of the solutions is to code AES using Very High Speed Integrated Circuit Hardware Description Language (VHDL). XILINX ISE tool is used for simulation and optimization of the synthesizable VHDL code on FPGA family of virtex-5. This project implements 128 bit standard of AES using VHDL. All the transformations of both Encryptions and Decryption are simulated for bit information.

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

SPEECH API

K. Bharath Reddy

Abstract

Objective:
This project is aimed to bring in the practical usage of complete Speech API. This includes speech to text and text to speech.
Existing System:
In the existing system, a user has to manually click on the application to open it or perform certain tasks. This also includes typing text. In addition to this, a user did not have the option to easily convert from audio to text file. These small utilities that were missing are accomplished in this project.
Proposed System:
The aim of this project is to build an alternative to a standard input through keyboard/mouse. It is also being designed with a purpose of output as an audio instead of only a visual text on screen. This will assist a person for hands-free use of computer or on the move or for those who find it difficult to read.

MODULES:

- *PDF/Text File Reading*
- *Dictation*
- *Audio to Text*
- *Voice Commands*

PDF/Text File Reading:
In this module we can select a text file or PDF file and it will be converted to speech and at the same time text will be displayed.
Here we can give voice commands like Speak, Pause, Resume and Stop without clicking on user interface buttons and the corresponding actions will be performed. A particular page can be opened at anytime and listen to the text in it.
Dictation:
In this module one can dictate and text will be displayed on screen. Once the dictation is finished, the document can be saved in desired location.
Audio to Text:
In this module we need to provide an audio file as input. The speech in the audio file will be converted into text and displayed as text. The file converted to text on screen can be saved as a text document.
Voice Commands:
We can give the voice commands and open applications like Notepad, Internet explorer, Task Manager and Word pad.

MINING MINI BOUNDARY LAYER MAST (MBLM)

Bhaker , S. Devi Priyanka , T.L.N.S. Sravanti

Abstract

Introduction:

The ISRO has set up an automated weather station in Hyderabad to constantly monitor the weather including the radiation reaching the earth from the sun. The centre, ***Mini Boundary Layer Mast (MBLM),*** *is located at VBIT. Data is collected at one second resolution and averaged for every four minutes and is sent to a receiving station at ISRO headquarters in Bangalore via SMS using a mobile phone connection.*

The system uses advanced high resolution sensors to measure ambient temperature, relative humidity and wind vector at three different levels and measure rainfall using a tipping bucket, net incoming solar radiation in long wave and short wave range, atmospheric pressure, soil temperature at seven levels and soil moisture at six levels.

Project Scope:

The retrieved data from this center, which is in the form of .txt files, is converted to excel files individually for each day. Searching of the average values has hence become a tedious job, when comparison between a set of days and parameters is involved and may cause storage issues. Hence a data mining application that enables the upload of the data, as well as a search mechanism that enables for a detailed study of the average values across a specified period of time is developed by use of this project.

Methodology:

The project basically involves 3 modules. User is provided a web based GUI platform where-in he chooses between what operation is to be done. Only the authorized administrators are allowed to upload the data whilst the other users are allowed only to search and retrieve information from the uploaded data.

In the upload module, the administrator is provided with a browse option to upload the data files into the database.

In the retrieve module, a list of tabs showing the 10 parameters calculated are shown. Accordingly, options are displayed to be chosen from a range of date and time values. Also the intervals for which the average values are to be calculated are chosen and when the form is submitted, the respective table of average values is displayed along with a graph.

CORRUPTION CONTROL THROUGH BUDGET MAINTENANCE

Ramesh Kommineni , Rajashekhar Reddy. T

Abstract

Transparency and participation can jointly lead to better budgetary outcomes by reducing manipulations of budget, misappropriation of resources and fostering sensible, accountable and equitable resource allocations.

The main objective of our project "Corruption Control Through Budget Maintenance" is to maintain the flow of money released by government, and intern control corruption. It aims to inform the people about how and who has utilized the money and for what purpose. CCTBM is anchored on fighting corruption and establishing transparent, accountable and participatory governance as necessary preconditions for achieving poverty reduction, inclusive growth, enhanced peace and ecological integrity.

Existing System:

In the existing system the government plans annual budget and when once it I passed, allocates funds to various departments like agriculture, health, education, social welfare etc. Politicians make policies regarding the usage of funds and departmental heads are responsible to implementing their policies. Departmental heads often collude with politicians and handpick contractors of their own choice to execute various works. Contractors misuse the funds and do not deliver quality services to the people. People are kept in dark about the selection of contractors and are not informed about the way funds have been utilized for various works that are initiated for people's welfare. In the existing system there is no proper hierarchy of authority meant for distributing the funds and supervising the effective utilization and hence citizens cannot get answers to questions like who are the in-charge of funds, which contractor was

assigned with the responsibility of carrying out a particular work and whether or not the funds have been properly utilized.

Disadvantages:

- *There is no centralized control over money transactions of various departments .*
- *There is a lot of scope for corruption and the whole budget allocation and distribution system is not transparent.*
- *Illegal activities of contractors do not come to the notice of the people.*
- *Contractors do no provide up to date information about the constructions and other schemes that are going on.*
- *Contractors do a little work and claim large amounts of money illegally.*
- *Contractors resort to illegal activities without any fear of being watched by people.*
- *Quality of services provided to the people is undermined.*
- *As the power of internet technologies is not utilized, communication between various government officials and contractors takes place at a slower rate hampering the speedy development of the society.*

Proposed System:

The proposed system CCTBM is a powerful web application which will guarantee transparency in budget allocation, distribution and utilization. It fulfills the objective of maintaining the flow of money released by government, and intern control corruption. It aims to inform the people about how and who has utilized the money and for what purpose. With involvement of everybody starting from Budget Officer, Department Officers, Districts' Commissioners, Contractors to Citizens, CCTBM envisages complete transparency.

Advantages:

- *Proper delegation of responsibilities by defining a clear hierarchy of authority and thereby providing centralized control over money transactions.*
- *Provides complete transparency in budget allocations and usage of allocated funds.*
- *Contractors cannot resort to illegal activities as Citizens can closely monitor their activities and contract execution.*
- *As people's power becomes decisive in judging the performance of contractors, naturally quality of services provided by the contractors will greatly increase.*
- *As the proposed solution is a web application communication gaps between government officials at various levels can be greatly minimized.*
- *Latest up to date information about ongoing people welfare projects can be made available to the people at their finger tips.*

Modules:

- *Budget Officer Module*
- *Departments Module*
- *District Commissioner Module*
- *Contractors Module*
- *Citizens Module*

MOBILE INFORMATION PROVIDER

Anja Rao Bhattu

Abstract

This project is aimed to automate the operations of Mobile Information Pr oviders.

Customers/Company representatives logging in may also access/search any information of mobile related services.

This ambitious service uses state-of-the-art technology to attain global excellence and leadership in business. Our entry into this sector has brought mobile service at an affordable cost to the common man. All serving a single objective, to provide better communication to millions across India.

This Customer service leads to have a good response for services and it can make users enroll as customers within months of launch this service.

SHOWROOM MANAGEMENT SYSTEM

Chandrakanth Reddy G, Devesh Mishra, Manasa Rao K, Nagsowmya Burra

Abstract

***E**very showroom across the globe needs to maintain detailed information about the various models and types of cars on display. In order to do this, they need a system which can store detailed information about the status of various cars and their availability and provide them with all the required details about the stocks available.*

***T**his project encompasses various requirements of a showroom and satisfies their need for information by storing details about the various models available and their stock details, and also stores the required information about various spares and other items required for the maintenance of cars and provides information when queried for.*

***T**he data that is collected is stored in a background database and is used by the foreground code as per the requirements. The information regarding various aspects about the cars such as the make, price, model etc. is stored in a specific file and other relevant information is stored in various relevant files.*

***T**he user is provided with various options and he can navigate through all the models and select a vehicle and make a comparison between different models as per his requirements and needs. Also, he is given the option to book, buy or select a service schedule for his vehicle or seek technical support from the staff concerned.*

EXOKERNEL

Rajasekhar Reddy, Meegada

Abstract

INTRODUCTION :

An operating system is interposed between applications and the physical hardware. Therefore, its structure has a dramatic impact on the performance and the scope of applications that can be built on it. An exokernel eliminates the notion that an operating system should provide abstractions on which applications are built. Instead, it concentrates solely on securely multiplexing the raw hardware

***PROJECT DESCRIPTION**:*

Exokernels are an attempt to separate security from abstraction, making non-override able parts of the operating system do next to nothing but securely multiplex the hardware. The goal is to avoid forcing any particular abstraction upon applications, instead allowing them to use or implement whatever abstractions are best suited to their task without having to layer them on top of other abstractions which may impose limits or unnecessary overhead.

User-space applications are allowed to implement their own, optimized memory management (by directly accessing e.g. memory tables), file access (by "raw" disk access), etc. This can, for special applications, result in significant performance increases. In addition, by being aware of resource availability, revocation and allocation, it is hoped that applications can make more efficient and intelligent use of hardware resources.

Implemented applications are called library operating systems; they may request specific memory addresses, disk blocks, etc. The kernel only ensures that the requested resource is free, and the application is allowed to access it. This low-level hardware access allows the programmer to implement custom abstractions, and omit unnecessary ones, most commonly to improve a program's performance. It also allows programmers to choose what level of abstraction they want, high, or low.

STUDENT MONITORING SYSTEM

Kashup, Sindhoora, Bharath.S, Ganendra.V

Abstract

Objective: *Attendance Management System is an application developed for daily student attendance in schools, colleges and institutes. If facilitates to access the attendance information of a particular student in a particular class. The information is sorted by the operators, which will be provided by the teacher for a particular class. This system will also help in evaluating attendance eligibility criteria of a student.*

Current Scenario:

In the present system all the work is done on paper. The whole session attendance is stored in the register and at the end of the session the reports are generated at the end of the session who don't have 75% attendance gets a notice

Problem Definition:

Student cannot know the aggregate percentage of his academic year at his favorable time.

Proposed Solution:

The purpose of developing attendance management system is to computerized the tradition way of taking attendance. Another purpose for developing this application is to generate the report automatically for every day/week and sends the result to the respective guardian.

DATA MIGRATION TO XML

Apoorva Reddy. S, Ashwini Deshmukh, Maria Jyothi Sarvani, Pallavi. S

Abstract

Database Migration to XML *is a project of migrating the existing databases into XML format. Our system performs the conversion of databases like Ms-Access, Oracle, and MS-SQL to XML file format. We retrieve tables from the corresponding database and generate code for the appropriate databases and convert the tables into XML flat file format. This converted XML file is been presented to the user.*

Using this project we can easily migrate the existing database to XML. The XML is a text format flat file, so our system has an ability to store any kind of data under different platform. XML file format support different platform like Linux, Windows etc… Even though our source database crashes, we can backup the database from XML file. By migrating into common file format, the database size is been reduced, accessing time is minimized and also it requires less human resource.

XML Database migration is a project of migrating the existing database into XML file format. We provide authentication for the user and protect the database sources from unauthorized access. The User with valid username and password can only proceed with further conversion process. The user is allowed to select the database type from the available database types. Here the appropriate database server is connected using the specified database name. The User is prompted for the database name and the appropriate tables are listed. The User is made to select the table for which the conversion is to be carried out. The table is retrieved from the database. The tables selected by the User can also be previewed for the case of reducing mal-selections. The table is subjected for conversion after manual verification.

DEPARTMENT OF INFORMATION TECHNOLOGY

TCS- OPERATIONAL DASH BOARD PORTAL

Sandeep.Ch

Abstract

TCS is a multi-national company that has a large group of employees working in different departments serving large number of clients. Every department that services a particular client is known as an account. Various levels of managers manage these accounts. One such account in focus is the one that we have completed our internship in. All the details of the employees in the account are to be maintained in such a way that their data can be retrieved by the managers according to their requirements.

BACKGROUND:

The details of the employees working in the account are saved in various databases. In order to gather all the details of a particular employee, managers, currently, collect all the data manually and store then in spreadsheets. This is highly complicated and is time-consuming. There is a need for a common portal to store and retrieve all the details of employees at a single place.

PURPOSE:

TCS Operational Dashboard Portal is a Java-based Web tool designed in order to provide a common platform for storing and retrieving the employee details. The main purpose of this tool is to ease the managers of the account to pull out the reports, and to add the details of any new employees whenever required.

SCOPE:

The users of TCS Operational Dashboard Portal are given two levels of access. One is employee level that is restricted to access only few resources of the portal and the other is Super-Admin level access that is allowed to have complete access over all the resources of the portal. This portal has four modules.

- ***MY PROFILE***
- ***ADD EMPLOYEE***
- ***REPORTS***
- ***STATEMENT OF WORK***

MY PROFILE:

It maintains the details of the employees in three sub modules.

- *Personal profile*
- *Project profile*
- *Learning and development*

Personal Profile:

It maintains personal details of an employee including the Date of joining, passport and visa details, contact information, core technologies and so on.

Project Profile:

It maintains the allocation details of the employee like the department to which he is allocated, percentage of allocation and the value addition details which includes IT savings, Business savings and so on.

Learning and Development:

It maintains the certification details which include the certification planning and details of the certifications completed by a particular employee and the training details, which include the training sessions that are attended or planned by the employees.

ADD EMPLOYEE:

This module helps the Super-Admin to add the details of any employee to the portal.

REPORTS:

Depending on the requirements of the managers, four types of reports have been developed.

- *Portfolio details report*
- *Resource details report*
- *Portfolio summary report*
- *SOW parking report*

STATEMENT OF WORK:

It is a contract that is signed between TCS and its customers which defines various project parameters like Employee Effort Estimation, Cost Effort Estimation, Start and End date of Project and so on.

MEDIA SERVER FOR EDUCATIONAL INSTITUTIONS

G.Prudhvidhar Reddy, Sanjay

Abstract

This project is aimed at developing an Online Media server that is of importance to either an educational institution or a college. The system (MSEI) is an Intranet based application that can be accessed throughout the institution or a specified department. The system consists of an admin level user and an ordinary user. The users can register for any course and view Videos or Photo Albums of the Institution in the website. The admin user can upload Videos, Photo Albums. These Videos could be played in the browser without downloading, anywhere in the LAN.

Admin user can create faculty users and departments online and he can even edit or delete these users and departments. Faculty users can create, edit or delete courses and they can upload course material for any subject related to a department. The Student user is the third level user, who can use these resources online or offline by downloading or playing them in the website. The students can give an online request to a particular faculty for any new upload of course material or videos.

INTEGRATION OF SHARE POINT WITH INFO PATH

K.Kishore, A.ChandraKanth

Abstract

Microsoft SharePoint *is a web application platform developed by Microsoft in the year 2001. It is the one central place or a point of contact in an organization where people can communicate, collaborate and share data. It also renders services such as content management, document management, business intelligence, offline synchronization, enterprise search and customization. SharePoint 2010 is a fully integrated platform that is made up of the best bits of many tried-and-tested products. And at the end of the day SharePoint is not a program, it's a platform.*

SharePoint 2010 maintains a tight integration with Microsoft's office suite and also visual studio as this platform is based on .Net framework.

Here the discussion is how this SharePoint 2010 is going to integrate with Microsoft's InfoPath and how the InfoPath workflows are designed and deployed on a SharePoint site. The primary goal of InfoPath 2010 is to make it easy for nontechnical users to create forms that can be used to capture user input. Forms can be completed offline using the InfoPath client application, or, by using InfoPath Forms Services in SharePoint 2010, InfoPath Forms can be rendered as web pages.

WEB BOARD TRACKING SYSTEM

Bhoomika, Deekshita, Naga hitha

Abstract

The Web Board Issue Tracking System is an intranet application, which provides information about issues in software projects, in detail. This project develops a system that can be used by all the departments of a software organization. The Issues related to software projects can be raised, tracked and resolved by Employees of different departments. Resolved issues can be allowed to access from Knowledge Base as Knowledge elements.

This project does all the jobs that are done in conventional system. But, here, everything is done in more formal and efficient manner. All the users of organization can interact with each other through the Issue Tracking System. This system acts as an interface between the employees thereby enabling them to forward their issues to the centralized Issue tracking system. Hence, making the work easy for both the issue raiser and the resolver. It totally avoids the involvement of middlemen in getting resolution for a particular issue.

Generally, in an organization, various issues like complaints of employees, Suggestions, conflicts between peers, applications, proposals, objections and requests have to be passed via the HR Department or the Head of the concerned Department. This traditional system of resolving issues and conflicts involves lot of manual work to be put in, and also it's a tedious process.

Thus in Web board Issue Tracking system, it fulfills different requirements of administrator and employees of a software development organization efficiently. The primary goal of the system is to gather and resolve issues that arise in different projects handled by the organization.

AIRLINE MANAGEMENT

Sindhusha, Sravani

Abstract

The application deals with airlines scheduling flights to pilots through operations control. The system performs the actions across communicating with pilots and flight master.

The pilot master handles information about the working of pilots for the airline. It involves study, license and validity issues related to the pilots. The flight master is associated with the types of carriers owned by the airline and required level of licensing from the pilots to operate it.

The operations control basically handles information on generating the schedule for the pilots. The pilots are associated with flights and are provided with sector they would operate, the routes for the week, time of schedule and other related carrier information.

A registration module is provided only for valid users to access the site. The site is functional from two users view point and administrator and the pilots.

ONLINE COLLEGE MAGAZINE

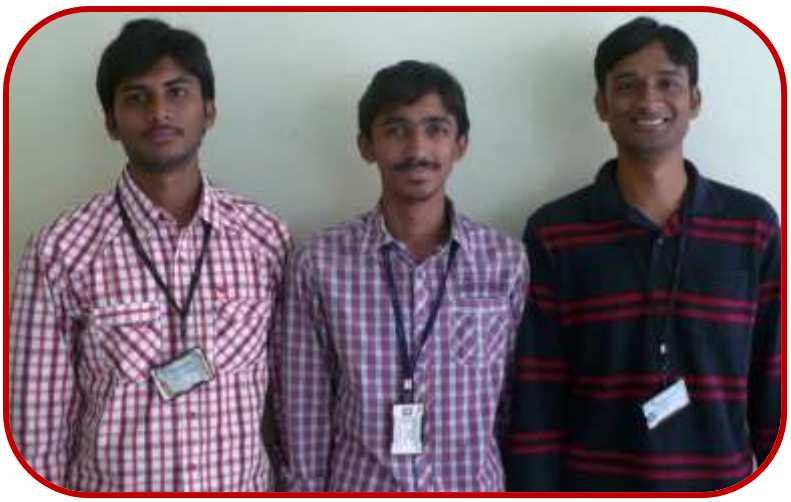
Sairam, Satish Kumar, Suresh P

Abstract

Creating and managing an Online College Magazine where college students and faculties can post and read various articles, thus promoting literary insight. Articles can be searched by anybody in the world. Factors behind the motivation of this system are:

1. *Not all students make it to the printed magazine.*
2. *Creativity of students needs to be nurtured.*
3. *Creating a user-friendly interactive place where students/faculties can share their ideas.*

This magazine also creates awareness among the students about different technologies that are arising in the current world. All these information is accessible only to the registered users (Students/Faculty) who are provided with a unique ID after registration. Guests can read articles, rate them and comment on them. They can also access other optional features but can't post articles unless they sign in. Registered user has privilege of downloading and uploading the articles in various formats and modifying it but not deleting it. These articles are to be associated with suitable tags by the registered users at the time of posting itself, so that they are easily searchable. The home page consists of attractive essential features like: most read articles, editor's pick, recently posted articles, highest rated articles, article of the month, college news, Word of the day etc. Interactive feedback will be provided to enhance the user experience. This magazine is hosted in the website and maintained by the students, faulty, moderators who have the privilege of validating the articles whether they are structured properly or abusing anyone and admin who has the centralized control over the magazine like maintenance of home page, progress report of moderators and many more.



INVENTORY MANAGEMENT WITH RFID

Shailaja, Sushma

Abstract

The work of Inventory Management with the help of RFID is made easy maintain the process of inventory. RFID helps in detecting the products delivered or stored in storage area and also employees involved in delivering and storing the goods or products.

Scope:

The project consist of providing Inventory management with a RFID scanning system so that all goods entering and leaving its storage area are easily stock report sent to management. The project is meant to facilitate the storage operators scan the goods entering at one point and leaving at another, thus reducing the difficulties they undergo in providing a sound and reliable report to the management.

Action Plan:

Current Scenario:

At present the Inventory Management work is done through manual process just by maintaining book records. Storing and Delivering of goods or products is entered in book records by manual process. Entering the records manually is lengthy procedure and also maintaining huge books for storing the data related to goods delivered or products stored is really very hectic process. Even after maintaining huge data in books there may be a chance misleading of goods or products in storage area. There is no protection for the goods stored in the storage area.

Proposed System:

In Proposed System everything is made Automation process like products stored in storage area or the products delivered. With the help of the RFID (Radio Frequency Identification Device) we can identify the employee who responsible for storing or delivering the goods or products from the storage area. This makes the data easily and automatically stored in the database. In database we can find each and every detail of the products has been stored as a transaction. It will be much easier for the Administrator to view data related to a particular product and also with respect to employee. Using RFID we can easily raise an alarm or warning signal when an employee is attempting to stealing the products from storage area. This makes full protection for products or goods stored in storage area.

Features:

- *Centralized Database.*
- *Easily Updating of Database without any Interference of Employees.*
- *Theft Detection System for protecting products and goods from thieves.*
- *Matching of goods Delivered and Stored in Storage area.*

Design view:

Modules:

1] Product Management.

2] Employee Management.

3] Theft Detection System.

Advantages:

- *Improve the current stock control, monitoring and management of the goods in the storage area using the RFID technology.*
- *Provide for better and quicker reporting mechanism.*
- *Reduce cost in terms of man power on the long run.*
- *Decrease risk of loss and theft in the stock in the storage area.*
- *Provide for better tracking of the goods within the storage area example positioning etc.*
- *Reduce processing time for input of goods in the system and creation of in/out-flows data.*

TRAINING AND PLACEMENT CELL

Sai Kiran, Sai Vamshi, Santhosh, Padma

Abstract

OBJECTIVE:

- *To reduce the paper work and human interference.*
- *To provide ease in administrating and maintaining the placement cell.*
- *To reduce the time complexity and increase the efficiency of managing placement cell.*

Training and Placement Cell is one of the important functional units in a college or business schools or any other educational institution. Any educational institution or an organization can use this application without any complexity. Any human with minimum knowledge of computers can use this application with an ease.

This application will perform major tasks in placement cell such as:

- *User interface and easy to use environment.*
- *Handling Student Database.*
- *Training programs to be held semester wise and its schedule.*
- *Conducting online exams and spot evaluation automatically by the server in least time possible.*
- *Conducting placement drives.*
- *Grading the students based on their attendance towards training classes, academics, co-curricular activities, behavior in class rooms and respect towards the faculty.*
- *Generating automatic time table for the classes to be taken on particular day.*