3.3.5 Number of books and chapters in edited volumes / books published, and papers in national/international conference-proceedings per teacher during the last five years (6)

Sl.No	Academic Year	Count
1	2014-2015	48
2	2015-2016	33
3	2016-2017	45
4	2017-2018	114
5	2018-2019	24
	Total	264

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3.3.5 Number of books and chapters in edited volumes / books published, and papers in national/international conference-proceedings per teacher during the last five years (6)

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3	Mr. Y. Nagendra Kumar	Accessing Geographic Mapping Techniques for Internet Hosts	**19**
4	Mr M N Rao	Fundamentals of Open Source Software	**20**
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8	Mr.R.Pavan Kumar	English-I	**33**
9	Mr.V.Rajesh	English-I	**33**
10	Mr. N.L.Srinivas	English-II	**29**
11	Dr.Sudhirkumar Patnaik	English-II	**29**
12	Mr.R.Pavan Kumar	English-II	**29**
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15	Mr. Sobhanbabu	Engineering Mathematics-I	**39** **39**
16	Mr. T.Srinivas	Engineering Mathematics-I	**39**
17	Dr.K.Jayaramireddy	Engineering Mathematics-I	**39**
18	Mr. Ravindra	Engineering Mathematics-II	**38**
19	Ms,Ch.V.Aruna	Engineering Mathematics-II	**38**
20	Dr.G.Vidyasagar	Engineering Mathematics-II	**38**
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SEMANTIC KEY PRE-DISTRIBUTION PROTOCOL FOR MULTI-PHASE WIRELESS SENSOR NETWORKS

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Abstract: - The problem of efficiently and securely broadcasting to a remote cooperative group occurs in many newly emerging networks. A major challenge in devising such systems is to overcome the obstacles of the potentially limited communication from the group to the sender, the unavailability of a fully trusted key generation center, and the dynamics of the sender. The existing key management paradigms cannot deal with these challenges effectively. In this paper, we circumvent these obstacles and close this gap by proposing a novel key management paradigm. The new paradigm is a hybrid of traditional broadcast encryption and group key agreement. In such a system, each member maintains a single public/secret key pair. Upon seeing the public keys of the members, a remote sender can securely broadcast to any intended subgroup chosen in an *ad hoc* way. Following this model, we instantiate a scheme that is proven secure in the standard model. Even if all the non-intended members collude, they cannot extract any useful information from the transmitted messages. After the public group encryption key is extracted, both the computation overhead and the communication cost are

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ACCESSING GEOGRAPHIC MAPPING TECHNIQUES FOR INTERNET HOSTS

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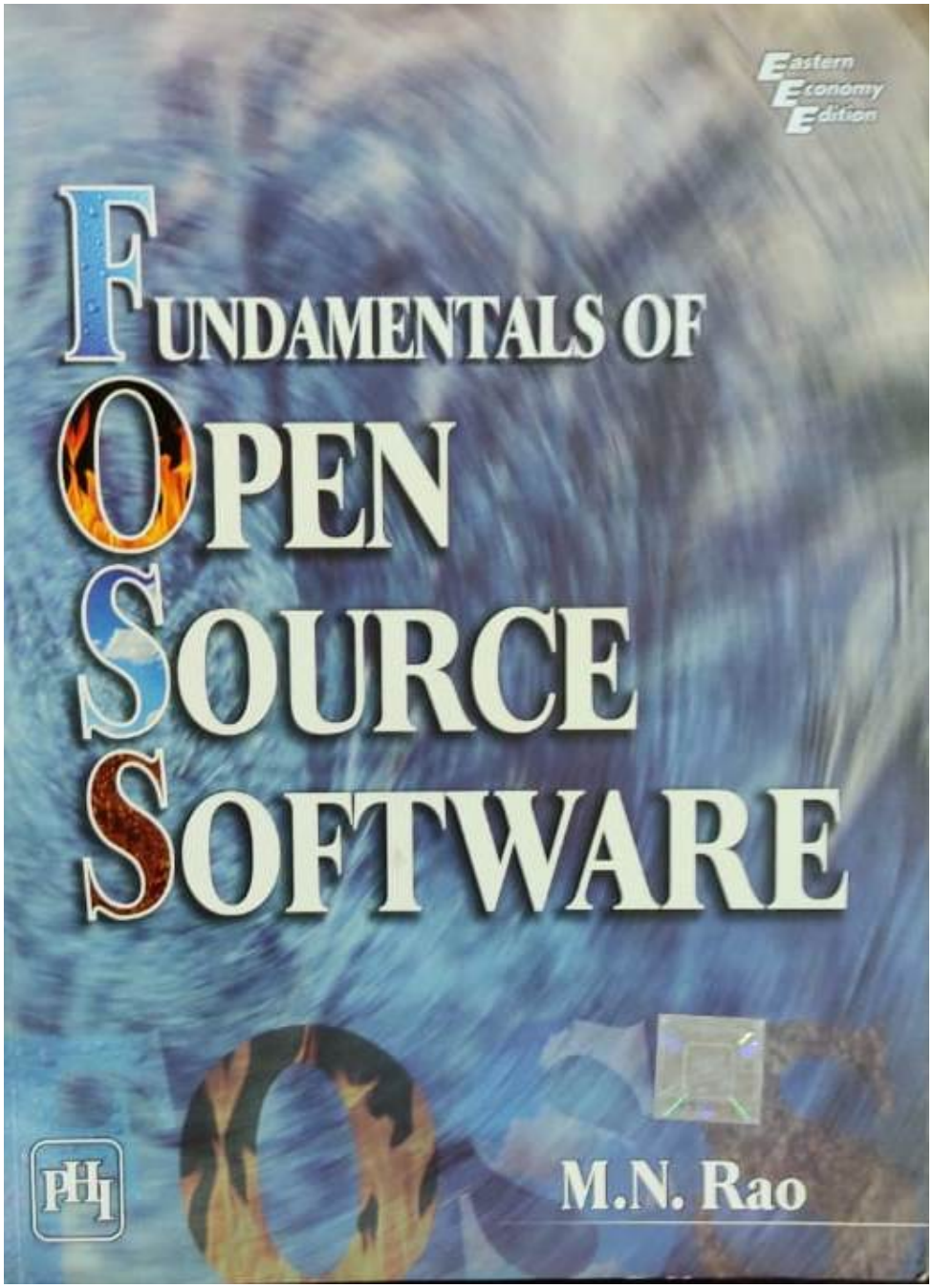
Abstract:- Most IP-geo location mapping schemes take delay-measurement approach, based on the assumption of a strong correlation between networking delay and geographical distance between the targeted client and the landmarks. Traditional IP-geo location mapping schemes are primarily delay-measurement based. In these schemes, there are a number of landmarks with known geo locations. The delays from a targeted client to the landmarks are measured, and the targeted client is mapped to a geo location inferred from the measured delays. In this paper, we investigate the delay-distance relationship in a particular large region of the Internet (China), where the Internet connectivity is moderate. The data set contains hundreds of thousands of (delay, distance) pairs collected from thousands of widely spread hosts. We have two observations from the data set. First, the linearity between the delay and distance in this region of Internet is positive but very weak. Second, with high probability the shortest delay comes from the closest distance, and we call this phenomenon the —closest-shortestl rule. Based on the observations, we develop a simple yet novel IP-geo location mapping scheme for moderately connected Internet regions, called Geo Get. The contributions of this paper are twofold. First, by studying a large data set, we show that most of the traditional IP-Geo location mapping schemes cannot work well for moderately connected Internet regions, since the linear delay-distance correlation is weak in this kind of Internet regions. Second, based on the measurement results (MR), we develop and implement Geo Get, which uses the closest-shortest rule and works much better than traditional schemes in moderately connected Internet regions.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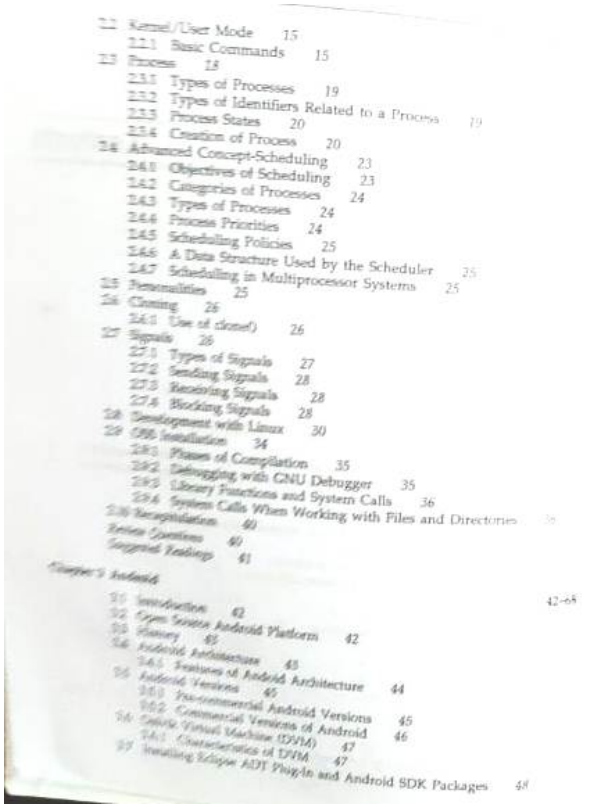

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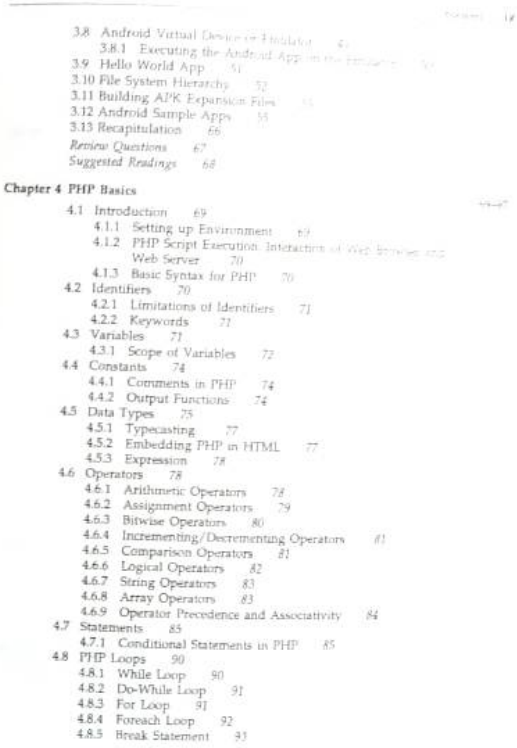

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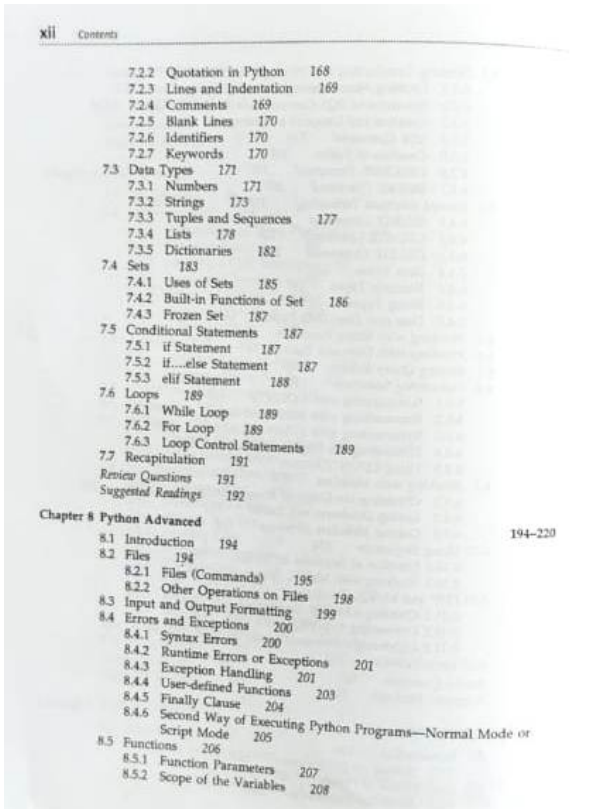

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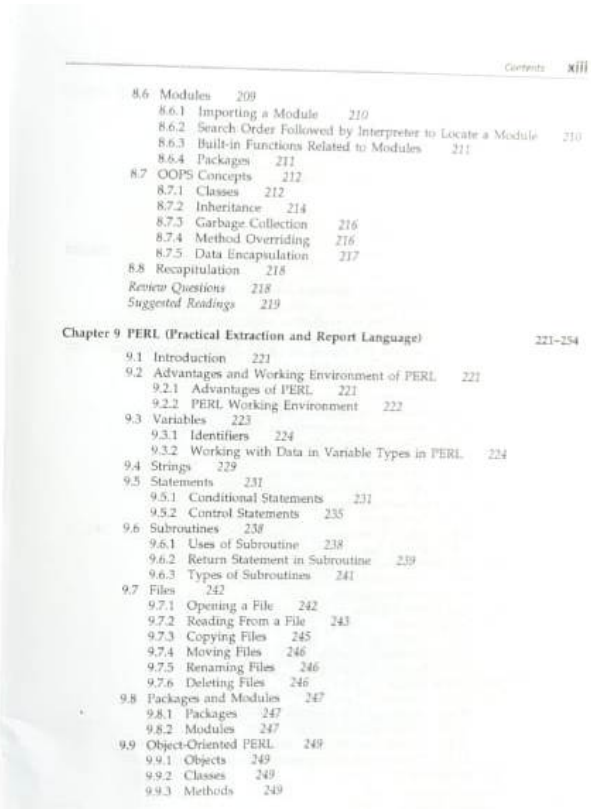

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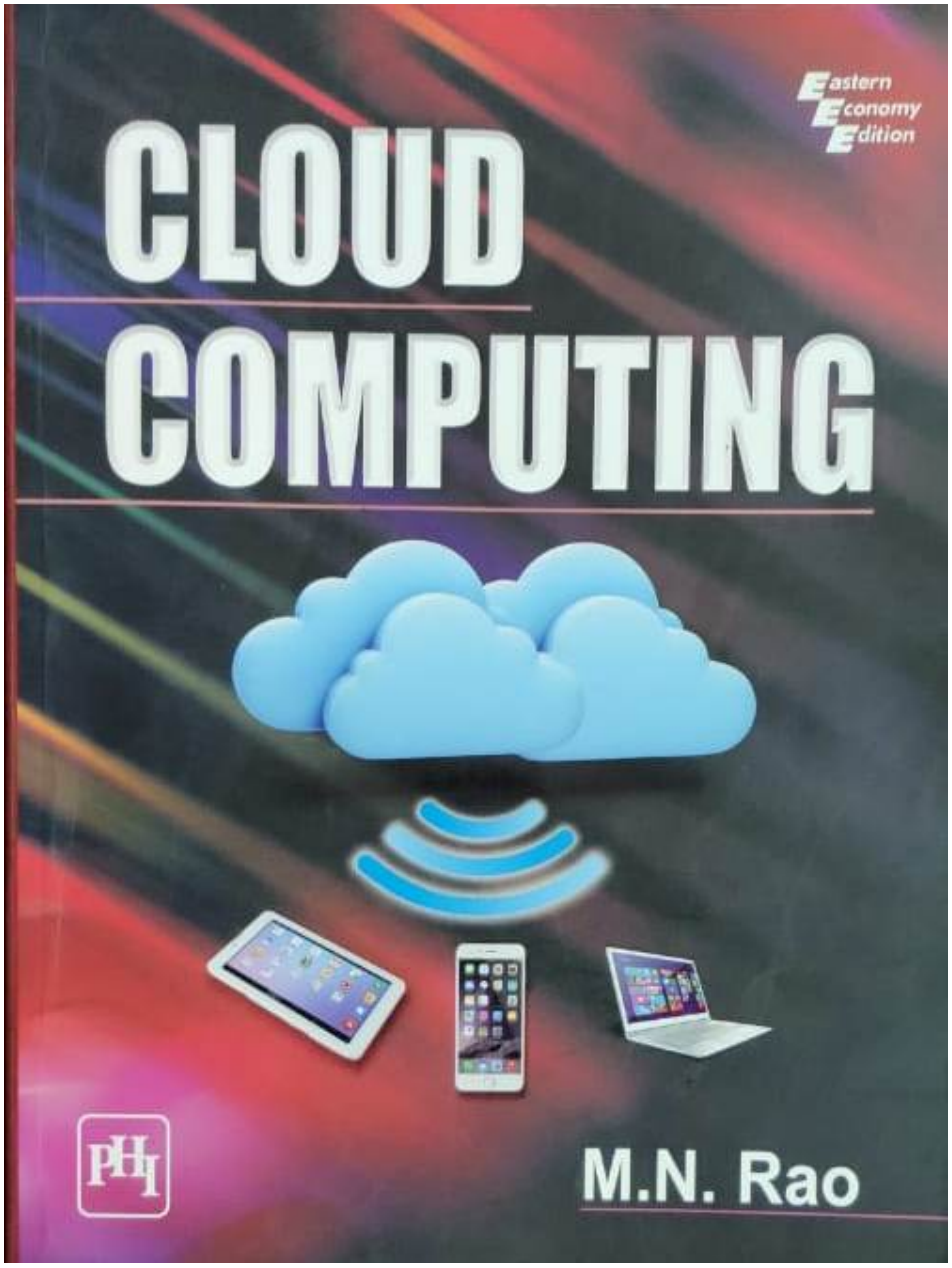
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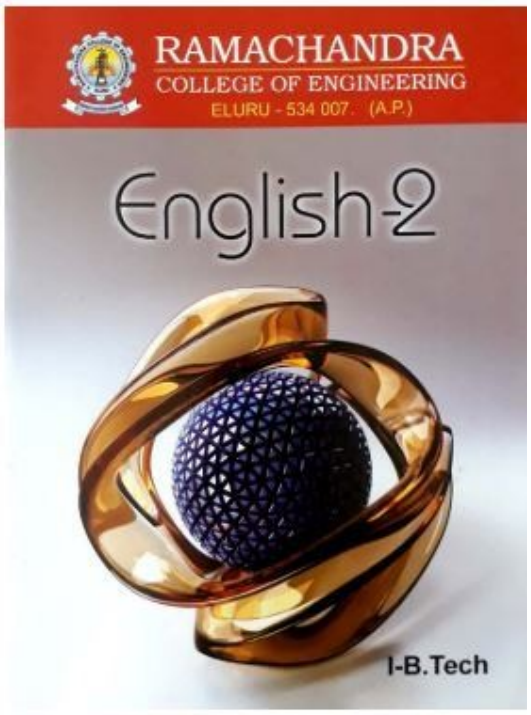

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Dr. K. Jayarami Reddy for their advice, assistance and constant support throughout preparation of this book.

- Department of English (BESH)

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1. Jagadish Chandra Bose

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1.2 Question and answers

2. Homi Jahangir Bhaba

2.1 Summary

2.2 Question and answers

3. Vikram Sarabhai

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4. A Shadow

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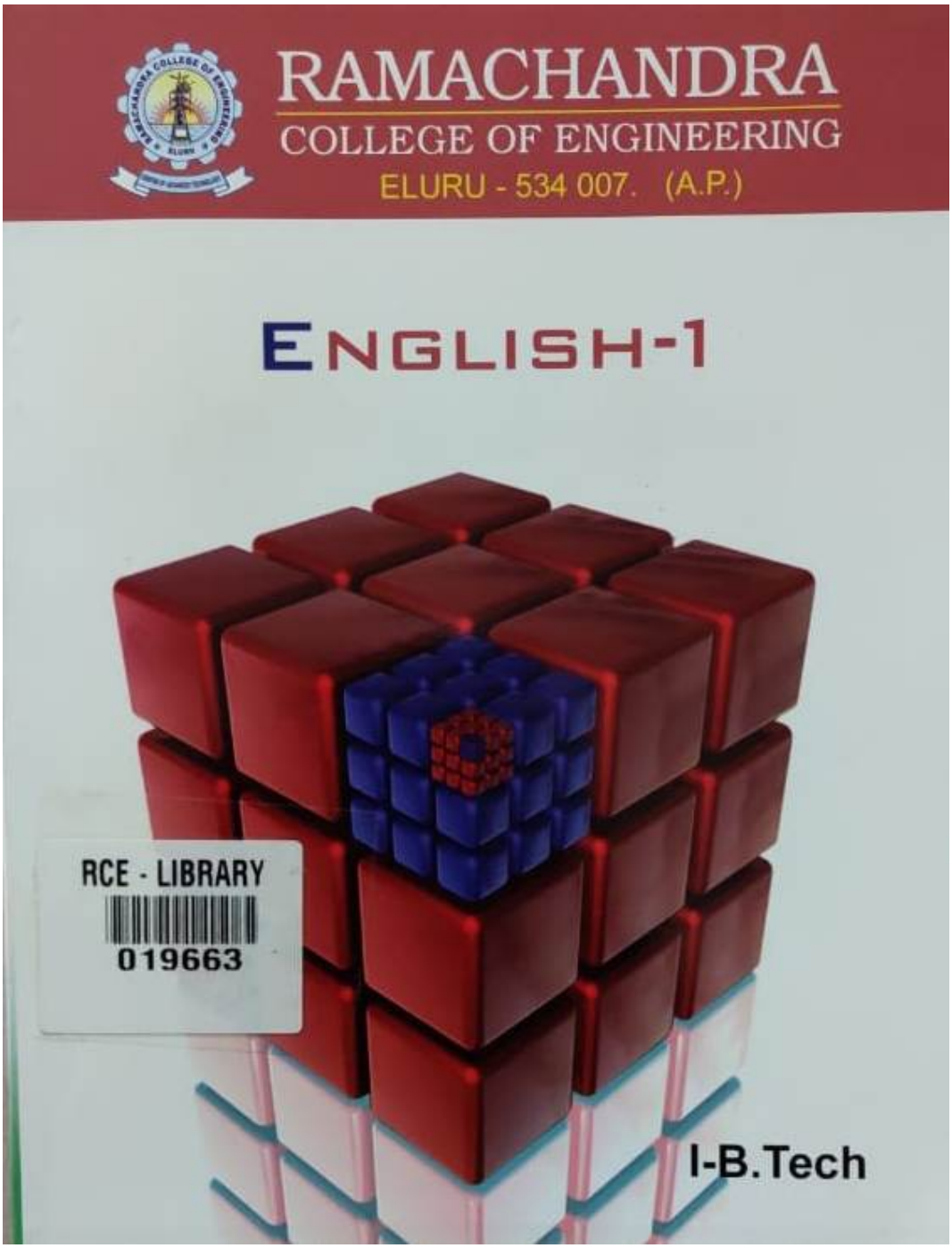
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2. Gorur Ramaswamy Gopinath
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3. Dr.Vijay Bhatkar
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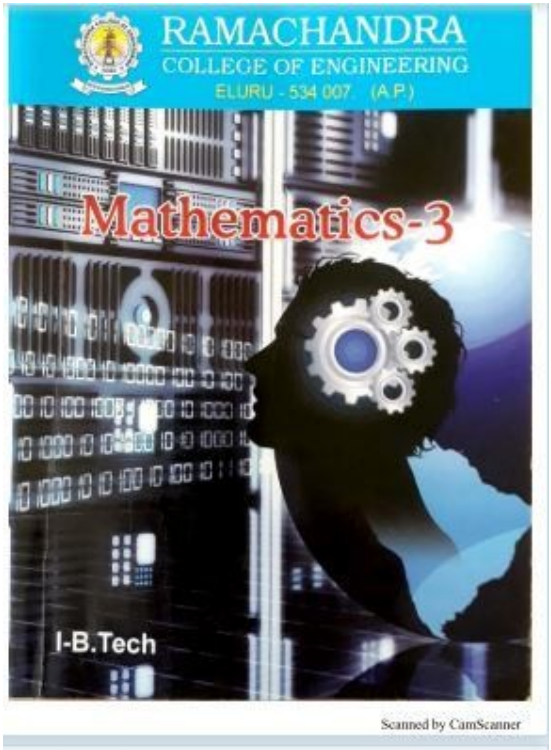

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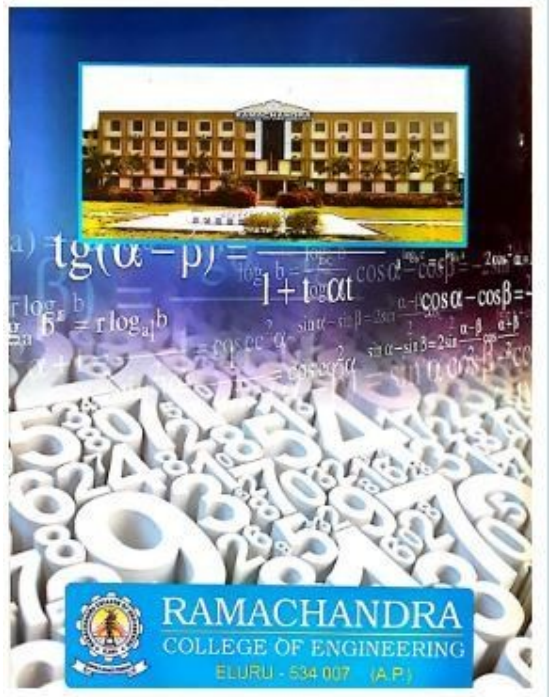

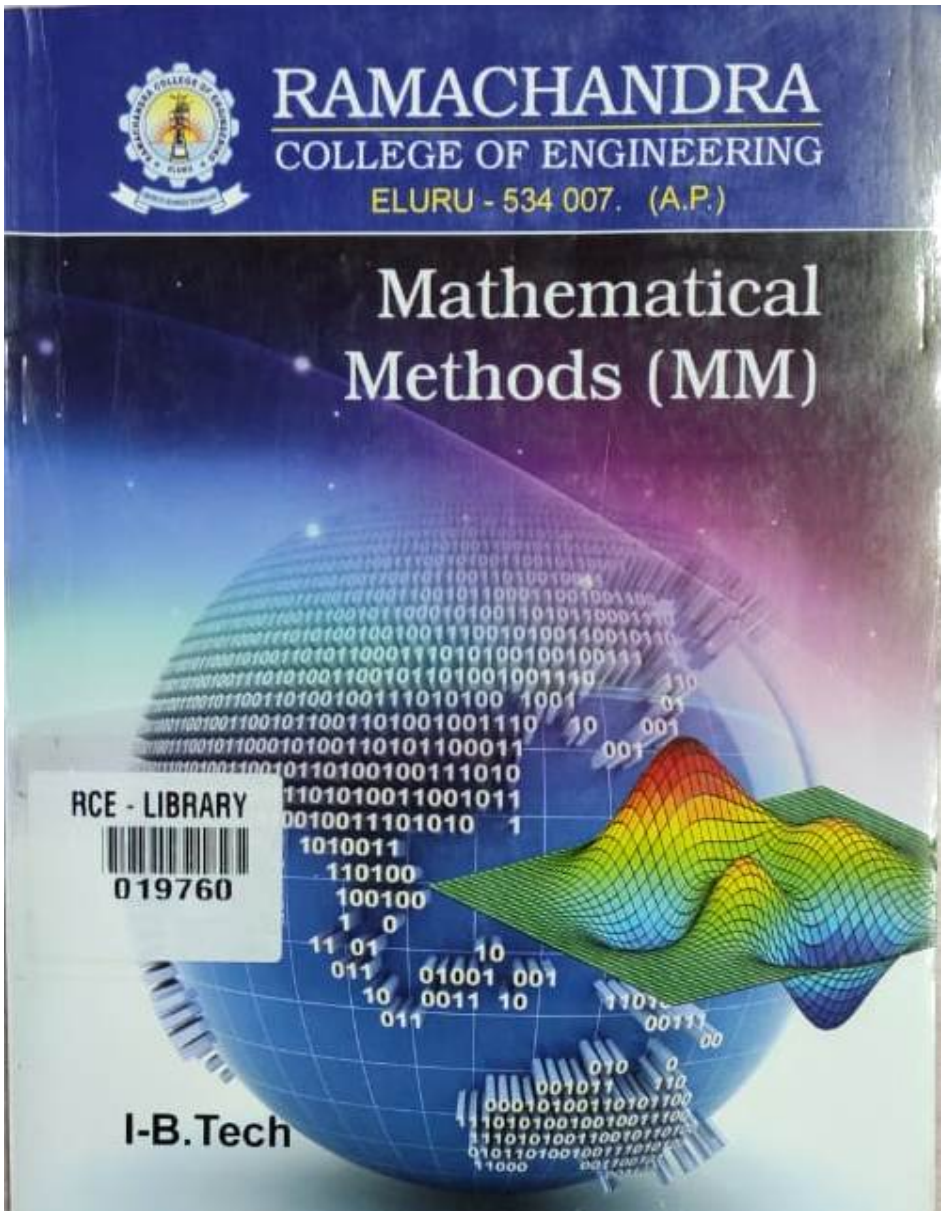
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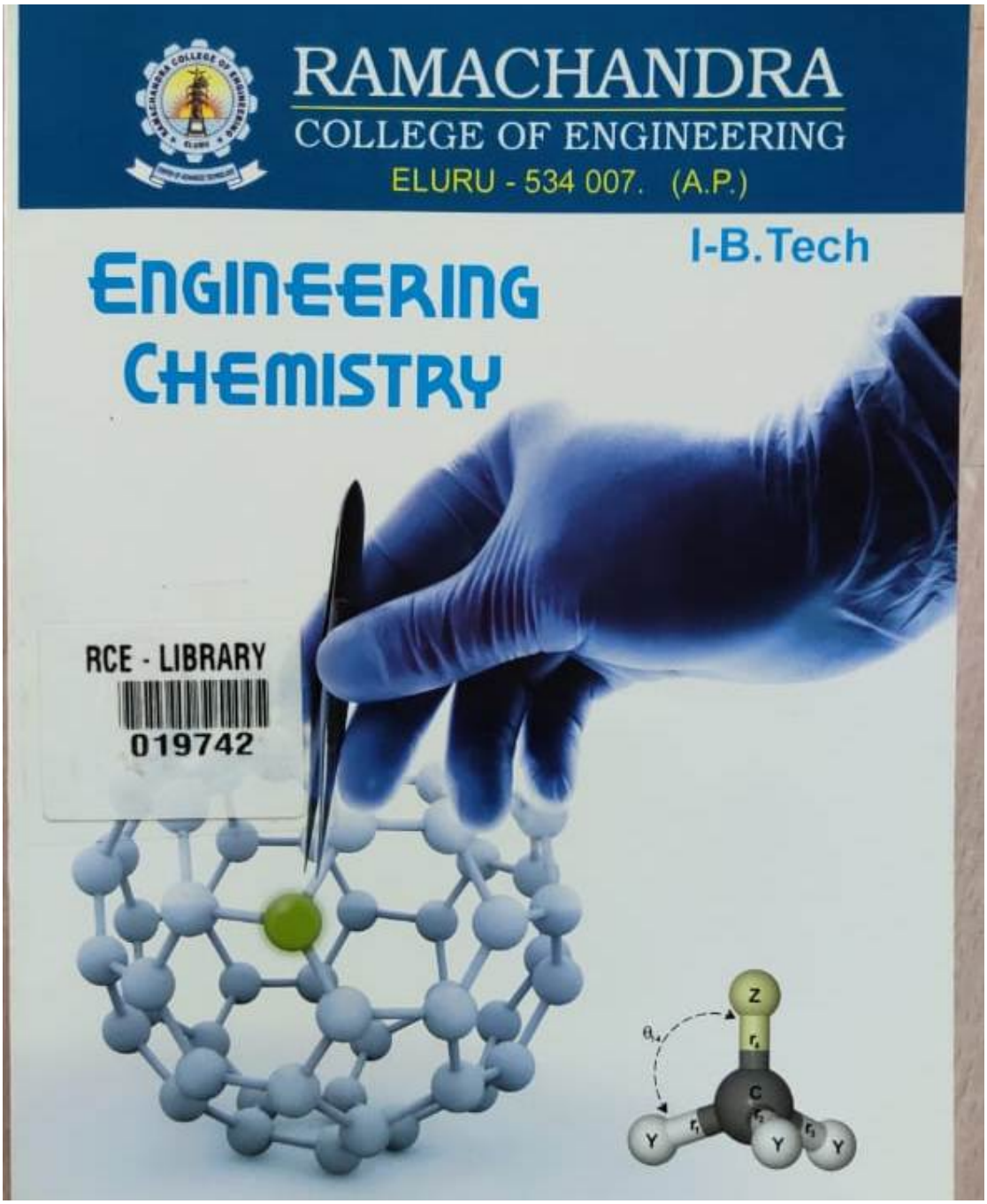
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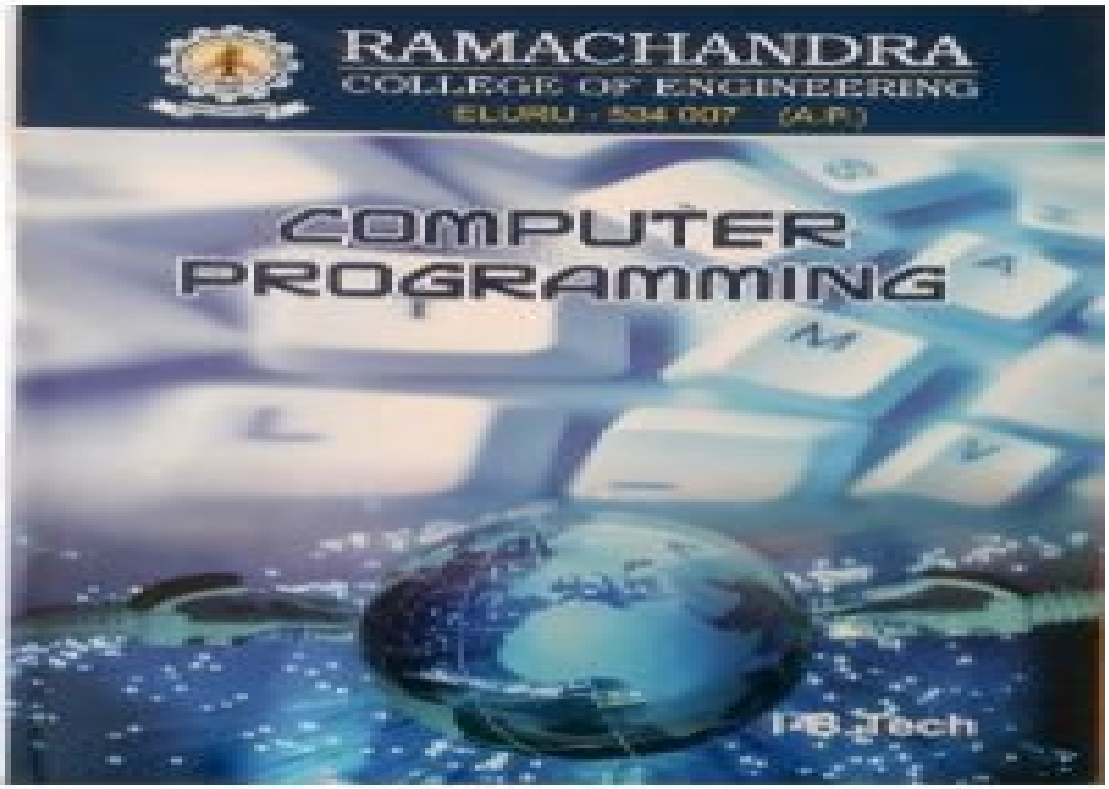

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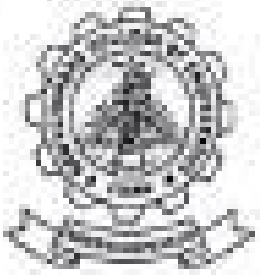

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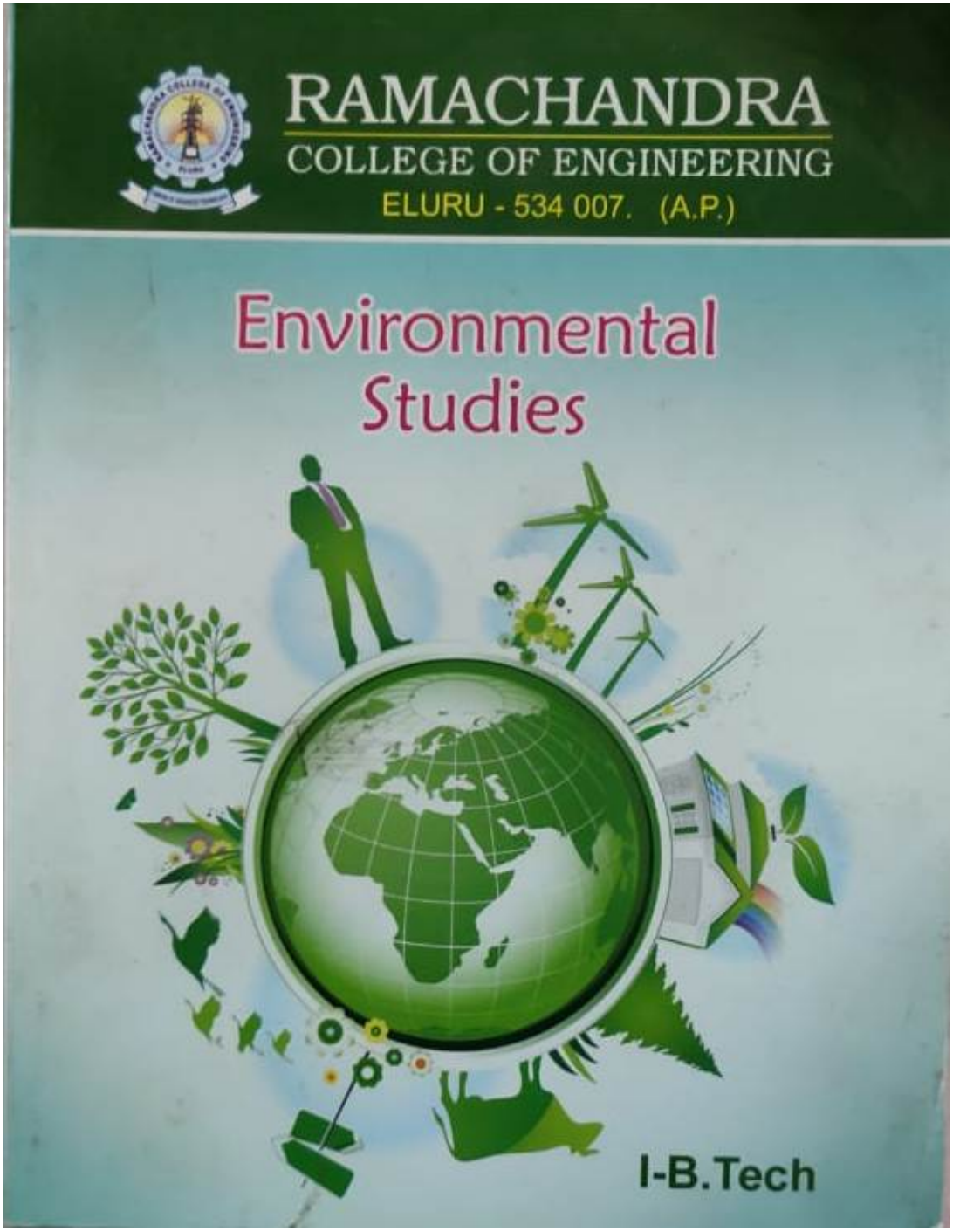
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5.3 Rain Water Harvesting

5.4 Rehabilitation and Resettlement – its Problems and concern

5.5 Environmental Ethics - Issues and possible solutions

5.6 The Environment Protection Act, 1986

5.7 The Air (Prevention and Control of Pollution) Act, 1981

5.8 Water Prevention and Control of Pollution Act (1974)
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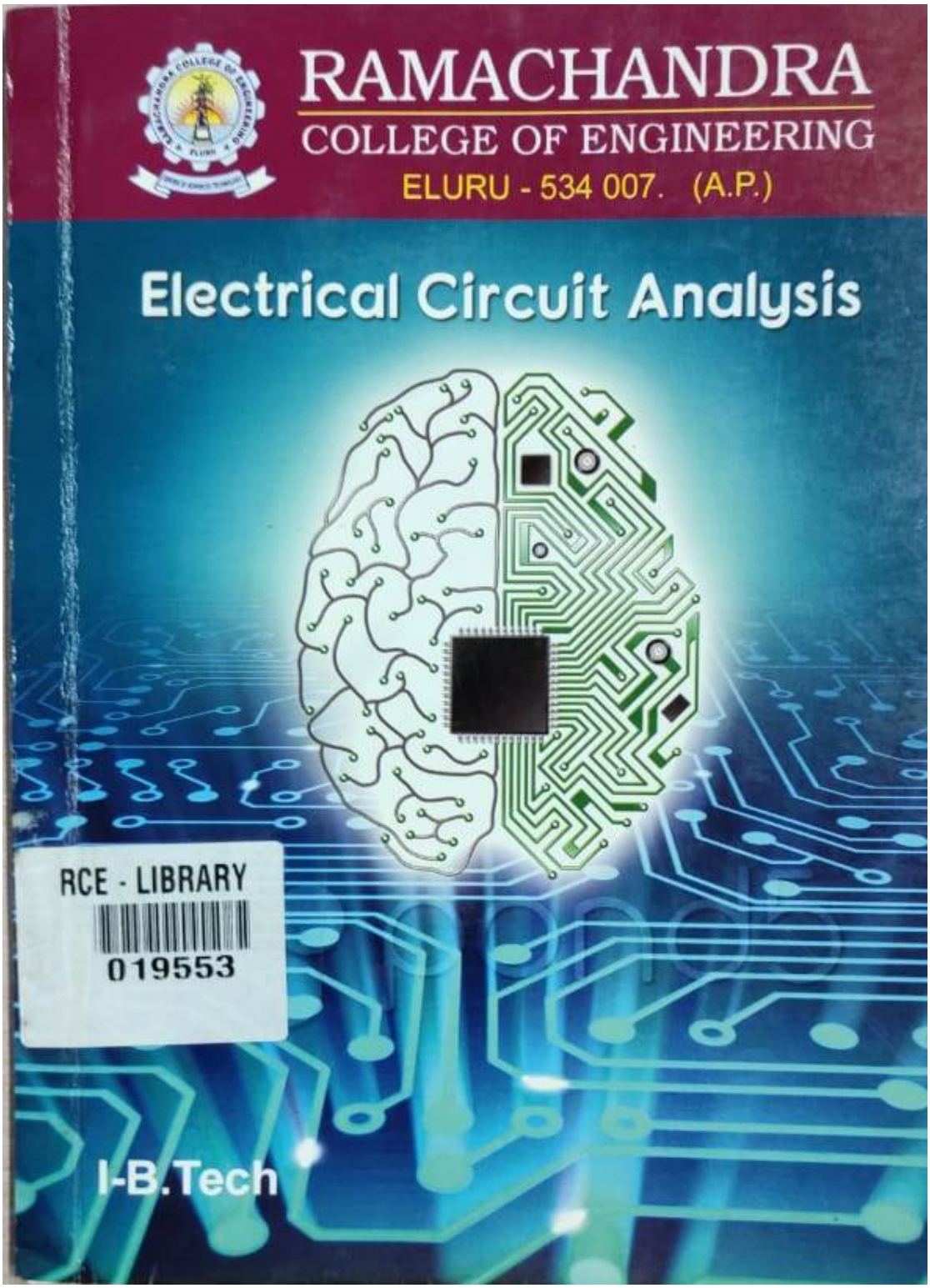
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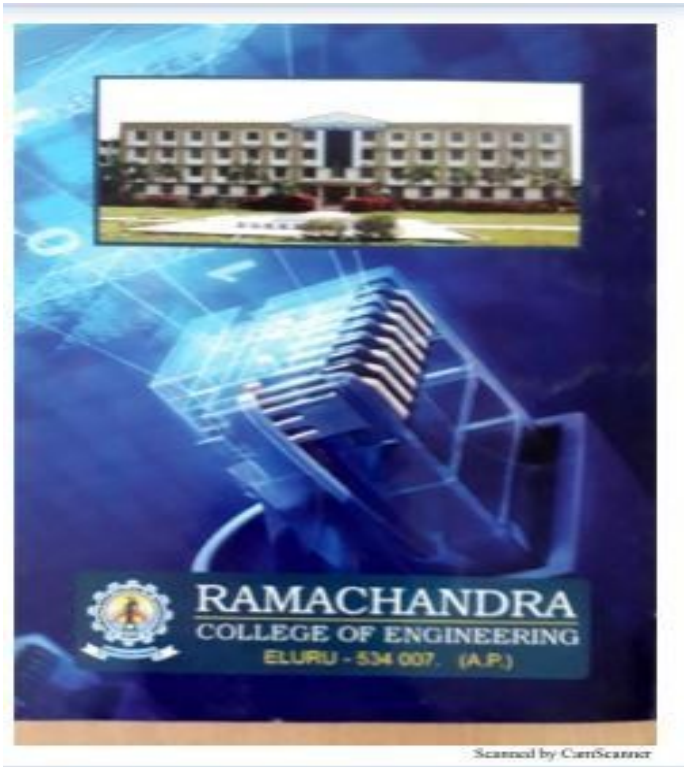

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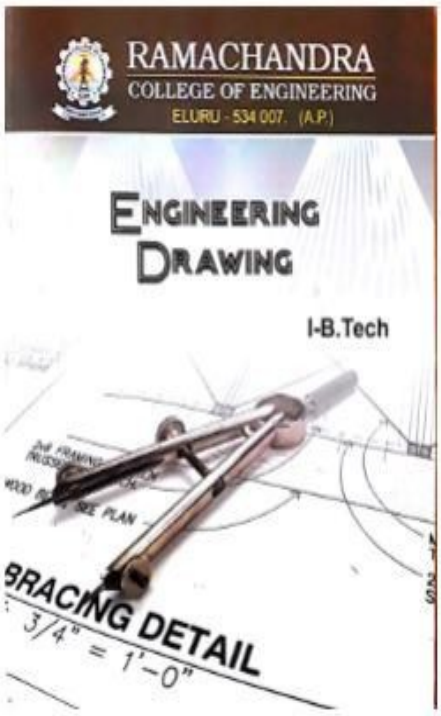
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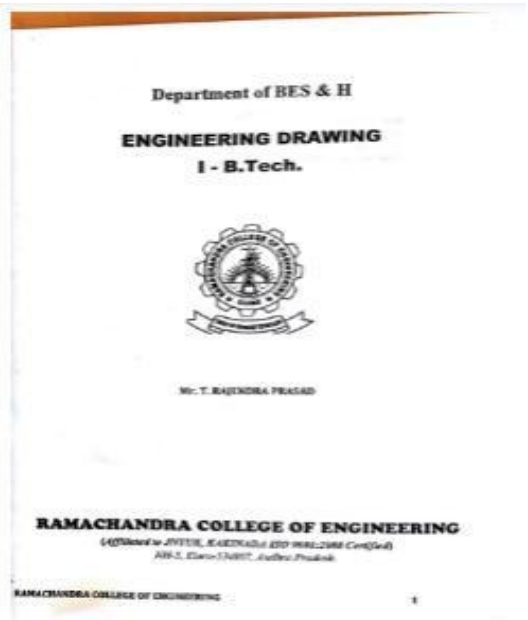
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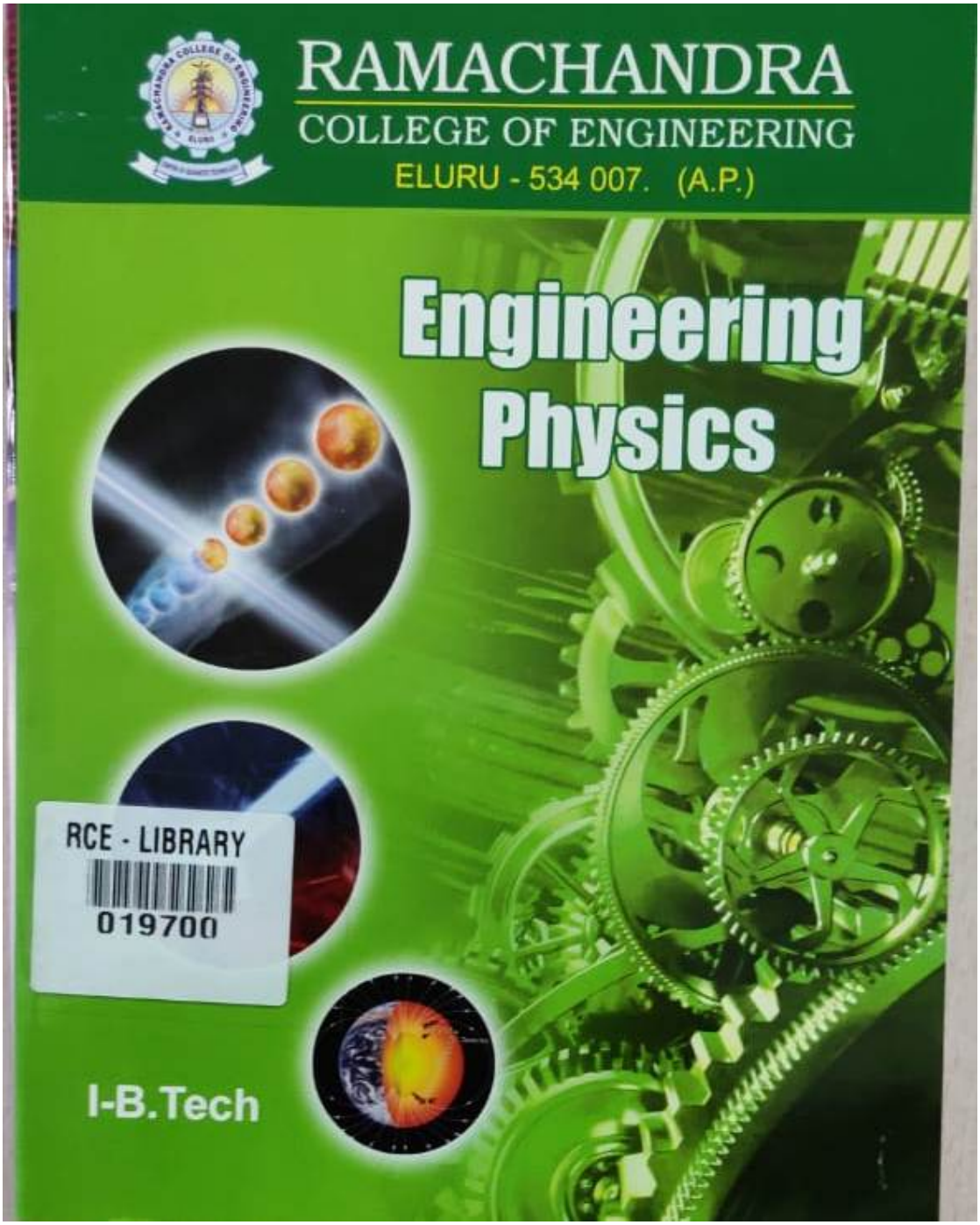
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Screening and Docking Studies of 266 Compounds from 7 Plant Sources as Antihypertensive Agents

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Abstract

Various proteins play important roles in hypertension and a number of plants have been tested for their efficacy in modulating hypertension. Angiotensin 1-converting enzyme, renin and extracellular regulated kinase 2(ERK2) proteins, respectively, has major role in hypertension and therefore protein - ligand interaction studies were performed on 266 compounds from different parts of 7 plants (Allium sativum, Coriandrum sativum, Dacus carota, Murrayya koneigii, Eucalyptus globus, Calendula officinalis and Lycopersicon esculentum). Analysis was conducted using GOLD (Genetic Optimisation for Ligand Docking) software as docking program and the molecules drawn in ISIS Draw software are energy minimized using cosmic - optimize 3D module of Tsar (Tools for structure activity relationships) software. Before docking plant compounds, software validation was performed and found that all co-crystallized ligands are within 2.0 A°. Further, docking and re-scoring of 266 compounds with GOLD, Molegro and eHiTS followed by rank-sum technique revealed high binding affinity of compound 27, from Allium sativum, with Angiotensin converting enzyme, 1UZE and Renin, 2IKO. The docked pose of compound 27 (Phytic acid) exactly fits into the active site region and the ligand formed more number of H-bond interactions than the co-crystallized ligand. The best compound that exhibited high binding affinity with 3ERK was molecule 23 (Stigmasterol) from Lycopersicon esculentum.

Keywords: Docking;GOLD; Hypertension; Angiotensin-converting enzyme (ACE); Renin; Extracellular regulated kinase (ERK)

Introduction

Hypertension is a highly prevalent cardiovascular risk factor (Zoccali et al., 2002) and an increase in blood pressure (BP) increases the risk of developing heart disease, obesity (Chow et al., 2010). Recently, researchers evaluated the association between dietary habits and levels of blood pressure (BP) in 4,304 women and men aged 18 to 20 observed that whole grains have been consistently associated with lower blood pressure (Steffen et al., 2005). Furthermore, the researchers suggested that high intakes of plant foods and low intakes of meat products may help high blood pressure treatment and these benefits can be linked to the presence of specific compounds in plants. Various plants have been tested for their efficacy in modulating hypertension, however, when literature was searched for computer-aided docking studies on compounds from plants vs. proteins that mediate hypertension, none of the reports were found to contain the required information. Also, many virtual screening studies have been reported in literature stating the importance of dataset, algorithms and scoring functions, whereas none of the works contain screening compounds from plants. This provided us the rationale to screen plant based compounds using GOLD (Genetic Optimisation for Ligand Docking) software. Hence, in this paper we report screening various compounds from seven plant sources (*Allium sativum, Coriandrum sativum, Dacus carota, Murrayya koneigii, Eucalyptus globus, Calendula officinalis and Lycopersicon esculentum*) against proteins, Angiotensin 1-converting enzyme 1UZE (PDB id) (Natesh et al., 2003), renin 2IKO (White et al., 2000) and extracellular regulated kinase 2(ERK2) 3ERK, (Xu et al., 1996) extracted from Protein Data Bank (PDB), respectively.

Materials and Methods

Virtual screening

Virtual screening utilizes docking and scoring of each compound from a dataset and the technique employed is based on the prediction of binding modes and binding affinities of each compound in the dataset by means of docking to an X-ray crystallographic structure (Jalaie and Shanmugasundaram, 2006). Some recent studies (Warren et al., 2006) have focused on certain crucial factors such as the size and diversity of the ligand dataset, wide range of targets and the evaluation of docking pro-

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To Implement File Based Access control using Identity based Secured Distributed Data Storage

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Classification and Clustering of User Mails by Using an Improved k-means Clustering Algorithm

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Abstract

K-approach clustering has been extensively used to advantage perception into organic systems from huge-scale lifestyles science records. To quantify the similarities among bio ogical facts units, Pearson correlation disance and standardized Euclidean distance are used maximum frequently; however, optimization techniques were in large part unexplored. Those two distance measurements are equivelent inside the feel that they yield the same ok-approach clustering end result for same sets of ok preliminary centroids. for that reason, an efficient set of rules used for one is applicable to the alternative. numerous optimization techniques are available for the Euclidean distance and may be used for processing the standardized Euclidean distance; but, they're no longer custom designed for this context. We as an alternative approachec the trouble by analyzing the homes of the Pearson correlation distance, and we invented an easy but effective heuristic approach for markedly pruning unnecessary computation while keeping the final solution.

Keywords: Classification, Clustering, Preprocessing, Word frequency.

1. Introduction

Clustering, an unmonitored gaining knowledge of set of rules to group information into similar classes, has been widely used to benefit insights into biological structures from large-scale organic facts, which includes gene expression records monitored with the aid of microarrays [1], [2], [3], [4], his tone modifications [5], [6], [7], [8], [9], [10], and nucleosome positioning . An expansion of clustering a gorithms, consisting of hierarchical clustering, ok-approach clustering, self-organizing map (SOM), and most important additives analysis (PCA), had been used. of tiese, okay-approach clustering is the most extensively used to procedure big-scale information developing quantity of organic records because of the recent progress in information scnes with the aid of subsequent-generation sequencing.

1.1 Existing System

These days many researchers have proposed the clustering algorithms for class of the facts gadgets into the clusters by way of their similarities. All those research had been concentrated a great deal towards offline and small information units. K-manner clustering is applicable for massive records units; nevertheless its overall performance wishes enhancements. Inside the existing structures, length of the init-centroids reasons the overall performance versions.

1.2 Disadvantages of Existing System

- Applicable for small length datasets.
- Off-line.
- Overall performance is less and eating of excessive computational recources.
- Greater delay.

2. Proposed System

On this paper, we suggest a brand new approach of classification and clustering user mails , the e-mail messages are labeled and implicitly labeled on their arrival. It improves the users viewing comfort. We implement the email clustering technique with the help of an progressed okay-method clustering algorithm. We use Pearson-Correlation-Distance for Initialization of centroids, which facilitates in pruning and improving the performance of the proposed algorithm. Inside the Pearson-correlation-distance

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II. DG and its Impacts on Distribution System and Reliability
III. Problem Formulation
Abstract:
The distribution system is part of the electric power system that links the bulk transmission system and the individual customers. Modern Power systems are smart, interconnected, interdependent, load sharing and phased mission systems. Reliability of such complex power systems is very important in design, planning, installation and maintenance to provide electrical energy as economical as possible with an acceptable degree of reliability. In this paper, an analytical methodology for reliability evaluation and enhancement of electrical distribution systems is described and further an innovative cost effect index to improve the reliability of power systems is developed. The developed algorithm has been implemented on a sample distribution system, where distribution system reliability indices are calculated for an existing system without Dispersed Generation (DG) and compared to those calculated for the same system with some DG units running in parallel with the system. The results demonstrate that DG does improve the reliability of the
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TOPSIS RANKING OF HYBRID COMPOSITES

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Abstract— In This Research Article Epoxy and polyester based composites reinforced with Glass Fiber Fillers are fabricated by manual hand layup process and mechanical properties like Tensile Strength, Tensile modulus, Flexural Strength, ILSS, Hardness and impact strength are determined. Selection of a composite with respect to above mechanical characterization parameters is a difficult task; some selection procedure techniques are required to overcome from this confusion state. TOPSIS is one of the selection procedure technique adopted for this problem. This technique provides a base for decision-making processes where there are limited numbers of choices but each has large number of attributes. In this paper some composites are considered with different compositions and various mechanical properties. Selection of the best composite is done using TOPSIS technique

Index Terms—TOPSIS, Normalized decision matrix, Positive and Negative Ideal solutions, Relative closeness, Ranking.

I. INTRODUCTION

The TOPSIS (technique for order performance by similarity to ideal solution) was first developed by Hwang & Yoon (1981). It is one of the best grading methods of multi criteria decision making (MCDM) that is taken place in compromising subgroup of compensating models of decision making [1]. TOPSIS is a multiple criteria method to identify solutions from a finite set of alternatives based upon simultaneous minimization of distance from an ideal point and maximization of distance from a nadir point [2]. TOPSIS has also been used to compare company performances [3] and financial ratio performance within a specific industry [4]. A great deal of work has already been done on the use of TOPSIS for selection of the best alternatives in many fields. However, the use of TOPSIS for selection of the material is hardly been reported.

II. LITERATURE REVIEW

TOPSIS is a multiple criteria method to identify solutions from a finite set of alternatives based upon simultaneous minimization of distance from an ideal point and maximization of distance from a nadir point. TOPSIS has been applied to a number of applications many researchers. Singh et al. [5] studied the selection of material for bicycle chain in Indian scenario using MADM Approach. They concluded that both MADM and TOPSIS methods User friendly for the ranking of the parameters. Huang et al. [6] studied the multi-criteria decision making and uncertainty analysis for materials selection in environmentally conscious design. It was reported that TOPSIS method demonstrates a reasonable performance in obtaining a solution; and entropy optimal refinement condition to achieve maximum tensile properties of Al-15%Mg2Si composite based on TOPSIS method and observed that the TOPSIS method is considered to be a suitable approach in solving material selection problem when precise performance ratings are available. Ghasemiejad et al. [8] used data envelopment analysis and TOPSIS method for solving flexible bay structure layout, and found that this method is useful for creating initial layout, generating initial layout alternatives and evaluating them. Chakladar and Chakraborty [9] studied the combined TOPSIS-AHP-method-based approach for non-traditional machining processes selection and also include the design and development of a TOPSISAHP- method-based expert system that can automate the decision-making process with the help of a graphical user interface and visual aids. Shahroudi and Rouydel [10] studied a multi-criteria decision making approach (ANP TOPSIS) to evaluate suppliers in Iran's auto industry. Lin et al. [11] studied on customer-driven product design process using AHP and TOPSIS approaches and results shows that the proposed approach is capable of helping designers to systematically consider relevant design information and effectively determine the key design objectives and optimal conceptual alternatives. Isiklar and Buyukozkan [12] studied a multi-criteria decision making (MCDM) approach to assess the mobile phone options in respect to the users preferences order by using TOPSIS method.

III. METHODOLOGY

The objective of this work is to develop TOPSIS method for composite selection. In order to comply with collecting quantitative and qualitative data for

CHARACTERIZATION OF EPOXY/POLYESTER BASED COMPOSITES

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Abstract— Polymer glass fiber reinforced composites plays a vital role in day to day life. The aim of this research Article is processing of Epoxy and polyester based composites reinforced with Glass Fiber and filled with the natural Filler**Arabic Gum Tree Coal Powder** (A.C.P) which is prepared by carbonization of Arabic Gum Tree Stem. Manual hand layup process is adopted for preparation of composite with 2.5wt%, 5wt% and 7.5wt% of A.C.P. with Glass fiber of 40 wt% reinforced in Epoxy/Polyester resins by varying their compositions with respect to the composition of the filler material. After the preparation of composites with the compositions, specimen were prepared as per ASTM Standards for Mechanical characterizations. Tensile Strength, Flexural Strength, ILSS, Impact Strength and Hardness were determined.

Index Terms— Epoxy/polyester composites, A.C.P, Tensile Strength, Flexural Strength, ILSS, Impact Strength, Hardness.

I. INTRODUCTION

Polymer composite with fiber-reinforced materials is of two main categories normally referred to as particle reinforced materials and continuous fiber reinforced materials. Fiber used for advanced composite materials were glass fiber, cotton fiber with high strength in humid environment but degrade under elevated temperature [1-2]. Glass fiber is the typical reinforcing material for thermoset matrices for various structural applications. Woven fabric reinforced epoxy composites are well known for their high ratios of strength and stiffness to weight in orthotropic direction. These attractive characteristics of the composites have resulted in numerous applications of the materials in areas where high performance and light weight of structures are essential [3]. Sarcja Devi [4], and Ramakrishna [5] have researched the mechanical properties of fly ash-filled general-purpose unsaturated polyester resin. Wong and Truss [6] reported the effect of fly ash addition and the effect of coupling agent on the tensile and impact properties of polypropylene (PP). Gowdaa and Naidu [7] studied the mechanical properties of woven jute fabric-reinforced polyester resin composites.

II. METHODOLOGY

The objective of this work is to fabricate the composites by using simple hand-layup technique. From the prepared compositesthe specimens are cut as per ASTM Standards for mechanical characterization of composites. Composites designation and experimental values are tabulated in table-1&2.

Designation of composite	Composition
Ce1	57.5wt%Epoxy+40 wt%G.F+2.5 wt% A.C.P
Ce2	55 wt% Epoxy+ 40 wt% G.F+ 5 wt% A.C.P
Ce3	52.5wt%Epoxy+40 wt%G.F+7.5 wt% A.C.P
Ce0	60 wt% Epoxy+ 40 wt %G.F
Cp1	57.5 wt%P+40 wt%G.F+2.5 wt% A.C.P
Cp2	55 wt% P+ 40 wt% G.F+ 5 wt% A.C.P
Cp3	52.5 wt%P+40 wt%G.F+7.5 wt% A.C.P
Cp0	60 wt% P+ 40 wt %G.F

Material Test Details

Tensile Strength and Tensile Modulus

As per ASTM –D-638-III the dog bone type specimen with end tabs is used for tensile test. On TUE-C-200, 2013/50 machine tensile test was performed. From tensile strength we have to find out the tensile modulus using the formula.

$$E=\sigma * l/\delta l$$

Where, σ= tensile strengthδl = Elongation l= length of the specimen

Flexural and Inter Laminar Shear Strength

By using three point bend test on universal testing machine TUE-C-200, 2013/50 for the specimen of size as per ASTM D-790-2003, we can determine the flexural strength and ILSS.

The ILSS equation is

$$ILSS = 3P/4bd$$

And the flexural strength equation is

$$\text{Flexural strength} = 3PL/2bd^2$$

Where, P= maximum load applied on the specimen b = width of the specimen

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- > working in the fields of advanced fuels and their formulation
- > with interest in the fields of design and production

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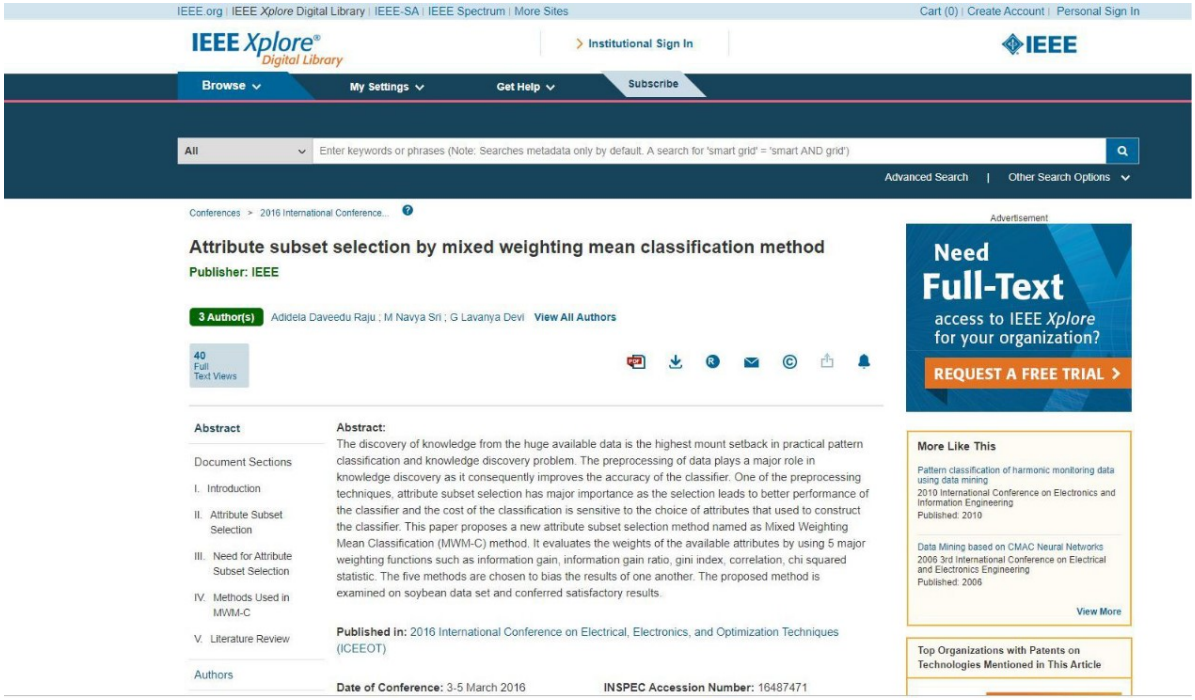
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I. Introduction
II. Attribute Subset Selection
III. Need for Attribute Subset Selection
IV. Methods Used in MWM-C
V. Literature Review
Authors
Abstract:
The discovery of knowledge from the huge available data is the highest mount setback in practical pattern classification and knowledge discovery problem. The preprocessing of data plays a major role in knowledge discovery as it consequently improves the accuracy of the classifier. One of the preprocessing techniques, attribute subset selection has major importance as the selection leads to better performance of the classifier and the cost of the classification is sensitive to the choice of attributes that used to construct the classifier. This paper proposes a new attribute subset selection method named as Mixed Weighting Mean Classification (MWM-C) method. It evaluates the weights of the available attributes by using 5 major weighting functions such as information gain, information gain ratio, gini index, correlation, chi squared statistic. The five methods are chosen to bias the results of one another. The proposed method is examined on soybean data set and conferred satisfactory results.
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Computerized Cloud Based File Storage Nodes Balancer

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Abstract: In Distributed record frameworks, hubs at the same time serve processing and stockpiling capacities; a document is divided into various lumps dispensed in different hubs with the goal that Map-reduce undertakings could be performed in parallel over the hubs. Anyhow in his construction modeling, Storage hubs unequivocally rely on upon a focal server for lump reallocation which happens to be a manual and tedious methodology. This reliance is plainly deficient in an extensive scale, disappointment inclined environment in light of the fac that the focal burden balancer is put under respectable workload as it all the while need to handle stockpiling hubs and approaching customer associations that is directly scaled with the framework size, and may accordingly turn into the execution bottleneck and the single purpose of disappointment. One issue with Map-reduce is that it is basically cluster preparing situated. When you begin the methodology, you can't undoubtedly overhaul the info information and anticipate that the yield will be normal. Hence, Map-reduce is poor at ongoing transforming. Yet, it will stay fine for latence-negligent applications, for example, Extract-Transform-Load or number crunching operations. Anyway because of the element nature of the hosts and heterogeneous structural planning between focal server and capacity hubs incited us to investigate different choices to help parallel transforming other than Map-reduce. Proposes to utilize a product load balancer furnished with a rebalancing calculation in mix with Bulk Synchronous Parallel (BSP) connecting mode for supporting parallel operations rather than Map-reduce. Joined with DSP model to accomplish parallel transforming and utilization of robotized programming burden equalization we develop a proficient cloud document convey demonstrate that has less record development costs, and algorithmic overheads for piecing. A commonsense execution accepts the case.

Index Terms: Cloud Computing, Load Balancer, Automatic Load Balancer.

I INTRODUCTION

Distributed storage framework comprises of gathering of capacity hubs legislated by a brought together server, giving long haul stockpiling administrations over the Internet viably and productively. Different numerical systems for experimental processings focused around the examples of dissipating and get-together of information between preparing hubs are recorded as takes after. Dense Linear Algebra, Sparse Linear Algebra, Spectral Methods, N-Body Methods, Structured Grids, Unstructured Grids, Mapreduce[1], Combinational Logic, Graph Traversal, Dynamic Programming, Backtrack and Branch-and-Bound, Graphical Models, Finite State Machines.

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Superiority of Facilities with Large Conservatory on Cloud Computing

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Abstract: Software as a Service (SaaS) is a software distribution model in which a vendor or service provider develops the applications and this is made available to customers over a network. SaaS clouds are vulnerable to malicious attacks because of their sharing nature. IntTest, a scalable service integrity attestation framework has been anticipated and it uses a novel integrated attestation graph analysis scheme to pinpoint attackers. In this paper, we present IntTest, an effective service integrity attestation framework for SaaS clouds. IntTest provides an integrated graph attestation analysis method that can pinpoint malicious service providers than existing methods. Also IntTest will automatically correct the corrupted result that are produced by the malicious service providers and replace it with good results produced by benign service providers. Our experimental results show that our scheme is effective and can achieve higher accuracy in pinpointing the attackers than the existing approaches.

Keywords: Service Integrity Attestation, Cloud Computing, Software as a Service.

I. INTRODUCTION

Cloud computing has emerged as a cost-effective resource leasing paradigm, which obviates the need for users maintain complex physical computing infrastructures by themselves. Software-as-a-service (SaaS) clouds build upon the concepts of software as a service and service-oriented architecture (SOA), which enable application service providers (ASPs) to deliver their applications via the massive cloud computing infrastructure, illustrated by fig 1.

Fig. 1. Software-as-a Service

In particular, our work focuses on data stream processing services that are considered to be one class of killer applications for clouds with many real-world applications in security surveillance, scientific computing, and business intelligence. However, cloud computing infrastructures are often shared by ASPs from different security domains, which make them vulnerable to malicious attacks. For example, attackers can pretend to be legitimate service providers to provide fake service components, and the service components provided by benign service providers may include security holes that can be exploited by attackers. Our work focuses on service integrity attacks that cause the user to receive untruthful data processing results, illustrated by Fig1. Although confidentiality and privacy protection problems have been extensively studied by previous research, the service integrity attestation problem has not been properly addressed. Moreover, service integrity is the most prevalent problem, which needs to be addressed no matter whether public or private data are processed by the cloud system. Although previous work has provided various software integrity attestation solutions, those techniques often require special trusted hardware or secure kernel support, which makes them difficult to be deployed on large-scale cloud computing infrastructures. Traditional Byzantine fault tolerance (BFT) techniquescan detect arbitrary misbehaviors using full-time majority voting (FTMV) over all replicas, which however incur high overhead to the cloud system.

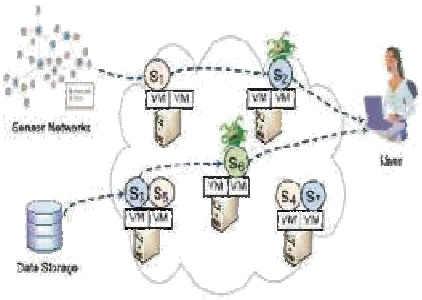
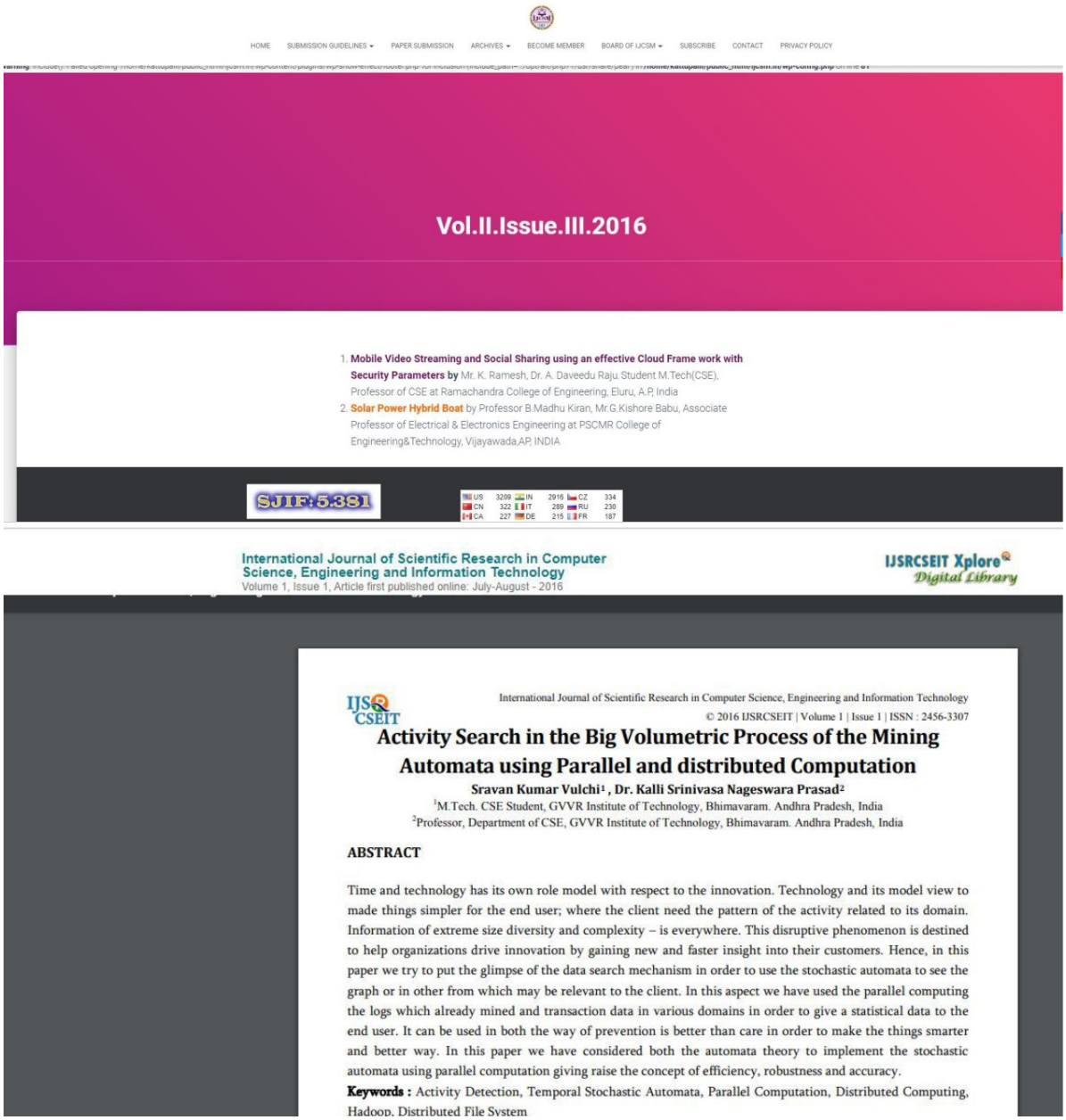


Fig. 2. Service integrity attacks in cloud

In this paper, we present IntTest, a new integrated service integrity attestation framework for multitenant cloud systems. IntTest provides a practical service integrity attestation scheme that does not assume trusted entities on third-party serviceprovisioning sites or require application modifications.



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Activity Search in the Big Volumetric Process of the Mining Automata using Parallel and distributed Computation

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ABSTRACT

Time and technology has its own role model with respect to the innovation. Technology and its model view to made things simpler for the end user; where the client need the pattern of the activity related to its domain. Information of extreme size diversity and complexity – is everywhere. This disruptive phenomenon is destined to help organizations drive innovation by gaining new and faster insight into their customers. Hence, in this paper we try to put the glimpse of the data search mechanism in order to use the stochastic automata to see the graph or in other from which may be relevant to the client. In this aspect we have used the parallel computing the logs which already mined and transaction data in various domains in order to give a statistical data to the end user. It can be used in both the way of prevention is better than care in order to make the things smarter and better way. In this paper we have considered both the automata theory to implement the stochastic automata using parallel computation giving raise the concept of efficiency, robustness and accuracy.

Keywords : Activity Detection, Temporal Stochastic Automata, Parallel Computation, Distributed Computing, Hadoop, Distributed File System

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Decision Making in the Multi-Dimensional Trust by Mining Huge Volume of unstructured E-Commerce Feedback Comments

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ABSTRACT

Information of extreme size, diversity and complexity – is everywhere. This disruptive phenomenon is destined to help organizations drive innovation by gaining new and faster insight into their customers. Market and Technology has its own way of implementation of the strategic decision policy. These days' data mining in the trend o the E-commerce plays the role of the market, as the trend is shifting from classical trend to the electronics trend which in turn we call as E-commerce. If we approach the model of axis model of decision making cannot be without data and information. Hence In this Paper we put forward the concept of the feedback from customer as open text which mined with the specific purpose to study the customer need in the E-commerce market. Vendors like Amazon and Alibaba more customer centric rather to market centric, hence the data will help them what is the trend the customer need rather to the market. In the context, we have implemented the no-sql database based approach to retrieve information in a pattern which the client or customer need. The Divide and Conquer with Map reduced program enables us to reach the destination with the robustness, performance oriented and best of the timely technology solution.

Keywords: Electronic commerce, text mining, Big Data, Hadoop, Volume

I. INTRODUCTION

An incentive mechanism is a system with designed rules ensuring that the actions of big data honestly reporting their information will produce a better outcome for these big data. Mechanism where big data are better off to report truthfully the information of their valuation about requested products. Different incentive mechanisms have been developed by researchers to encourage honesty in the reporting from buying big data in electronic marketplaces, in order to diminish concerns about untruthful ratings. For example, side payment mechanisms offer side

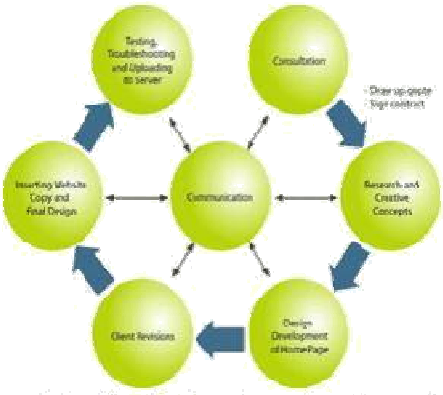

Figure 1. Decision Making Process Cycle Illustration.

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An Identity Based Key Control Mechanism of Photo Sharing Across Online Social Networks.

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RAMACHANDRA COLLEGE OF ENGINEERING

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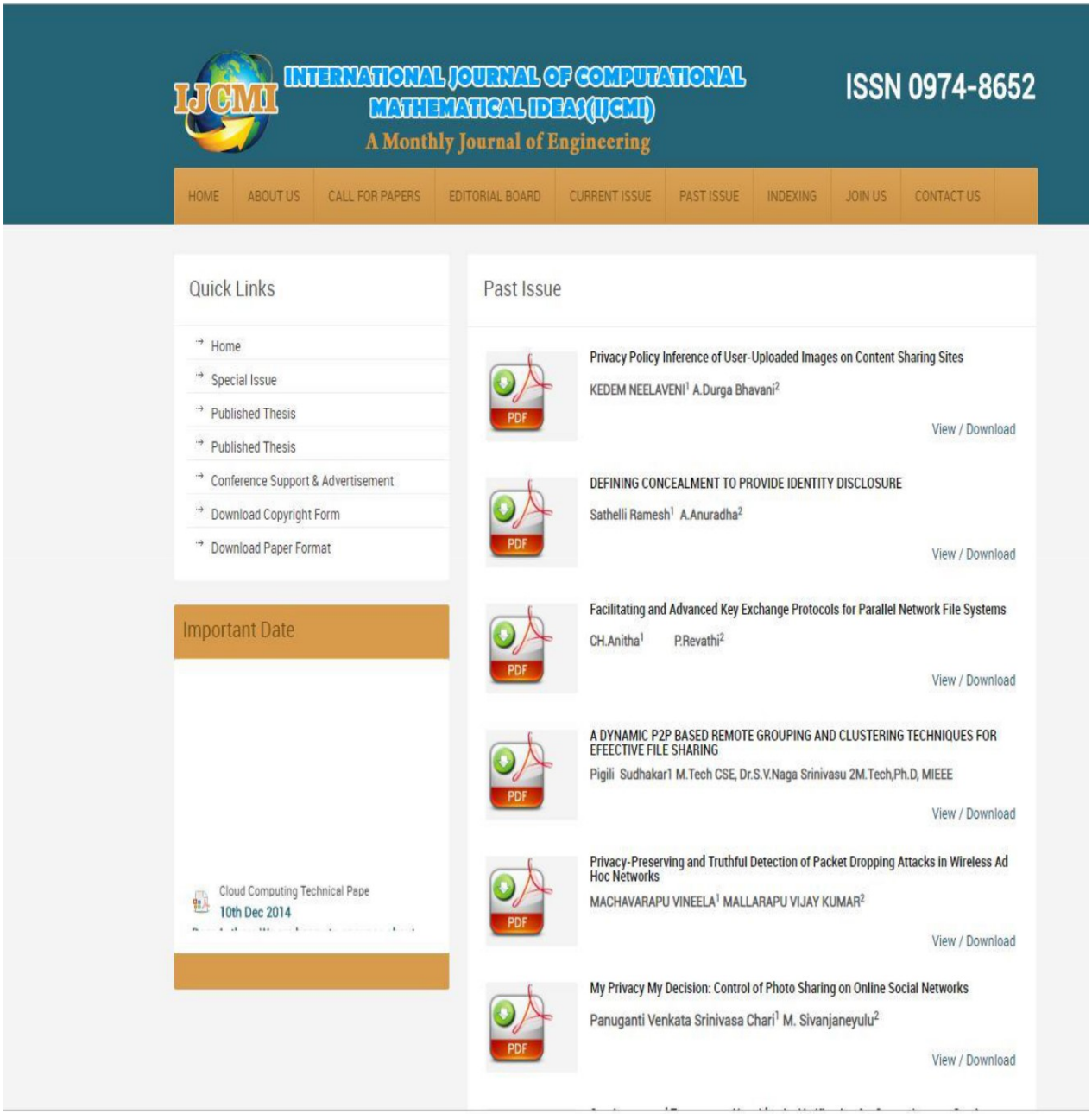
Abstract

Photo sharing is an attractive feature which popularizes Online Social Networks (OSNs). Unfortunately, it may leak users' privacy if they are allowed to post, comment, and tag a photo freely. In this paper, we attempt to address this issue and study the scenario when a user shares a photo containing individuals other than himself/herself (termed co-photo for short). To prevent possible privacy leakage of a photo, we design a mechanism to enable each individual in a photo be aware of the posting activity and participate in the decision making on the photo posting. For this purpose, we need an efficient facial recognition (FR) system that can recognize everyone in the photo. However, more demanding privacy setting may limit the number of the photos publicly available to train the FR system. To deal with this dilemma, our mechanism attempts to utilize users' private photos to design a personalized FR system specifically trained to differentiate possible photo co-owners without leaking their privacy. We also develop a distributed consensus based method to reduce the computational complexity and protect the private training set. We show that our system is superior to other possible approaches in terms of recognition ratio and efficiency. Our mechanism is implemented as a proof of concept Android application on Facebook's platform.

1. INTRODUCTION

Social sites have become important part of our daily life. Online social networks (OSNs) such as face book, Google and sound of birds are inherently designed to make able people to put personal and public information and make social connections with friends, co-workers, persons having like-position, family, and even with strangers. To keep safe (out of danger) user facts, way in control has become a chief thing point of OSNs. However it becomes everlasting record once some photo/image is posted/ uploaded. Late consequences can be dangerous; people may use it information with respect to the users work history birthday, sex, residence, interests, education, and, travel information and be in touch information. Moreover, users upload the picture and tag other people even though they are willing or not willing to be part of uploaded image/content. When other people are tagged the situation becomes more complicated. The user uploading the image is totally unaware of the consequences that arise for the person which is involved in tagging or image. Currently nobody can stop such unavoidable situation. We need to have a control over such actions to minimize the risks of photos being tagged or uploaded. Instead of imposing restrictions over such incidents or increasing security, sites like FB and Instagram are encouraging people to get into such things more. Most of the times user is unwilling to get tagged or being exposed without his permission. Is it violation if we share picture without taking a permission from all the people involved in picture? To answer this we need to explain the privacy and security issues over the social sites. Whenever a photograph is shared it includes everybody's security, which can be put on risk if the proper permissions are not sought. We need to enforce maximum level of privacy and security of the content being uploaded on social sites. So while using the online social networks one can feel desired level of confidence and security. He/she can confidently make use of social sites without worrying or photos being shared in insecure and unauthorized way. Desired level of privacy and security is a first important thing for a user using online social sites. With respect to current architecture and implementations of social sites, either user will alone because highly imposed security constraints else will be impacted by several security threats because of low security mechanisms. Few authors studied about the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SECURED ROUTING FOR MANET'S ADVERSARIAL ENVIRONMENTS

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ABSTRACt: The Mobile Adhoc Networks (MANETs) is remote and element topology system medium, which might experience the ill effects of numerous open security feedback. The real issue of The Mobile Adhoc Networks (MANETs) is to send the information in secure way from source to destination hub in antagonistic (adversary) environment such remote hub correspondence issues are hub activity, hub assault and information getting to of middle hubs. The fundamental point of system is to give unidentifiability and unlinkability to versatile hubs. The current conventions are helpless against the assaults of fake directing packets or Denial-of-Service (DoS) TV, even the hub personalities are ensured by aliases. In this proposed framework another directing convention, i.e., authenticated anonymous secure routing (AASR), to fulfill the necessity and safeguard the assaults has been utilized. All the more particularly, the route ask for packets are validated by a gathering mark, to shield the potential dynamic assaults without revealing the hub personalities. in this paper, we will enhance AASR to diminish the packet delay. The hubs in the same system must help and trust one another in sending packets starting with one hub then onto the next. Notwithstanding, this suggested trust relationship can be undermined by malevolent hubs that might alter or disturb the efficient trade of packets.

Keywords— AASR Protocol, Group Signature, Onion Routing, Mobile Ad Hoc Networks, Secure Routing Protocol (SRP), Trust based Quality of Service (TQoS), Anonymous Routing

I. INTRODUCTION

Mobile ad hoc networks (MANETs) are powerless against security dangers because of the innate attributes of such systems, for example, the open remote medium and element topology. It is hard to give trusted and secure interchanges in ill-adversarial environments, for example, combat zones. On one hand, the foes outside a system might surmise the data about the imparting hubs or movement streams by detached activity perception, regardless of the fact that the interchanges are scrambled. Then again, the hubs inside the system can't be constantly trusted, following a legitimate hub might be caught by adversaries and gets to be vindictive. Therefore, anonymous correspondences are essential for MANETs in antagonistic situations, in which the hubs recognizable pieces of proof and routes are supplanted by irregular numbers or pseudonyms for secure purpose..

Anonymity is characterized as the condition of being unidentifiable inside of an arrangement of subjects. In MANETs, the prerequisites of anonymous communications can be portrayed as a mix of unindentifiability and unlinkability [1]. Unindentifiability implies that the personalities of the source and destination can't be uncovered to different hubs. Unlinkability implies that the route and activity streams between the source and destination hubs can't be perceived or the two hubs can't be connected. The way to executing the mysterious correspondences is to create suitable anonymous secure directing conventions. There are numerous mysterious directing conventions proposed in the previous decade. Our center is the kind of topology-

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A REVIEW ON MULTIPLE USES OF CYAMOPSIS TETRAGONOLOBA (CLUSTER BEAN, GAUR)

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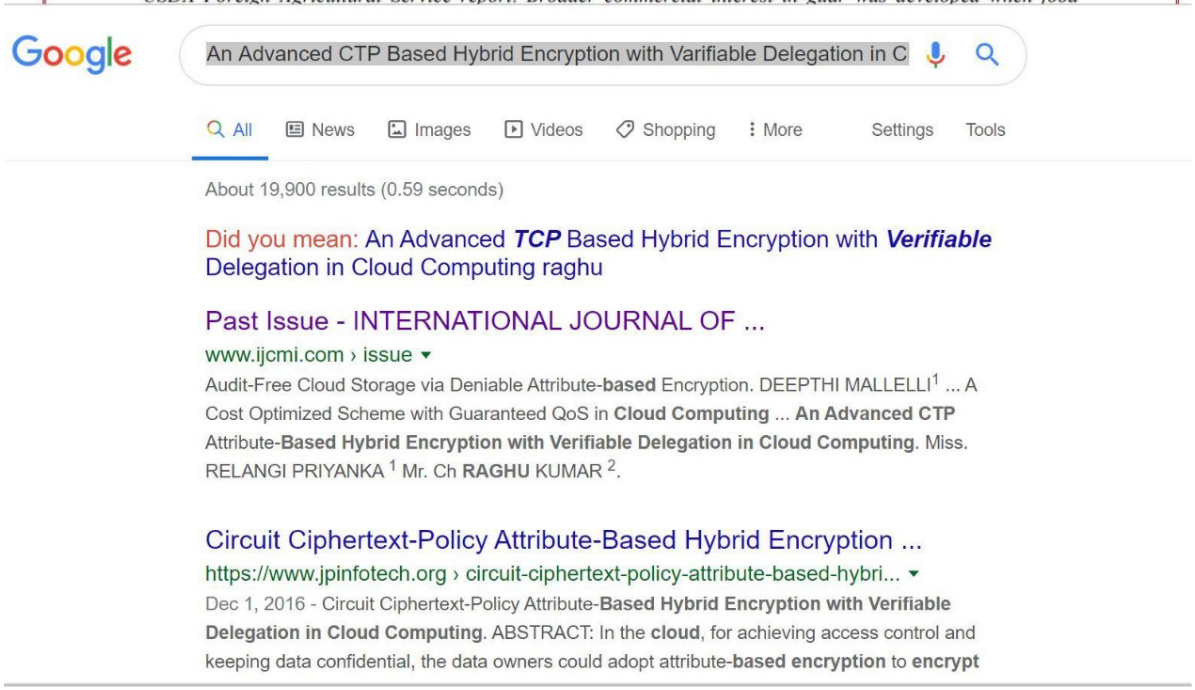
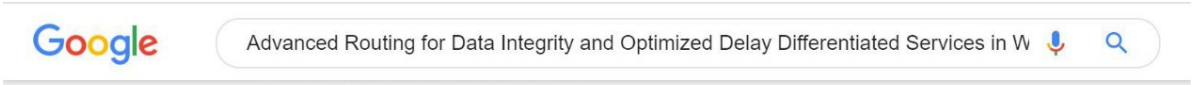
ABSTRACT

India is the leading producer of guar or cluster bean and guar gum in the world. It shares around 85 % production of the world, rest of major production comes from Pakistan. In India Rajasthan is leading producer of the guar seed and guar gum. It contributes around 70 % production of India. Haryana , Gujarat and Punjab are other Guar producing states in India. Guar, a modest bean so hard that it can crack teeth, has become an unlikely global player and become a crucial link in the energy production of the United States. In 2011, guar emerged as India's largest agricultural export to the United States, with sales of $915 million, according to a USDA Foreign Agricultural Service report. Broader commercial interest in guar was developed when food





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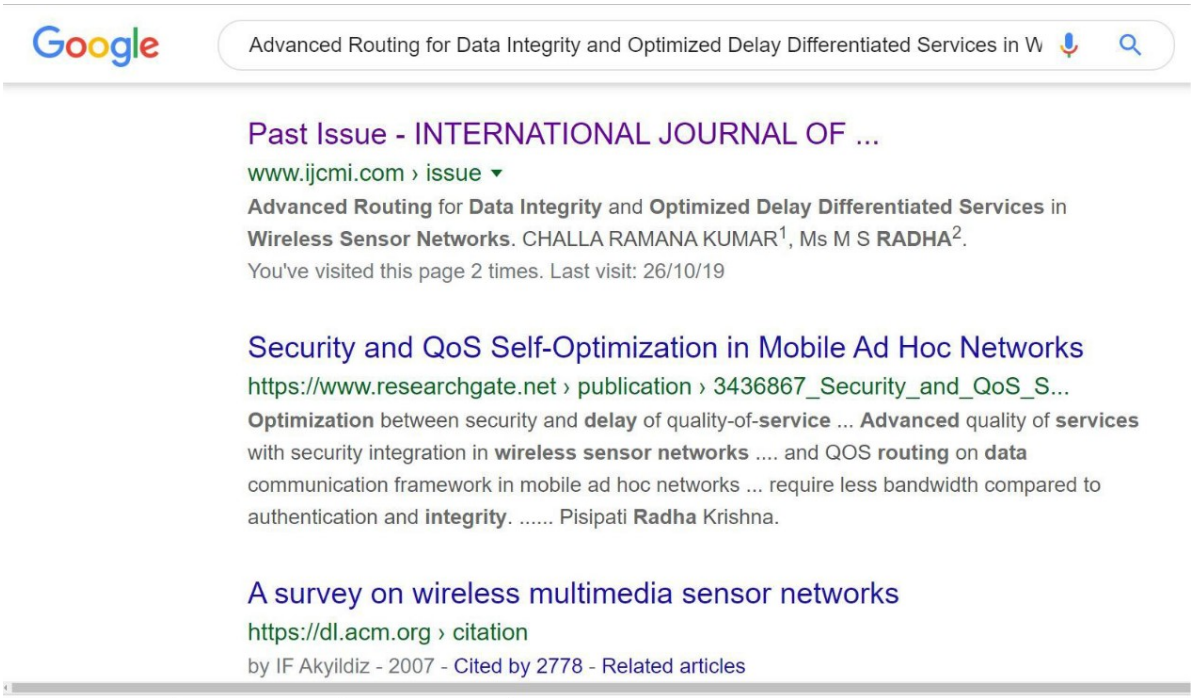
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A Graph theory algorithmic approach to data clustering and its Application

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Abstract

Clustering is the unproven classification of data items, into groups known as clusters. The clustering problem has been discussed in many area of research in many disciplines, this reflects its huge usefulness in the field of data analysis. However, clustering may be a difficult problem statistically, and the differences in assumptions in different disciplines made concepts and methodologies slow to occur. This paperpresentstaxonomy of clustering techniques, and recent advances in graphtheorytic approach. We also describe some important applications of clustering algorithms such as image segmentation, object recognition, and information retrieval.

Key words- weighted graph, clustering, image segmentation, image retrieval.

1. Introduction

Data clustering is an key methodology in explore the data analysis. The main objective of clustering is to partition a dataset into clusters in terms of its basic structure, without resorting to any a priori knowledge such as the number of clusters, the distribution of the data elements, etc. Clustering is a powerful tool and has been studied and applied in many research areas, which include image segmentation [1,2], machine learning, data mining [3], and bioinformatics [4,5]. Although many clustering methods have been proposed in the recent decades, there is no universal one hat can deal with all cluster problems, since in the real world clusters may be of arbitrary shapes, select suitable clustering methods. This is the dilemma of clustering.

Wu, Zhenyu et al [9], introduced a novel graph theoretic approach for data clustering and its application to the image segmentation problem where The data to be clustered are represented by an undirected adjacency graph with arc capacities assigned to reflect the similarity between the linked vertices. Clustering is achieved by removing arcs of to form mutually exclusive subgraphs such that the largest inter-sub-graph maximum flow is minimized. The segmentation is achieved by effectively searching for closed contours of edge elements (equivalent to minimum cuts), which consist mostly of strong edges, while rejecting contours containing isolated strong edges. This method is able to accurately locate region boundaries and at the same time guarantees the formation of closed edge contours.

2. Graph–Theoretic Clustering

We represent the data to be clustered as an undirected edge-weighted graph with no self-loops G =(V, E,w) where V = {1,...,r} is the vertex set, E ⊆ V × V is the edge set, and w : E → IR * +is the (positive) weight function. Vertices in G correspond to data points, edges represent neighborhood relationships, and edge-weights reflect similarity between pairs of linked vertices (fig-1). As customary, we represent the graph G with the corresponcing weighted adjacency (or similarity) matrix, which is the n × n symmetric matrix A = (a_{ij}) defined as[10]-

$$a_{ij} = \begin{cases} w(i,j), & \text{if } (i,j) \in E \end{cases}$$

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Generalized Parallel CRC Computation

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ABSTRACT

This paper presents a theoretical result in the context of realizing high-speed hardware for parallel CRC checksums. Starting from the serial implementation widely reported in the literature, we have identified a recursive formula from the degree of the polynomial generator. Last, we from which our parallel implementation is derived. In comparison with previous works, the new scheme is faster and more compact and is independent of the technology used in its realization. In our solution, the number of bits processed in parallel can be different have also developed high-level parametric codes that are capable of generating the circuits autonomously when only the polynomial is given.

KEYWORDS: *Parallel CRC, LFSR, error-detection, VLSI, FPGA, VHDL, digital logic.*

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I. Introduction

Cyclic Redundancy Check (CRC) is widely used in data communications and storage devices as a powerful method for dealing with data errors. It is also applied to many other fields such as the testing of integrated circuits and the detection of logical faults [6]. One of the more established hardware solutions for CRC calculation is the Linear Feedback Shift Register (LFSR), consisting of a few flip-flops (FFs) and logic gates. This simple architecture processes bits serially. In some situations, such as high-speed data communications, the speed of this serial implementation is absolutely inadequate. In these cases, a parallel computation of the CRC, where customized solutions. This paper presents a customized, elegant, and concise formal solution for building parallel CRC hardware. The new scheme generalizes and improves previous works. By making use of some mathematical principles, we will derive a recursive formula that can be used to deduce the parallel CRC circuits. Furthermore, we will show how to apply this formula and to generate the CRC circuits automatically. As in modern synthesis tools, where it is possible to specify the number of inputs of an adder and automatically generate necessary logic, we developed the necessary parametric codes to perform the same tasks with parallel CRC circuits. The compact representation proposed in the new scheme provides the possibility of significantly

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VLSI Implementation of 32-Bit Unsigned Multiplier Using CSLA & CLAA

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ABSTRACT

In this project we are going to compare the performance of different adders implemented to the multipliers based on area and time needed for calculation. The CLAA based multiplier uses the delay time of 99ns for performing multiplication operation where as in CSLA based multiplier also uses nearly the same delay time for multiplication operation. But the area needed for CLAA multiplier is reduced to 31 % by the CSLA based multiplier to complete the multiplication operation.

KEYWORDS: *CLAA, CSLA, Delay, Area, Array Multiplier, VHDL Modeling & Simulation.*

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I. INTRODUCTION

To humans, decimal numbers are easy to comprehend and implement for performing arithmetic. However, in digital systems, such as a microprocessor, DSP (Digital Signal Processor) or ASIC (Application-Specific Integrated Circuit), binary numbers are more pragmatic for a given computation. This occurs because binary values are optimally efficient at representing many values.

Binary adders are one of the most essential logic elements within a digital system. In addition, binary adders are also helpful in units other than Arithmetic Logic Units (ALU), such as multipliers, dividers and memory addressing. Therefore, binary addition is essential that any improvement in binary addition can result in a performance boost for any computing system and, hence, help improve the performance of the entire system.

The binary adder is the critical element in most digital circuit designs including digital signal processors (DSP) and microprocessor data path units. As such, extensive research continues to be focused on improving the power delay performance of the adder. In VLSI implementations, parallel-prefix adders are known to have the best performance. Reconfigurable logic such as Field Programmable Gate Arrays (FPGAs) has been gaining in popularity in recent years because it offers improved performance in terms of speed and power over DSP-based and microprocessor-based solutions for many practical designs involving mobile DSP and telecommunications applications and a significant reduction in development time and cost over Application Specific Integrated Circuit (ASIC) designs.

Ripple-Carry Adders (RCA):

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RFID Based Security and Access Control System using ARDUINO

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ABSTRACT

There has been rising demand for secure system that must be dependable and quick respond for the industries and company. To secure industries and companies this concept is helpful.

RFID (Radio Frequency Identification) is one of the consistent and fast means of identify the material object. In the long ago the barcode's are more preferable as compared to RFID because of their cost but now a day's RFID are easily available and are more convenient to use. Research has made some drastic changes which makes its programming a lot shorter and easier is because of replacing microcontroller with Arduino. Arduino makes the circuit and programming a bt easier to understand. This project is based upon security access and control system using RFID and Arduino. Security access system is very convenient to use at home, office and commercial buildings

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I. Existing Method

In the long ago the barcode's are more preferable as compared to RFID because of their cost. In those days these barcode's are available for low cost and they are popular in those days. The barcode is scanned by barcode reader and it displays the stored information, thus it provides security.

Limitations:

- The Bar code should be placed nearer to the reader when compare to RFID tags.
- These are very slow than the RFID readers.
- These are inconsistent and inefficient.

II. Proposed Methodology

III. Radio Frequency Identification (RFID)

A. Introduction

Radio Frequency Identification (RFID) technology has been attracting considerable attention with the expectation of improved supply chain visibility for both suppliers and retailers. It will also improve the consumer shopping experience by making it more likely that the products they want to purchase are available.

Recent announcements from some key retailers have brought the interest in RFID to the forefront. This guide is an attempt to familiarize the reader with RFID technology so that they can be asking the right questions when considering

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Comparison of Image Segmentation Algorithms for Brain Tumor Detection

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ABSTRACT

This paper deals with the implementation of Simple Algorithms for detection of size and shape of tumor in brain using MRI images. Generally, CT scan or MRI that is directed into intracranial cavity produces a complete image of brain. This image is visually examined by the physician for detection & diagnosis of brain tumor. However this method of detection resists the accurate determination of stage & size of tumor. To avoid that, this project uses computer aided method for segmentation (detection) of brain tumor by applying Fuzzy C-Means, K-Means, Gaussian Kernel and Pillar K-means algorithms. This segmentation process includes a new mechanism for clustering the elements of high-resolution images in order to improve precision and reduce computation time. The system applies FCM, Gaussian kernel and K-means clustering to the image later optimized by Pillar Algorithm. It designates the initial centroids' positions by calculating the Euclidian distance metric between each data point and all previous centroids. Then it selects data points which have the maximum distance as new initial centroids. This algorithm distributes all initial centroids according to the maximum accumulated distance metric.

In addition, it also reduces the time for analysis. At the end of the process the tumor is extracted from the MRI image and its exact position and the shape is also determined. This paper evaluates the proposed approach for Brain tumor detection by comparing with K-means, Fuzzy C means, Gaussian Kernel and manually segmented algorithms. The experimental results clarify the effectiveness of proposed approach to improve the segmentation quality in aspects of precision and computational time.

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I. Introduction

Every human body is made up of cells. Each cell has a special function and will grow and divide in order to keep the body healthy. When cells lose the ability to control their growth mechanism, cell division starts without any order. The extra cells form as a tissue called as tumor. Tumors are of two types benign and malignant. Benign tumors grow be pumped into the human body to cure the tumor cells depends on the size of the tumor and this can be obtained accurately by Magnetic Resonance imaging (MRI) scan or a CT scan (Computed Tomography).

However, in this paper, MRI scan images are used for the analysis. MRI is a very powerful tool to diagnose brain tumors. After MRI scan, the image is visually examined by a physician for detection &

Identification and Rejection of Defective Ceramic Tile using Image Processing and ARDUINO

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ABSTRACT

Manual Ceramic Tile inspection process is tedious if human operator is employed to look for defective tiles and their elimination. The plain ceramic tiles often have the following types of defects viz Cracks, Blobs and pin holes [1]. The fatigue of human operator deteriorates the quality of the tile being produced. In this paper a novel and simple automatic tile defect identification and elimination system is proposed. The proposed system is built around MATLAB and ARDUINO. The systems performance is evaluated in terms of accuracy and time taken for detection. The Proposed system promises superior performance when compared to the other existing system.

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I. INTRODUCTION

In ceramic tile production process many stages lead to different types of faults and defects on the final product. These defects may occur due to chemical impurities in the material or due to some physical faults in the production process. To reduce the fatigue of human operator at ceramic efficiency for all tiles. The blobs and cracks are common defects that we easily found on the ceramic tile surface. Considering all the problems related to tile inspection, an efficient method is developed for ceramic tile inspection, which can detect blobs and cracks very efficiently on the surface of ceramic tiles. The proposed method is based on image processing and morphological

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Content Based Image Retrieval Using Dominant Color and Texture Features

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ABSTRACT

The purpose of this Paper is to describe our research on different feature extraction and matching techniques in designing a Content Based Image Retrieval (CBIR) system. Due to the enormous increase in image database sizes, as well as its vast deployment in various applications, the need for CBIR development arose. Content Based Image Retrieval (CBIR) is the retrieval of images based on features such as color and texture. Image retrieval using color feature cannot provide good solution for accuracy and efficiency. The most important features are Color and texture. In this paper technique used for retrieving the images based on their content namely dominant color, texture and combination of both color and texture. The technique verifies the superiority of image retrieval using multi feature than the single feature.

KEYWORDS : *Content Based Image retrieval (CBIR), Co-occurrence matrix, Euclidian distance.*

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I. INTRODUCTION

Due to the proliferation of video and image data in digital form, Content Based Image Retrieval (CBIR) has become a prominent research topic. This motivates the extensive research into image retrieval systems. In the earlier image retrieval systems are rather text-based search since the images are required to be indexed. However, with the substantial increase of the size of images as well as the size of image database, the task of user-based annotation becomes very cumbersome, and, at some extent, subjective and thereby, incomplete as the text often fails to convey the rich structure of the images.

This motivates the research into what is referred to as CBIR. Therefore an important problem that a lot of garbage in the results. Also having humans manually enter keywords for images in a large database can be inefficient, expensive and may not capture every keyword that describes the image. Thus a system that can filter images based on their content would provide better indexing and return more accurate results.

For describing image content, color and texture features have been used. Color is one of the most widely used low level visual features and is invariant to image size and orientation.. For representing color in terms of intensity values, a color space is defined as a model. A color component or a color channel is one of the dimensions.

The RGB model uses three primary colors, red, green and blue, in an additive fashion to be able to

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Techniques for Improving BER and SNR in MIMO Antenna for Optimum Performance

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ABSTRACT

The use of multiple antennas for diversity, including MIMO (Multiple Input Multiple Output) is one of the most promising wireless technologies for broadband communication applications. This antenna system is a vital study in today's wireless communication system especially when the signal propagates through some corrupted environments. In our paper new techniques of improving bit error ratio and signal to noise ratio are discussed. Inter symbol interference is a major limitation of wireless communications. It degrades the performance significantly if the delay spread is comparable or higher than the symbol duration. To remove ISI, equalization needs to be included at the receiver end. This paper discusses the merits of the MIMO system and the techniques used for improving BER performance and SNR. In MIMO wireless communication, an equalizer is used to recover a signal that suffers from Inter symbol Interference (ISI) and the BER characteristics is improved and a good SNR can be obtained. Different equalization techniques are discussed in this paper.

KEYWORDS: *MIMO(Multiple input Multiple output), MRC(Maximum ratio combining equalizer), BER(Bit error rate), SNR(Signal to noise ratio), ISI(Inter symbol interference), OFDM(orthogonal frequency division multiplexing)*

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I. INTRODUCTION

The use of multiple antenna technique has gained overwhelming interest throughout the last decade. The idea of using multiple antenna configurations instead of a single one has proven to be successful in enhancing data transfer rate, coverage, security and the overall performance of radio networks. In recent years high data rate techniques have gained considerable interests in communication systems. Signal –to-noise ratio (SNR) is defined as the ratio of the desired signal error rate and signal to noise ratio has become a real challenge for antenna designers. This paper discusses the merits of the MIMO system and the techniques used for improving BER performance and SNR. In MIMO wireless communication, an equalizer is used to recover a signal that suffers from Inter symbol Interference (ISI) and the BER characteristics is improved and a good SNR obtained. Different equalization techniques are discussed in this paper.

1.1 NEED OF MIMO:

Multiple-input multiple-output, or MIMO, is a

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Home Energy Monitoring System Using Internet of Things

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ABSTRACT

This paper presents home energy varying time to time and date vise in graphical representation when ever required through internet. The proposed system evolves the home energy to the next level we can see the data using internet. We should login to access the data by this our data is safe and not hack able. We can see the data on the daily basis check for alteration in the current voltage, temperature, light values for respective loads connected to the system.

KEYWORDS: *Arduino, Internet of things, Triac, Current sensor, voltage Sensor, Temperature Sensor, Light dependent Sensor.*

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I. Introduction

Now -a-day's generation runs with internet in this advanced generation we are using the widely useable and useful technology called Internet of Things. We made communication here through Wi-Fi module. Imagine a world where billions of objects can sense, communicate and share information, all interconnected over public or private Internet Protocol (IP) networks. These interconnected objects have data regularly collected, analyzed and used to initiate action, providing a wealth of intelligence for planning, management and decision making. This is the world of the Internet of Things (IOT).

Home energy:

different climatic conditions in different parts of the country and are benchmarked according to average household energy consumption particular to a given climatic region.

II. Proposed System

In the proposed system Home energy monitoring system consists of different analog and digital devices with various regulating voltages. The project helps to monitor the values in the home loads. The project has indicator for heavy temperature when the temperature reaches the threshold level the indicator tells by rotating dc fan with a switch type connection. The effect of temperature never lies for longer time so it just indicates and turns of when it crosses the base level or threshold level set by the code which we

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Gesture Vocalizer

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ABSTRACT

Generally dumb people use sign language for communication but they find difficulty in communicating with others who don't understand sign language. This project aims to lower this barrier in communication. It is based on the need of developing an electronic device that can translate sign language into speech in order to make the communication take place between the mute communities with the general public possible. A Wireless data gloves is used which is normal cloth driving gloves fitted with flex sensors along the length of each finger and the thumb.

Mute people can use the gloves to perform hand gesture and it will be converted into speech so that normal people can understand their expression. Sign language is the language used by mute people and it is a communication skill that uses gestures instead of sound to convey meaning simultaneously combining hand shapes, orientations and movement of the hands, arms or body and facial expressions to express fluidly a speaker's thoughts. Signs are used to communicate words and sentences to audience.

KEYWORDS: *Gestures, Arduino UNO, Flex sensors, APR 9600.*

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I. INTRODUCTION

A single standard, universally accepted scheme does not exist for Sign Language. When India ratified the United Nations Convention on the Rights of Persons with Disabilities (UNCRPD), India made a promise to the world that she would ensure that dumb and deaf people will be treated equally and will enjoy the same rights as other Indian citizens. But the absence of such a common sign language model proves to be a roadblock in the efforts to treat the Deaf and speech impaired people conclusion to make a simple prototype by taking some of those gestures and convert it into audio and visual form so that they can understand by everyone. For that we are making use of Arduino UNO Board as Atmega 328 Controller board to interface all of the sensors and actuators..

Basically an Artificial Network is the concept of our prototype. Some sensors are placed on the hand of deaf people which converts the parameter like finger bend hand position angle into electrical signal and provide it to Atmega 328 controller and controller take action according to the sign.

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An Effective Approach for Colour Image Transmission using DWT Over OFDM for Broadcasting Applications

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ABSTRACT

Image transmission over the fading channels without degrading the perceptual quality is a challenging task while mitigating the power consumption in many fields such as broadband networks, mobile communications, Image sharing and video broadcasting. Also, it is not possible to resend the lost packets every time in many applications such as video broadcasting. Here, an effective approach for color image transmission has been proposed with power saving approach over OFDM system. Experimental results shows that the reception quality of received image is good enough with various peak signal to noise ratios also saved 50% of energy.

KEYWORDS : *Image transmission, OFDM, DWT, PSNR and video broadcasting.*

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I. INTRODUCTION

In general, there is always a need for higher data rates over any communication network. But due to the inter symbol interference (ISI) and frequency selective fading channel such as Rayleigh fading channel, higher data rates will be limited [1], [2] and [3]. One of the best approaches to mitigate the ISI is multi-carrier modulation [4]. Orthogonal frequency division multiplexing is a well known multi-carrier modulation scheme that is having excellent performance which allows overlapping in frequency domain [5-6]. In OFDM, individual sub channels are affected by flat fading, so for a period of time, condition of the sub channels may be good, or they might be deeply faded.

The packets which are transmitted through these faded sub channels are highly prone to be compress the data packets that could be directly transmitted over the error-prone sub channels, with the coefficients having lower variances (i.e., with lower importance levels, high pass coefficients) mapped onto 'bad' sub channels. Thus, the more important coefficients are protected from likely losses in the transmission process.

The lost coefficients in DWT image would still introduce lesser distortion. A key observation is that, the unequal importance level of the compressed image coefficients can be combined intelligently with the binary channel state feedback to achieve an improved transmission performance in delay-sensitive applications. This feedback can also be used further for energy saving in the transmission process with little or no trade-off in transmission performance.In this

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Optimization of Delay and Error Correcting using Fault Tolerant Parallel Filters

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Abstract: Filters play a vital role in digital signal processing systems. In some cases, the reliability of those systems is critical, and fault tolerant filter implementations are needed. Over the duration, lots of techniques that make use of the filters structure and properties to achieve fault tolerance have been proposed. As technology scales, it enables more complex systems that incorporate many filters. In those complex systems, it is common that some of the filters operate in parallel, for example, by applying the same filter to different input signals. Recently, a simple technique that exploits the presence of parallel filters to achieve fault tolerance has been presented. This new scheme allows more efficient protection when the number of parallel filters is large. By incorporating Brent Kung adder (BKA) and Vedic multiplier in parallel filters area has been reduced. Parallel finite impulse response filters is used to evaluate this technique to ensure the effectiveness in terms of protection and area. The proposed scheme coded in VerilogHDL and simulated using Xilinx 14.3.

Keywords: FIR Filter, Error Correction Code, Brent Kung Adder (BKA), Vedic Multiplier.

I. INTRODUCTION

Electronic circuits are increasingly present in and space applications where reliability is critical. In those applications, the circuits have to provide some degree of fault tolerance. This need is further increased by the intrinsic reliability challenges of advanced CMOS technologies that include, e.g., manufacturing variations and soft errors. A number of techniques can be used to protect a circuit from errors. Those range from modifications in the manufacturing process of the circuits to reduce the number of errors to adding redundancy at the logic or system level to ensure that errors do not affect the system functionality.

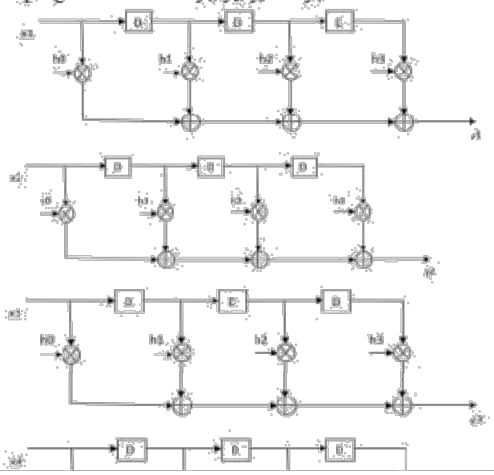
$$Y[n] = \sum_{i=0}^{\infty} x[n-i].h[i] \quad (1)$$

Where x[n] is the input signal, y[n] is the output, and h[I] is the impulse response of the filter. When the response h[I] is nonzero, only for a finite number of samples, the filter is known as a FIR filter, otherwise the filter is an infinite impulse response (IIR) filter impulse response of the filter.

To protect a circuit from errors a large number of techniques can be used. Those range from modifications in the manufacturing process of the circuits to reduce the number of errors to adding redundancy at the logic or system level to ensure that errors do not affect the system functionality. A common technique known as triple modular redundancy (TMR)

II. EXISTING FILTER STRUCTURE

The existing pipeline filter structure is shown in the Fig.1. This filter structure is designed for four input and four filter coefficients. The four filters are considered to be x_1, x_2, x_3 and x_4 and the filter coefficients are found to be h_0, h_1, h_2 and h_3. The output generated will be y_1, y_2, y_3 and y_4.



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Foetal Heartbeat and Volume Detection Using Spherical Harmonics Shape Model for Level Set Segmentation

Authors | Authors and affiliations

K. Sujatha ✉, V. Balaji, Nallamilli P. G. Bhavani, S. Jayalakshmi

Conference paper
First Online: 31 August 2018

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Abstract

The paper is aimed to estimate the heartbeat and volume of a foetus based on three-dimensional images from ultrasonic using image processing algorithms. Since human soft tissues show a minimal intensity difference, the ultrasonic produces poor quality image. Enhancement of the boundary is done to recover the deprived image which is the input image for segmentation. Simultaneously, the superfluous edges in the foetus image are removed to enhance the quality. Nonlinear dispersal techniques were incorporated for foetal image enhancement method. Foetus images are processed using segmentations based on iso-intensity and edge focusing to achieve apt and comprehensible edge image. The iso-intensity shape method is applied to sort the pixel values with equal intensity. Another shape-based method,

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Reliability investigation of electric distribution system with nano-grid architectures using hybrid dispersed generation (HDG)

Publisher: IEEE

3 Author(s) S. Subramanya Sarma ; V. Machusudhan ; V. Ganesh View All Authors

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Abstract:

In this investigation, hybrid generation systems such as photovoltaic arrays, wind turbine generators, and storage batteries, which are optimal in terms of multiple criteria including cost, reliability, and emissions are used to build nano-grid architectures integrated to conventional distribution systems. In this study, Hybrid generation systems under different design scenarios are designed based on the renewable energy sources. First, a grid linked hybrid system is designed without incorporating system uncertainties. Then, reliability evaluation is conducted based on probabilistic methods by accounting for equipment failures, time-dependent sources of energy, and stochastic generation/load variations. In particular, due to the unpredictability of wind speed and solar insolation as well as the random load variation, time-series models are adopted to reflect their stochastic characteristics. Sensitivity studies are also carried out to examine the impacts of different system parameters on the overall design performance.

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Reliability investigation of electric distribution system with nano-grid architectures using hybrid dispersed generation (HDG)

Publisher: IEEE

3 Author(s) S. Subramanya Sarma ; V. Machusudhan ; V. Ganesh View All Authors

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Figures

Abstract:

In this investigation, hybrid generation systems such as photovoltaic arrays, wind turbine generators, and storage batteries, which are optimal in terms of multiple criteria including cost, reliability, and emissions are used to build nano-grid architectures integrated to conventional distribution systems. In this study, Hybrid generation systems under different design scenarios are designed based on the renewable energy sources. First, a grid linked hybrid system is designed without incorporating system uncertainties. Then, reliability evaluation is conducted based on probabilistic methods by accounting for equipment failures, time-dependent sources of energy, and stochastic generation/load variations. In particular, due to the unpredictability of wind speed and solar insolation as well as the random load variation, time-series models are adopted to reflect their stochastic characteristics. Sensitivity studies are also carried out to examine the impacts of different system parameters on the overall design performance.

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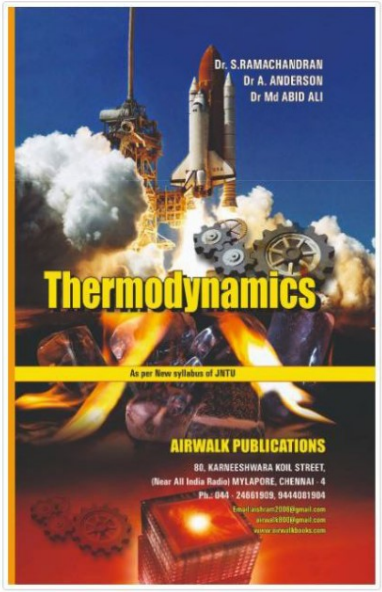

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Wood-Plastic Composites (WPC) are very promising and sustainable green materials to achieve durability without using any toxic chemicals. The term WPC refers to any composites that contain plant fibers combined with thermoses or thermoplastics. In comparison to other fibrous materials, plant fibers are in general suitable to reinforce plastics due to relative high strength to weight ratios, low cost, low density, low CO2 emission, biodegradability and annually renewable. Plant fibers as fillers and reinforcement for polymers are currently the fastest growing type of polymer additives. Since automakers are aiming to make every part either recyclable or biodegradable, there still seems to be some Scope for green-composites based on biodegradable polymers and plant fibers. From a technical point of view, these bio-based composites will enhance mechanical strength and acoustic performance, reduce material weight and lower production cost including dimensional stability.

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Dynamic Analysis of Revitalizing Systems in a Steel Turbine Building

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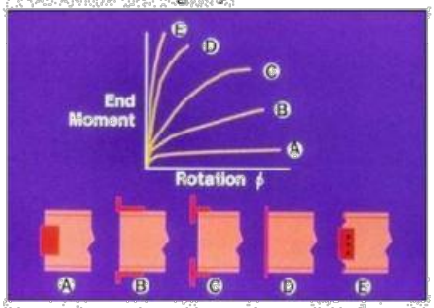
ABSTRACT:
The effective use of bracing systems for as a structural system is of vital importance in the seismic design of structures. Bracing systems are usually analyzed for wind loading only because it is one of the most commonly used lateral load resisting element. Usually for the steel struc- ture the failure is governed by wind loading because of its lesser self-weight when compared to RC structures. But when seismic activity is greater than a particular scale, then the failure governing criteria may vary. It is a model with steel superstructure and concrete foun- dation and three commonly used bracing systems namely X-bracing, K -bracing and V-bracing are incorporated into the structure separately. All the three models were subjected to two types of analysis. Equivalent static meth- od for static analysis and Response spectrum method for dynamic analysis was used. In this project a composite structure is modeled with the help of STAAD pro V8i software.

INTRODUCTION:
The present day scenario in the construction industry is the efficient seismic design of the structure. Both concrete and the steel structures have to be reinforced with sys- tems that resist the lateral loads. Namely, there are three types of lateral load resisting structures. There are two types of connections in structural steel, they are simple (shear) connections and moment connections. Bracing systems are to be used separately for lateral stability when the joints have shear connection and in the case of rigid frames moment connections are used. Below Fig shows the type of connections and their rigidity.



The braced frame is an integral part of the lateral load resisting system in structural steel construction. The brac- ing systems are generally governed by the wind loading and as well as the seismic loading in some criteria. The diagonal bracing creates a stable triangular configuration within the steel frame. It is also one of the most economi- cal methods of resisting the wind loads in both open and closed structures.The turbine hall, generating hall or tur- bine building is a building or room in any steam cycle or hydroelectric

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Experimental, Cae Evaluation and Optimization of Hard Turning of Aisi D3 Tool Steel

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ABSTRACT: Machining operation is still irrefutably vital process in manufacturing, that involves complex relation of process parameters (like cutting speed, feed rate, depth of cut, nature of cooling, etc.) to performance characteristics (like surface finish, tool life, tool wear, machining time, machining cost, etc.). Numerous efforts were noticed in literature, to relate these parameters with each other so as to implement cost effective machining with lees efforts. The present work is one such attempt made towards optimisation of cutting parameters for turning of AISI D3 under wet environment using reliable optimization techniques like Shifted Hammersley Sampling (Screening) and Multi-Objective Genetic Algorithm (MOGA) using Response Surface Generation Technique. The Design of Experiments (DOE) was established based on Central Composite Design (CCD) with 3 levels for each input parameter. The results of experiments were verified by simulating similar machining conditions within a virtual machining facility eased by CAE software package 'Deform 3D'. The optimisation of cutting parameters is carried out in 'ANSYS workbench 15 DesignXplorer for optimization'. Various response surfaces are generated using Kriging Technique to understand the effect of process parameters on each performance characteristic that is to be optimized. The optimum values suggested by each optimization technique are compared so as to arrive at the best feasible optimum value for wet machining.

KEYWORDS: Hard turning; Computer aided engineering; Optimization; Shifted hammersley sampling; MOGA.

INTRODUCTION

An intense research was observed in the field of machining, particularly in optimising the cutting parameters of turning operation and other such similar machining operations. The production time and cost majorly depend on cutting parameters like feed rate, cutting speed, depth of cut etc. Balance in these parameters would result in prolonged tool life and reduce machining efforts. Till recent times, control of these parameters was left to the expertise of shop floor machine operators. But with the non-availability of equally skilled operators in large numbers, a scientific alternative is much required so as to ensure that these parameters are met in a well-organised (or automated) method. Various attempts are made to effectively utilise these parameters and literature echoes the fact that the progress went at a slow pace. Although numerous conclusions were derived depending on the set of operating conditions, thrust is still expected in this area, in establishing well optimised conditions that can effectively handle all practical complexities. In order to experience reliable and cost effective result, latest optimisation techniques were often used. In present work, few such optimisation techniques viz., Shifted Hammersley Sampling (Screening) and Multi Objective Genetic Algorithm (MOGA) were used and an attempt was made to analyse the cutting parameters for a wet turning process.

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Mechanical Characterization & TOPSIS Ranking of Glass Fiber Reinforced particulate filled Epoxy based Hybrid Composites

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ABSTRACT

In this Research article, Epoxy (E) based composites reinforced with E-Glass fiber (G.F) and filled with two different micro fillers saw wood dust(S.W.D) and cattle bone powder(C.B.P) were fabricated by manual hand layup technique with appropriate compositions of raw materials. After fabrication of composites, to investigate the mechanical properties like Tensile Strength (T.S), Tensile Modulus (T.M), Flexural Strength (F.S), Inter Laminar Shear Strength (ILSS), Impact Strength (I.S), Hardness (H) of composites with and without fillers they are cut in to specimens as per ASTM Standards. The tests were conducted on those specimens for mechanical characterization and results were tabulated. The possible reasons for increase/decrease in the mechanical characterization are explained and finally the TOPSIS (Technique for Order Performance by Similarity to Ideal Solution) is implemented to measure the proximity to the ideal solution.

KEY WORDS- Epoxy (E), E-Glass Fiber (G.F), Saw Wood Dust (S.W.D), Cattle Bone Powder (C.B.P), Mechanical characterization.

1. INTRODUCTION

Due to several physical limitations like low resistance to impact on loading, low stiffness of polymers, they do not have required mechanical strength for application in various fields. To overcome this problem the reinforcement should be done in to the polymer with high strength fibers (Rufai & Lawal, 2015). The synthetic or manmade fibers like Glass, carbon and Kevlar fibers are provided as reinforcement to get high strength to weight ratio and high strength as compared to conventional materials or mono materials. But due to high initial cost, adverse effect on environment the usage of synthetic fibers is decreasing (Prakash Tudu, 2009). To reduce the usage of synthetic fibers natural fibers should be used in place of synthetic fibers as reinforcement otherwise combination of synthetic and natural fibers are used as reinforcement in polymers to reduce the usage of synthetic fibers. For various industrial applications and fundamental research the interest in usage of natural fiber as reinforcement in polymer composites is rapidly growing (Deepa, 2011). These natural fibers/fillers are biodegradable, recyclable, renewable and cheap (Gulbarga and Burli, 2013; Kasama and Nitinat, 2009; Joshi Drzal, 2004; Roe and Ansell, 1985; Zadorecki and Michell, 1989). Due to high hardness, non-toxic, good acoustic resistance and hard wearing quality saw wood dust is potential material for the development of new composites which are used in automotive industry. In structural applications like door panels, window parts, decking, fencing, outdoor furniture, roofline products, furnishing, packaging etc. for automotive industry and building industries wood filled composites are used (Markarian, 2002; Pritchard, 2004; Joshi, 2004; Rozman, 2000; Gachter and Muller,1990; Canche-Escamilla, Rodriguez-Laviada, Cauich-Cupul, Mendizabal, Puig and Herrera-Franco, 2002; Coutinho, 1997; Balasuriya, 2002; Raj, Kokta, 1989; Netravali and Chabba, 2003). Due to high stiffness and strength, Low density, and low price wood fillers are used in composites (Bledzki, 1998; Dalava, 1985; Park and Balatinecz, 1996; Nogellova, 1998).The tensile strength and tensile modulus were increased when Silane treated wood flour is added to poly propylene (Ichazo, Albano, González, Perera and Candal, 2001). (Agunsoye, 2013) studied the effect of cow bone powder as filler in polyethylene and found that addition of cow bone powder to polyethylene improved the strength and wear properties. (Isiaka, 2013)

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Influence of Vibration, Heat treatment and Turning Inserts on Machinability and Surface Characteristics of Modified Al-Si-Mg cast Alloys

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ABSTRACT

The microstructures, machinability and surface characteristics of Al-(8-15) %Si-0.35Mg cast alloys in modified, vibrated and heat treated conditions were studied. The optimum parameters for obtaining best quality machining with minimum energy consumption or maximum tool life were determined. Results indicate that combined effect of vibration and heat treatment on modified Al-(8-16) %Si-0.35% Mg cast alloys have microstructures consisting of uniformly distributed α-Al grains, eutectic Al-silicon and fine Mg2Si particles in the interdendritic region. These alloys exhibited better machinability and surface finish in the cast condition compared with the same alloy subjected to only modification or vibration. Performances of the turning inserts (PVD and CVD diamond tipped) and Carbide tipped tool were evaluated in machining Al-(8-16) %Si-0.35% Mg cast alloys under dry environment using a lathe. The CVD diamond tipped insert outperformed the Carbide tipped tool or PVD-coated cutting inserts which suffered from sizeable edge buildup leading to higher cutting force and poor surface finish. This work attempts to investigate the influence of mould vibration, heat treatment and combined effect of both on the micro structural changes in the modified Al (8-16)%Si 0.35%Mg cast alloys and their machinability and surface finish when different turning inserts and tools used.

KEYWORDS: *Cast Al-(8-16) % Si-0.35% Mg Alloys, Mould Vibration, Heat Treatment, Machinability.*

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I. INTRODUCTION

It is the reason for the wide acceptance of the Al–Si alloys can be found in the attractive combination of physical properties and generally well known. However, cutting tool performance is found wanting, in machining materials like Al–Si alloys, whose use is increasing in the expanding automobile industry. The cutting tools suffer from rapid wear because of strong adhesion and

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Transient Analysis of Disc Brake

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M Vimal Teja , Raffi Mohammed, B Sudhakara Rao, V Sai Surendra, G Chitti Babu "Transient Analysis of Disc Brake", *International Journal for Modern Trends in Science and Technology*, Vol. 03, Issue 08, August 2017, pp.-81-85

ABSTRACT

In this paper the thermo elastic phenomenon occurring in the disc brakes, the occupied heat conduction and elastic equations are solved with contact problems. The numerical simulation for the thermo elastic behavior of disc brake is obtained in the repeated brake condition.

The computational results are presented for the distribution of heat flux and temperature on each friction surface between the contacting bodies. Also, thermo elastic instability (TIE) phenomenon (the unstable growth of contact pressure and temperature) is investigated in the present study, and the influence of the material properties on the thermo elastic behaviors (the maximum temperature on the friction surfaces) is investigated to facilitate the conceptual design of the disc brake system. Based on these numerical results, the thermo elastic behaviors of the carbon-carbon composites with excellent mechanical properties are also discussed.

KEYWORDS: *Disc Brake, Cast iron, Heat Flux, Thermal Conductivity, FEA, ANSYS*

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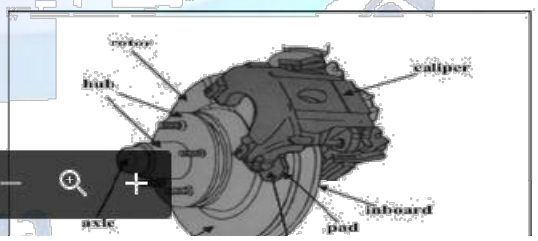
I. INTRODUCTION

A disc brake consists of a cast iron disc bolted to the wheel hub and a stationary housing called caliper. The caliper is connected to some stationary part of the vehicle like the axle casing or the stub axle as is cast in two parts each part containing a piston. In between each piston and the disc there is a friction pad held in position by retaining pins, spring plates etc. passages are drilled in the caliper for the fluid to enter or leave each housing. The passages are also connected to another one for bleeding. Each cylinder contains rubber-sealing ring acts as return spring and retract the pistons and the friction pads away from the disc.



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Preparation and Characterization of Rubber Lining Material For 33% Diluted Hcl Acid Storage Tank

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ABSTRACT

The purpose of rubber lining is to protect the vessels, tanks and piping against corrosion and/or erosion damage and increasing the life of their service. In present work isoprene/natural rubber is used to prepare the lining material for 33% diluted Hcl acid storage tank. The required parameters for rubber lining material are minimum tensile strength of 110kgf/cm², minimum elongation at break 350%, maximum ash content 35% and maximum acid absorbed 12%. To achieve the above said results a rubber lining material with appropriate composition is prepared in the form of sheet with desired thickness and the sheets are cut in to the specimens as per ASTM/IS Standards and tests like tensile strength, Ash content test and Acid bleed tests were performed and the results obtained are tensile strength=112.80kgf/cm², Elongation at break are 438.92%, ash content=31.85% and acid absorbed =7.85%.

KEYWORDS: *Natural Rubber, Vulcanization, Auto Clave, Rubber Lining, Acid Bleed , Tensile Strength*

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I. INTRODUCTION

In 1893 Charles good year discovered the process called vulcanization [1]. A soft amorphous mass of natural rubber cross linked in to a resilient elastomeric material with excellent elongation, Natural rubbers are compounded in three forms soft, semi hard and hard natural rubbers [3-5]. Depending upon the requirement we can opt any one of the type of natural rubber. In present work soft natural rubber is used to prepare the rubber lining material for acid tank which is having

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Effect of Fiber Orientation & Salinity on Tensile Strength of Glass/Epoxy Composites

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ABSTRACT

In the present study Glass Fiber Reinforced Polymer (GFRP) composites have been fabricated with different orientations of fiber using the hand layup method. These composite laminates have been immersed in artificial oceanic water which is prepared with different levels of salinity according to the ASTM standards.

The mechanical properties such as tensile strength and moisture absorbing capacity which indirectly affects the tensile strength of the component are analyzed. The main objective of the project work is to replace the conventional material of the keel of the ship which would be under tensile loading, with that of the GFRP. The obtained results are compared with the tensile strength of steel. Also comparison is done in terms of cost, life, environmental impact and several other factors.

From the experiments, it has been observed that the mechanical properties of the GFRP are favorable for medium load applications when compared with those of steels. It is suggested that these GFRP can be used as an alternative material for steels especially in case of medium and low loading applications as they significantly reduce the problems related to environmental impact.

Keywords: *Glass Fibre Reinforced Polymers, Epoxy resin, Mechanical Properties*

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I. INTRODUCTION

Composite materials have been continuously replacing the traditional materials, because of their superior properties such as high tensile strength, low thermal expansion, and high strength to weight ratio. Synthetic fiber reinforced years, there is vast growth in fiber based polymer composites due to its various attractive features like biodegradability, no abrasiveness, flexibility, Availability, low cost, light weight etc. Different researchers have performed various experiments to enhance the mechanical properties of fiber

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Effect of $CaCO_3$ and Al_2O_3 Fillers on Mechanical Properties of Glass/Epoxy Composites

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ABSTRACT

Fibre reinforced plastic materials are widely used in various engineering applications because of their superior performance and tailor made properties. Nowadays specific fillers/additives are added to the composite materials to reduce material costs, enhance and modify the quality of composites to some extent, in some cases to improve processability and product performance. Some of the commonly used fillers are carbon black, calcium carbonate, clay, alumina, alumina tri-hydrate, magnesium hydroxide, bone powder, coconut powder, hematite powder, TiO_2, SiO_2, ZnS, graphite, etc. In the present work plain woven glass fabric reinforced epoxy composites filled with two different types of fillers, such as calcium carbonate($CaCO_3$) and Aluminium Oxide (Al_2O_3) at different weight fractions (0, 5 and 10 wt%) are studied. The composite specimens required for different tests are fabricated by hand lay-up technique as per ASTM standards. These composites are investigated for their mechanical properties such as ultimate tensile strength, flexural strength, impact strength as well as hardness. The obtained results are compared with pure glass fiber/epoxy composites. From the results it is found that there is a decrease in tensile and flexural strength with the addition of filler material. However significant improvement in mechanical properties such as impact strength and hardness is observed. The ranking for the composite materials is given by using Technique for Order Preference by Similarity to Ideal Solution (TOPSIS) method with output parameters of their mechanical and water absorption attributes.

Keywords: *Glass Fibre Reinforced Composites, Epoxy resin, Fillers, Mechanical Properties, TOPSIS.*

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I. INTRODUCTION

Over the past few decades, remarkable interest has been observed in production and development of new composite materials or modification of existing composite materials is the real challenge for most of the materials engineers for production filler materials to modify resins for further improvement in mechanical properties.

Many researchers have studied and examined the influence of various fillers on the mechanical properties of fibre reinforced composite materials. Sachin Kumar Chaturvedi et al. [1] studied effect of calcium carbonate filler on tensile strength of glass

INVESTIGATION ON MECHANICAL PROPERTIES OF EPOXY/POLYESTER BASED COMPOSITES

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Abstract— Polymer glass fiber reinforced composites plays a vital role in day to day life. The aim of this research Article is processing of Epoxy and polyester based composites reinforced with Glass Fiber and Filled with the natural filler**Arabic Gum Tree Coal Powder** (A.C.P) which is prepared by carbonization of Arabic Gum Tree Stem. Manual hand layup process is adopted for preparation of composite with 2.5wt%, 5wt% and 7.5wt% of A.C.P. with Glass fiber of 40 wt% reinforced in Epoxy/Polyester resins by varying their compositions with respect to the composition of the filler material. After the preparation of composites with the compositions, specimen were prepared as per ASTM Standards for Mechanical characterizations. Tensile Strength, Flexural Strength, ILSS, Impact Strength and Hardness were determined.

Index Terms— Epoxy polyester composites, A.C.P., Tensile Strength, Flexural Strength, ILSS, Impact Strength, Hardness.

I. INTRODUCTION

Polymer composite with fiber-reinforced materials is of two main categories normally referred to as particle reinforced materials and continuous fiber reinforced materials. Fiber used for advanced composite materials were glass fiber, cotton fiber with high strength in humid environment but degrade under elevated temperature [1-2]. Glass fiber is the typical reinforcing material for thermoset matrices for various structural applications. Woven fabric reinforced epoxy composites are well known for their high ratios of strength and stiffness to weight in orthotropic direction. These attractive characteristics of the composites have resulted in numerous applications of the materials in areas where high performance and light weight of structures are essential [3]. Saroja Devi [4], and Ramakrishna [5] have researched the mechanical properties of fly ash-filled general-purpose unsaturated polyester resin. Wong and Truss [6] reported the effect of fly ash addition and the effect of coupling agent on the tensile and impact properties of polypropylene (PP). Gowdaa and Naidu [7] studied the mechanical properties of woven jute fabric-reinforced polyester resin composites.

II. METHODOLOGY

Table-1: Designation and Composition of Composites

Designation of composite	Composition
Ce1	57.5 wt% Epoxy+40 wt% GF+2.5 wt% A.C.P
Ce2	55 wt% Epoxy+ 40 wt% GF+ 5 wt% A.C.P
Ce3	52.5 wt% Epoxy+40 wt% GF+7.5 wt% A.C.P
Ce0	60 wt% Epoxy+ 40 wt % G.F
Cp1	57.5 wt% P+40 wt% G.F+2.5 wt% A.C.P
Cp2	55 wt% P+ 40 wt% G.F+ 5 wt% A.C.P
Cp3	52.5 wt% P+40 wt% G.F+7.5 wt% A.C.P
Cp0	60 wt% P+ 40 wt % G.F

Material Test Details

Tensile Strength and Tensile Modulus

As per ASTM –D-638-III the dog bone type specimen with end tabs is used for tensile test. On TUE-C-200, 2013/50 machine tensile test was performed. From tensile strength we have to find out the tensile modulus using the formula

$E=\sigma * l/\delta l$

Where, σ = tensile strength δl = Elongation l = length of the specimen

Flexural and Inter Laminar Shear Strength

By using three point bend test on universal testing machine TUE-C-200, 2013/50 for the specimen of

MCDM TECHNIQUE FOR COMPOSITE SELECTION

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Abstract— In This Research Article Epoxy and polyester based composites reinforced with Glass Fiber/Fillers are fabricated by manual hand layup process and mechanical properties like Tensile Strength, Tensile modulus, Flexural Strength, ILSS, Hardness and impact strength are determined. Selection of a composite with respect to above mechanical characterization parameters is a difficult task; some selection procedure techniques are required to overcome from this confusion state. TOPSIS is one of the selection procedure technique adopted for this problem. This technique provides a base for decision-making processes where there are limited numbers of choices but each has large number of attributes. In this paper some composites are considered with different compositions and various mechanical properties. Selection of the best composite is done using TOPSIS technique.

Index Terms— TOPSIS, Normalized decision matrix, Positive and Negative Ideal solutions, Relative closeness, Ranking.

I. INTRODUCTION

The TOPSIS (technique for order performance by similarity to ideal solution) was first developed by Hwang & Yoon (1981). It is one of the best grading methods of multi criteria decision making (MCDM) that is taken place in compromising subgroup of compensating models of decision making [1]. TOPSIS is a multiple criteria method to identify solutions from a finite set of alternatives based upon simultaneous minimization of distance from an ideal point and maximization of distance from a nadir point [2]. TOPSIS has also been used to compare company performances [3] and financial ratio performance within a specific industry [4]. A great deal of work has already been done on the use of TOPSIS for selection of the best alternatives in many fields. However, the use of TOPSIS for selection of the material is hardly been reported.

II. LITERATURE REVIEW

TOPSIS is a multiple criteria method to identify solutions from a finite set of alternatives based upon simultaneous minimization of distance from an ideal point and maximization of distance from a nadir point. TOPSIS has been applied to a number of applications many researchers. Singh et al. [5] studied the selection of material for bicycle chain in Indian scenario using MADM Approach. They concluded that both MADM and TOPSIS methods User friendly for the ranking of the parameters. Huang et al. [6] studied the multi-criteria decision making and uncertainty analysis for materials selection in environmentally conscious design. It was reported that TOPSIS method demonstrates a reasonable performance in obtaining a solution; and entropy optimal refinement condition to achieve maximum tensile properties of Al-15%Mg2Si composite based on TOPSIS method and observed that the TOPSIS method is considered to be a suitable approach in solving material selection problem when precise performance ratings are available. Ghasemiincjad et al. [8] used data envelopment analysis and TOPSIS method for solving flexible bay structure layout, and found that this method is useful for creating initial layout, generating initial layout alternatives and evaluating them. Chakladar and Chakraborty [9] studied the combined TOPSIS-AHP-method-based approach for non-traditional machining processes selection and also include the design and development of a TOPSISAHP- method-based expert system that can automate the decision-making process with the help of a graphical user interface and visual aids. Shahroudi and Rouydel [10] studied a multi-criteria decision making approach (ANP TOPSIS) to evaluate suppliers in Iran's auto industry. Lin et al. [11] studied on customer-driven product design process using AHP and TOPSIS approaches and results shows that the proposed approach is capable of helping designers to systematically consider relevant design information and effectively determine the key design objectives and optimal conceptual alternatives. Isiklar and Buyukozkan [12] studied a multi-criteria decision making (MCDM) approach to assess the mobile phone options in respect to the users preferences order by using TOPSIS method.

III. METHODOLOGY

The objective of this work is to develop TOPSIS method for composite selection. In order to comply with collecting quantitative and qualitative data for

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CHARACTERIZATION OF MECHANICAL AND THERMAL PROPERTIES OF EPOXY BASED HYBRID COMPOSITES

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***Abstract*—The aim of this comparative study is to heighten and examine mechanical and thermal properties of epoxy based composites using Silicon Carbide (SiC) micro-fillers and titanium oxide (Tio_2) micro-fillers. This work deals with preparation of epoxy composites with high content of micro-fillers up to 10 wt%. Experimental mechanical and thermal conductivity tests are evaluated in each specimen and compared with proposed model. This study was mainly focused on spherical particles of Silicon Carbide (SiC) and titanium oxide (Tio_2) micro-fillers separately in an effective way to enhance both thermal conductivity and sufficient voltage endurance. A numerical solution using finite element package ANSYS will be used to explain heat transfer process within epoxy matrix filled with micro silicon carbide particles and titanium oxide separately and its effective thermal conductivity values are validated with experimental results and theoretical model correlations.**

***Index Terms*—Epoxy, Mechanical Properties, FEM, ANSYS**

I. INTRODUCTION

Over the past decades, many Glass-fiber reinforced composite materials are used in manufacturing of various parts in automotive and aerospace industries. The major advantage of polymer composites is to offer easy processing, productivity, cost reduction, high strength and modulus-weight ratio etc. over metallic materials. Glass fiber composites have excellent surface finish, higher impact strength and the typical reinforcing material for various structural applications. For high ratios of strength and stiffness to weight in orthotropic direction Woven fabric reinforced epoxy composites are well known. In areas where light weight of structures and high performance are essential these good characteristics of the composites have resulted in numerous applications of the materials [4]. Cho et al. [5] investigated the special effects of particle loading particle medium interface adhesion and particle size, on mechanical properties of polymer matrix composites. Also, the use of epoxy resin for composite manufacture, being one of the most captivating and interesting materials are contemplated, because it is primarily used for preparing high-performance composites with advanced perfunctory properties, corrosive resistant to liquids and environments, superior electrical properties, high-quality performance at high temperatures, superior adhesion or a combination of above benefits. Suresh.J.S et.al [6] investigated the mechanical properties of polyester based hybrid composites. It is found that the third phase fillers are used in this composites and enhanced the major mechanical properties like tensile strength and flexural strength.

Recent electronic devices are packaged with different polymeric materials and usually epoxy or polyester resins are used for encapsulation [7] But due to their low thermal conductivity and high CTE has become a

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Predicting Health Conditions by monitoring Air Pollution

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Predicting Health Conditions by monitoring Air Pollution

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ABSTRACT: The intensity of pollution has increased with era by set of dynamic issues like the increase in residents, increased automobile use, industrialization and urbanization resulting in destructive effects on human welfare by directly affecting health of people exposed to it. In order to scrutinize the quality of air, a IOT based Predictive Analytical Model is proposed. The factors of the environment to be examined are temperature, humidity, volume of CO, volume of CO2, detection of methane gas and oxygen level in air. The values of these parameters are transmitted to Cloud, a

and asthma. Long-term physical health effects of air pollution may include chronic respiratory disease, lung cancer and heart disease. Long-term exposure to air pollution may even cause damage to your brain, nerves, liver or kidneys. Thus, pollution-related diseases range from mild to severe, and can significantly affect a person's quality of life. [1]

Air Pollution Index is necessary to measure the quality of air. Pollutants considered are PM_{10}, $PM_{2.5}$, NO_2, SO_2, CO, O_3, NH_3, and Pb. Based on the measurement,

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Building a Natural Disaster Management System based on Blogging Platforms

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***Abstract*—Over the decades, numerous kinds of knowledge discovering and sharing of the data techniques are playing a major role to reach the information quickly. Among these since last few years, social networks or media and own blogging are playing a major in sharing the personal information, updating the status, tagging the location and many more features. These data are considered to examine and the acceptance for emergency services to respond with the information gathered from the social network. Taking this into the consideration, proposed an algorithm to find out the location of the person based upon the information shared. This is implemented on a most popular social media twitter to identify the tweets.**

***Index Terms*—Emergency services, Twitter, Google map API, named entity recognizer, gazetteer database, user search methods.**

I. Introduction

A. Importance of Social Media

Social media is the combination of online interactions channels keen to community-based input, communication, content-sharing, and relationship. It is an essential part of life online as social websites and applications. Social media web-based services that permit individuals to build a public or semi-public profile within a restricted system, clear list of other users with whom they share a connection, view and pass through their list of connections and those made by others within the system. Social media use mobile technologies on smartphones

Social media websites require the internet to connect the users to their particular destination. It makes easier and low cost to connect and get people together effective communication. It expands the universe we can collect the information and opinions of others very easily and fastly likewise helps in growth of organizations.

According to an American survey, the usage of social media had rapidly grown from 2005to2016.Mostly difference had occurred in adults provides a platform to communicate through worldwide, share details about their daily life, share opinions, post videos, and photos, to find entertainment content and updates of news and current events.

Social Networking sites are used by 7% of the US population 10 years ago. Now that outline has risen to 65%. Of those who use the internet a huge majority of 76% of American's use social media. Social media has the practice of gathering data from blogs and social media websites and analyze that data to make business decisions.

B. Most commonly and popularly social media sites:

There are 6 types of social media they are:-

- Social Networks: -Social Networks permit the user to connect with other people of same interest. User consists of profile and can set groups etc. Such as Facebook, LinkedIn etc.
- Bookmarking sites: Bookmarking sites helps the user to save, arrange and handle links to different websites through the internet. It marks the particular link and makes the user search more efficiently.
- Social news: Social news allows the public to post

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New approaches of Data Mining for the Internet of Things with systems: Literature Review and Compressive

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Abstract - *The massive information created by the Internet of Things (IoT) are considered of high business esteem, and information mining calculations can be connected to IoT to separate concealed data from data. In this paper, we give an efficient approach to survey information mining in learning view, method view, and application see, including grouping, bunching, affiliation examination, time arrangement investigation and exception investigation. Furthermore, the most recent application cases are additionally studied. A more and more gadgets associated with IoT, vast volume of information ought to be broke down, the most recent calculations ought to be altered to apply to huge data. We looked into these calculations and examined challenges also, open research issues. Finally a recommended huge data mining framework is proposed. Data mining is used for mining data from databases and finding out meaningful patterns from the database. Many organizations are now using these data mining techniques.*

Key Words: **IoT, learning view, method view, application see, data mining**

1.INTRODUCTION

The Internet of Things (IoT) and its relevant technologies can seamlessly integrate classical networks with networked instruments and devices. IoT has been playing an essential role ever since it appeared, which covers from traditional equipment to general household objects [1] and has been attracting the attention of researchers from academia, industry, and government in recent years. There is a great vision that all things can be easily controlled and monitored, can be identified automatically by other things, can communicate with each other through internet, and can even

efficient predictive or descriptive model of a large amount of data that not only best fits or explains it, but is also able to generalize tc new data [4]. Based on a broad view of data mining functionality, data mining is the process of discovering interesting knowledge from large amounts of data stored in either databases, data warehouses, or other information repositories. On the basis of the definition of data mining and the definition of data mining functions, a typical data mining process includes the following steps (see Figure 1).

(i) Data preparation: prepare the data for mining. It includes 3 substeps: integrate data in various data sources and clean the noise from data; extract some parts of data into data mining system; preprocess the data to facilitate the data mining.

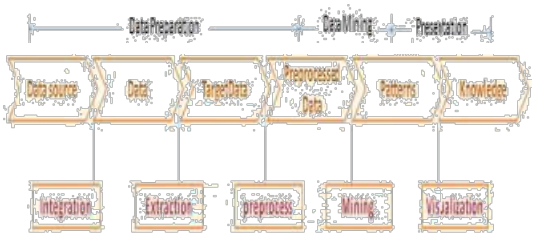

Figure 1 The Data mining overview

(ii) Data mining: apply calculations to the information to discover the designs and assess examples of found learning.
(iii) Data introduction: envision the information and speak to mined learning to the client. We can see information mining

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Advanced Cache Supported Path Planning on Roads

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Abstract:

Photo sharing is an attractive feature which popularizes Online Social Networks (OSNs). Unfortunately, it may leak users' privacy if they are allowed to post, comment, and tag a photo freely. In this paper, we attempt to address this issue and study the scenario when a user shares a photo containing individuals other than himself/herself (termed co-photo for short). To prevent possible privacy leakage of a photo, we design a mechanism to enable each individual in a photo be aware of the posting activity and participate in the decision making on the photo posting. We propose a system, namely, Path Planning by Caching (PPC), to answer a new path planning query in real time by efficiently caching and reusing historical queried-paths. Unlike the conventional cache-based path planning systems, where a queried-path in cache is used only when it matches perfectly with the new query, PPC leverages the partially matched queries to answer part(s) of the new query. We show that our system is superior to other possible approaches in terms of recognition ratio and efficiency. Our mechanism is implemented as a proof of concept Android application on Facebook's platform.

KEYWORDS: collaborative learning, social network, photo privacy, secure multi-party computation, support vector machine.

INTRODUCTION:

Social sites have become important part of our daily life.Online social networks (OSNs) such as face book, Google and sound of birds are inherently designed to make able people to part personal and public information and make social connections with friends, coworkers, persons having like-profile usually includes information with respect to the users work history, birthday, sex, residence, interests, education, and, travel information and be in touch information. Moreover, users upload the picture and tag other people even though they are willing or not willing to be part of uploaded image content. When other people are tagged the situation becomes more complicated. The user

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A Survey on Data Preprocessing Techniques-Missing Value Imputation-Outlier Detection and Attribute Subset Selection

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Abstract: With the advent of the rapid improvement in technology, huge spectrum of data has been accumulated among the databases around the globe. Most of the databases interest a highly prioritized concept, the quality of the data. This quality of the data is achieved by various preprocessing techniques that implement prior to the application of any data mining modules through which, required knowledge is abstracted. This paper promotes various views of different methodologies adopted by researchers on three preprocessing techniques such as missing value imputation, outlier detection and attribute subset selection. The major objective is to provide technical aspects of the methodologies that the researchers have implemented. So far this work is adopted to facilitate the concept of preprocessing techniques for the new researchers in the field of mining to have a broader view of the various methods adopted by various researchers to avoid ambiguity in choosing the suitable method. This improves the quality of the knowledge discovery among databases by procedures such as classification, clustering techniques. It also provides various techniques with their advantages and disadvantages. An attempt is also made to connect one process of technique to other in each of the three techniques. Further various tools that can support for these procedures are briefed in the tabular form for easy conclusions. It concluded that the best choice of the method to be implemented for preprocessing the data varies with respect to the opted database.

Keywords: *Preprocessing, missing value imputation, Outlier detection, Attribute subset selection, Classification, Clustering.*

I. Introduction on Missing Value Imputation:

Some of the tuples in the database table have no recorded value for several attributes; those empty locations are called as missing values. Missing values lead to the difficulty of extracting useful information the database. The presence of missing values in a dataset can affect the performance of a classifier. Several methods have been proposed to treat missing data. The following are the different methods used by various researches.

8. Maximization Likelihood method (ML)
9. Internal Treatment Method for C4.5 (C4.5)
10. Bayesian Iteration Imputation (BII)

List Wise Detection/ Case Deletion (CD):

List wise detection method omits the cases/instances with missing data and does analysis on the remaining data values [1]. Though it is the most common used method, it has two obvious disadvantages: a) A substantial decrease in the size of dataset available for the analysis. b) Data are not

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A STUDY ON TEXT MINING TECHNIQUES AND APPLICATIONS

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Abstract
Content Mining has transformed into an imperative research zone. Content Mining is the disclosure by PC of new, effectively darken data, by means of therefore isolating data from different created resources. Content Mining is the path toward isolating charming data or taking in or cases from the unstructured substance that are from different sources. The case disclosure from the substance and record relationship of report is an exceptional issue in information mining. These days, the measure of set away data has been hugely extending well ordered which is all things considered in the unstructured shape and can't be used for any planning to remove supportive data, so a couple of frameworks, for instance portrayal, clustering and data extraction are available under the arrangement of substance mining. Remembering the true objective to find a capable and effective system for content request, distinctive techniques of substance game plan is starting late made. Some of them are overseen and some of them unsupervised meihod for record arrange. In this paper, focus is on thought of substance mining, content mining process, systems used as a piece of substance mining in like manner demonstrating some honest to goodness employments of substance mining. Additionally, brief talk of substance mining preferences and imperatives has been shown.

Index Terms*. Text Mining, Information Extraction, Topic Tracking, Summarization, Clustering, Question Answering Etc.*

I. INTRODUCTION

Content Mining [1] is the disclosure by PC of new, officially cloud data, by means of thus isolating data from different made resources. A key part is the associating together of the removed data together to shape new substances or new theories to be explored help by more standard techniques for experimentation. Content mining is exceptional in connection to necessities with a particular ultimate objective to find the imperative data. In content mining, the goal is to discover cloud data, something that no one yet knows consequently couldn't have yet recorded. Content mining is a minor takeoff from a field called information mining that tries to find intriguing cases from colossal databases. Content mining, generally called Intelligent Text Analysis, Text Data Mining or Knowledge-Discovery in Text (KDT) insinuates all things considered to the path toward evacuating entrancing and non-insignificant data and gaining from unstructured substance. Content mining is an energetic interdisciplinary field which draws on data recuperation, information mining, machine learning, estimations and computational historical underpinnings. As most data (over 80%) is secured as substance, content mining is acknowledged to have a high business potential regard. Taking in may be found from numerous wellsprings of data, yet, unstructured works remain the greatest quickly available wellspring of data. The issue of Knowledge Discovery from Text (KDT) [6] is to isolate express and irrefutable thoughts and semantic relations between thoughts using Natural Language Processing (NLP) systems. Its point is to get bits of learning into extensive measures of substance information. KDT, while significantly settled in NLP, draws on methodologies from estimations, machine getting the hang of, considering,

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A Survey on Data Preprocessing Techniques-Missing Value Imputation-Outlier Detection and Attribute Subset Selection

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Abstract: With the advent of the rapid improvement in technology, huge spectrum of data has been accumulated among the databases around the globe. Most of the databases interest a highly prioritized concept, the quality of the data. This quality of the data is achieved by various preprocessing techniques that implement prior to the application of any data mining modules through which, required knowledge is abstracted. This paper promotes various views of different methodologies adopted by researchers on three preprocessing techniques such as missing value imputation, outlier detection and attribute subset selection. The major objective is to provide technical aspects of the methodologies that the researchers have implemented. So far this work is adopted to facilitate the concept of preprocessing techniques for the new researchers in the field of mining to have a broader view of the various methods adopted by various researchers to avoid ambiguity in choosing the suitable method. This improves the quality of the knowledge discovery among databases by procedures such as classification, clustering techniques. It also provides various techniques with their advantages and disadvantages. An attempt is also made to connect one process of technique to other in each of the three techniques. Further various tools that can support for these procedures are briefed in the tabular form for easy conclusions. It concluded that the best choice of the method to be implemented for preprocessing the data varies with respect to the opted database.

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List Wise Detection/ Case Deletion (CD):

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3

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Simplified Routing With Advanced Congestion Diversity in Wireless Adhoc Networks

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Abstract:

Link error and malicious packet dropping are two sources for packet losses in multi-hop wireless ad hoc network. In this paper, while observing a sequence of packet losses in the network, we are interested in determining whether the losses are caused by link errors only, or by the combined effect of link errors and malicious drop. We are especially interested in the insider-attack case, whereby malicious nodes that are part of the route exploit their knowledge of the communication context to selectively drop a small amount of packets critical to the network performance. Because the packet dropping rate in this case is comparable to the channel error rate, conventional algorithms that are based on detecting the packet loss rate cannot achieve satisfactory detection accuracy. To improve the detection accuracy, we propose to exploit the correlations between lost packets. Furthermore, to ensure truthful calculation of these correlations, we develop a homomorphic linear authenticator (HLA) based public auditing architecture that allows the detector to verify the truthfulness of the packet loss information reported by nodes. This construction is privacy preserving, collusion proof, and incurs low communication and storage overheads. To reduce the computation overhead of the baseline scheme, a packet-blockbased mechanism is also proposed, which allows one to trade detection accuracy for lower computation complexity. Through extensive simulations, we verify that the proposed mechanisms achieve significantly better detection accuracy than conventional methods such as a maximum-likelihood based detection.

KEYWORDS: packet dropping, secure routing, attack detection, homomorphic linear signature, auditing.

INTRODUCTION:

In a multi-hop wireless network, nodes cooperate in relaying/routing traffic. An adversary can exploit disrupting the path between the source and the destination. Eventually, such a severe Denial-of-Service (DoS) attack can paralyze the network by

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Framework of Matrix Factorization to Achieve Rating Prediction Task

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ABSTRACT:
We propose a social client wistful estimation approach and figure every client's notion on things items. Besides, we consider a client's own wistful properties as well as contemplate relational nostalgic impact. At that point, we consider item notoriety, which can be induced by the sentimental distributions of a client set that mirror clients' exhaustive assessment. Finally, we intertwine three components client sentiment likeness, relational nostalgic impact, and thing's notoriety closeness into our recommender framework to make a precise rating prediction. We lead an execution assessment of the three nostalgic components on a genuine dataset gathered from Yelp.

KEYWORDS: Recommender system, Sentiment influence, User sentiment.

1 INTRODUCTION:

Estimation examination is the most key and imperative work to extricating client's advantage inclinations. When all is said in done, slant is utilized to depict client's own particular state of mind on things. We watch that in numerous down to earth cases, it is more essential to give numerical scores instead of parallel choices. For the most part, surveys are isolated into two gatherings, positive and negative. Nonetheless, it is troublesome for clients to settle on a decision when all applicant items reflect positive assumption or negative assessment. To settle on a buy choice, clients not just need to know whether the item is great, additionally need to know how great the item is. It's additionally concurred that diverse individuals may have distinctive wistful expression inclinations. For instance, a few clients want to utilize "great" to depict a "magnificent" item, while others may want to utilize "great" to portray an "equitable so" item [20]. In our day by day life, clients are well on the way to the notoriety and even the far reaching appraisals. When we scan the net for obtaining, both positive surveys and negative audits are significant to be as reference. For positive audits, we can know the benefits of an item. For negative surveys, we can get the weaknesses if there should be an occurrence of being bamboozled. So it's worth to investigate those analysts who have evident and target state of mind on things. We watch that analysts' feeling will impact others. if a commentator has clear like and abhorrence slant, different clients will give careful consideration to him/her. In any case, client's assessment is difficult to anticipate and the eccentries of relational nostalgic impact makes an incredible trouble in investigating social clients.

2 RELATED WORK:

2.1 Collaborative Filtering

Tso-Sutter et al. propose a nonspecific strategy that enables labels to be fused to standard CF algorithms and to meld the 3-dimensional relationships between's clients, things and labels. In addition, thing based CF algorithms delivers the rating from a client to a thing in view of the normal appraisals of comparable or associated things by a similar client. It gets better execution in registering the comparability between things. Gao et al. propose an audit master collaborative recommendation algorithm in light of the suspicion that those projects/specialists with comparable themes have comparable element vectors.

2.2 Reviews based Applications

Qu et al. propose a pack of-suppositions model to foresee a client's numeric rating in an item survey. What's more, they build up a compelled edge relapse technique for learning scores of conclusions. Wang et al. propose an audit rating expectation technique by consolidating the social relations of a commentator. What's more, they arrange the social relations of commentators into solid social connection and

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A New Client Revocation Strategy For Data Forwarding In Untrusted Cloud

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ABSTRACT:
We propose a protected information sharing plan for dynamic individuals. In the first place, we propose a protected route for key appropriation with no safe corresponderce channels, and the clients can safely get their private keys from assemble chief. Second, our arrangement can fulfill fine-grained get the chance to control, any customer in the get-together can use the source in the cloud and repudiated customers can't get to the cloud again after they are denied. Third, we can shield the arrangement from trick strike, which infers that renounced customers can't get the primary data report paying little respect to the likelihood that they think up with the untrusted cloud. In our approach, by using polynomial limit, we can finish a secured customer foreswearing plan.

Key words : Certificate Authorities, protection saving, collective processing.

1. INTRODUCTION:

Liu et al. shown a safe multi-proprietor data sharing arrangement, named Mona. It is declared that the arrangement can fulfill fine-grained get the opportunity to control and revoked customers won't have the ability to get to the sharing data again once they are repudiated. In any case, the arrangement will viably encounter the evil impacts of the course of action attack by the denied customer and the cloud [13]. The repudiated customer can use his private key to translate the encoded data report and get the puzzle data after his foreswearing by creating with the cloud. In the time of report get to, as an issue of first significance, the denied customer sends his request

2. LITERATURE SURVEY:

2.1We propose a totally reasonable character based encryption plot (IBE). The arrangement has picked figure content security in the unprecictable prophet exhibit expecting a variety of the computational Diffie-Hellman issue. Our system relies upon bilinear maps between social affairs. The Weil mixing on elliptic twists is an instance of such a guide. We give correct definitions for secure character based encryption designs and give a couple of utilizations for such systems.

2.2In thiswork, to handle this unexplored region n distributed computing, we proposed another safe provenance scheme in light of the bilinear coordinating techniques. As the crucial bread and spread of data criminology and post examination n circulated registering, the proposed plan is portrayed by giving the information security on fragile reports set away in cloud, puzzling affirmation on customer access, and provenance following on wrangled about files. With the provable security frameworks, we formally display the proposed plot is secure in the standard model.

3. PROBLEM DEFINITION

The record piece keys ought to be revived and scattered for a customer denial; subsequently, the system had a significant key scattering overhead.

The complexities of customer intrigue and disavowal in these plans are specifically growing with the amount of data proprietors and the revoked customers.

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AN ANALOGY BETWEEN DIFFERENT SORTING ALGORITHMS WITH THEIR PERFORMANCES

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ABSTRACT

Sorting algorithms are an imporant part of managing data. Sorting is used as an intermediate step in many operations. This research paper presents the comparison of various efficient sorting techniques like Bubble Sort, Selection Sort, Insertion Sort, Merge Sort, Heap Sort and Quick Sort and also given their performance analysis with respect to time complexity. These six algorithms has particular strengths and weaknesses and have been an area of focus for a long time but still the question remains the same of "which to use when?" which is the main reason to perform this research. This paper provides a detailed study of all these six algorithms and compares them with their time complexity and other parameters to reach my conclusion.

Keywords: Bubble Sort, Complexity, Heap Sort, Insertion Sort, Merge Sort, Quick Sort, Selection Sort, Sorting

I. INTRODUCTION

Sorting is a fundamental task that is performed by most computers. Sorting refers to the operation of arranging data in some given order such as increasing or decreasing, with numerical data, or alphabetically, with character data. From time to time people ask the ageless question: Which sorting algorithm is the fastest? This question doesn't have an easy or unambiguous answer, however. The speed of sorting depends on the environment where the sorting is done, the type of items that are sorted and the distribution of these items. All sorting algorithm apply to specific kind of problems. Some sorting algorithm apply to small number of elements, some sorting algorithm suitable for floating point numbers, some are fit for specific range ,some sorting algorithms are used for large number of data, some are used if the list has repeated values. Efficient sorting is important for optimizing the use of other algorithms which require input data to be in sorted lists.

Sorting is used frequently in a large variety of important applications. Database applications used by schools, banks, and other institutions all contain sorting code. Because of the importance of sorting in these applications, dozens of sorting algorithms have been developed over the decades with varying complexity.

The sorting algorithms are also classified on the basis of different characteristics of these algorithms.

- Based on data size
- Based on information about data

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An Effective Data Management and Promoting Web Based Computing Services Across Distributed Systems

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Abstract:

Security of the web based services is become serious concern now a days. Secure user authentication is very important and fundamental in most of the systems User authentication systems are traditionally based on pairs of username and password and verify the identity of the user only at login phase. No checks are performed during working sessions, which are terminated by an explicit logout or expire after an idle activity period of the user. Emerging biometric solutions provides substituting username and password with biometric data during session establishment, but in such an approach still a single shot verification is less sufficient, and the identity of a user is considered permanent during the entire session. A basic solution is to use very short session timeouts and periodically request the user to input his credentials over and over, but this is not a definitive solution and heavily penalizes the service usability and ultimately the satisfaction of users. This paper explores promising alternatives offered by applying biometrics in the management of sessions. A secure protocol is defined for perpetual authentication through continuous user verification. Finally, the use of biometric authentication allows credentials to be acquired transparently i.e. without explicitly notifying the user or requiring his interaction, which is essential to guarantee better service usability.

KEYWORDS: Security, Web Servers, Mobile Environments, Authentication

INTRODUCTION:

In this technology era security of web-based applications is a serious concern, due to the recent increase in the frequency and complexity of cyber-attacks, biometric techniques offer emerging solution for secure and trusted user identity verification, where username and password are spreading usage of biometric systems, the incentive in their misuse is also growing, especially in the financial and banking sectors. In fact, similarly to traditional authentication processes which rely on username and password, biometric user authentication is typically formulated as a single shot, providing user verification only during login time when one or more biometric traits may be

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New approaches of Data Mining for the Internet of Things with systems: Literature Review and Compressive

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***

Abstract - *The massive information created by the Internet of Things (IoT) are considered of high business esteem, and information mining calculations can be connected to IoT to separate concealed data from data. In this paper, we give an efficient approach to survey information mining in learning view, method view, and application see, including grouping, bunching, affiliation examination, time arrangement investigation and exception investigation. Furthermore, the most recent application cases are additionally studied. A more and more gadgets associated with IoT, vast volume of information ought to be broke down, the most recent calculations ought to be altered to apply to huge data. We looked into these calculations and examined challenges also, open research issues. Finally a recommended huge data mining framework is proposed. Data mining is used for mining data from databases and finding out meaningful patterns from the database. Many organizations are now using these data mining techniques.*

***Key Words*: IoT, learning view, method view, application see, data mining**

1.INTRODUCTION

The Internet of Things (IoT) and its relevant technologies can seamlessly integrate classical networks with networked instruments and devices. IoT has been playing an essential role ever since it appeared, which covers from traditional equipment to general household objects [1] and has been attracting the attention of researchers from academia, industry, and government in recent years. There is a great vision that all things can be easily controlled and monitored, can be identified automatically by other things, can communicate with eachother throughinternet, and can even make decisions by themselves [2]. In order to make IoT smarter, lots of analysis technologies are introduced into IoT; one of the most valuable technologies is data mining. Data mining involves discovering novel, interesting, and potentially useful patterns from large data sets and applying algorithms to the extraction of hidden information. Many other terms are used for data mining, for example, knowledge discovery (mining) in databases (KDD), knowledge extraction, data/pattern analysis, data archeology, data dredging, and information harvesting [3]. efficient predictive or descriptive model of a large amount of data that not only best fits or explains it, but is also able to generalize to new data [4]. Based on a broad view of data mining functionality, data mining is the process of discovering interesting knowledge from large amounts of data stored in either databases, data warehouses, or other information repositories. On the basis of the definition of data mining and the definition of data mining functions, a typical data mining process includes the followingsteps (see Figure 1).

(i) Data preparation: prepare the data for mining. It includes 3 substeps: integrate data in various data sources and clean the noise from data; extract some parts of data into data mining system; preprocess the data to facilitate the data mining.

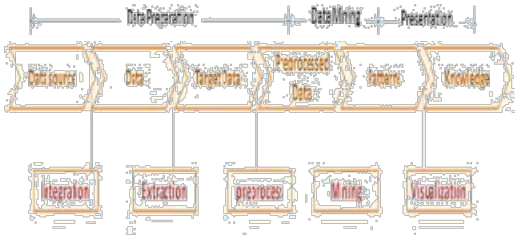

Figure1: The data mining overview

(ii) Data mining: apply calculations to the information to discover the designs and assess examples of found learning.
(iii) Data introduction: envision the information and speak to mined learning to the client. We can see information mining in a multidimensional view. (i) In information view or information mining capacities see, it incorporates portrayal, separation, characterization, grouping, affiliation investigation, time arrangement examination, and anomaly investigation. (ii) In used methods see, it incorporates machine learning, measurements, design acknowledgment, huge information, bolster vector machine, unpleasant set, neural systems, and transformative calculations.
(iii) In application see, it incorporates industry, media

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New approaches of Data Mining for the Internet of Things with systems: Literature Review and Compressive

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[2] *Professor, Dept of Computer Science and Engineering, Ramachandra college of engineering Eluru, Andhra Pradesh India*

Abstract - *The massive information created by the Internet of Things (IoT) are considered of high business esteem, and information mining calculations can be connected to IoT to separate concealed data from data. In this paper, we give an efficient approach to survey information mining in learning view, method view, and application see, including grouping, bunching, affiliation examination, time arrangement investigation and exception investigation. Furthermore, the most recent application cases are additionally studied. A more and more gadgets associated with IoT, vast volume of information ought to be broke down, the most recent calculations ought to be altered to apply to huge data. We looked into these calculations and examined challenges also, open research issues. Finally a recommended huge data mining framework is proposed. Data mining is used for mining data from databases and finding out meaningful patterns from the database. Many organizations are now using these data mining techniques.*

***Key Words*: IoT, learning view, method view, application see, data mining**

1.INTRODUCTION

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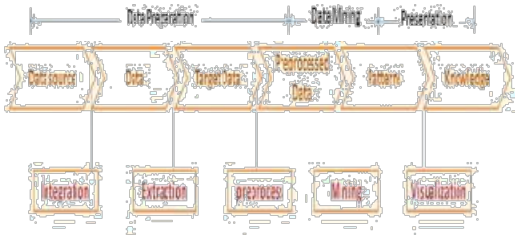

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(iii) In application see, it incorporates industry, media

A study on Online-Shopping Behaviour in the Digital Era

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Abstract:

Online shopping is emerging as a new trend all over the world. It refers to purchasing of goods/services from the seller over the internet using an internet browser. The developing prospect for online shopping is enhancing use of internet in India. The online shopping behaviour and its future respective are changing the way of consumer shops and purchase goods or services. In South-India also the phenomenon of online shopping is becoming a reality. The study attempts to look over the online shopping scenario in South-india and comes-up with interesting consumer insight with the help of a survey. it will be significant in highlighting whether consumer prefer online shopping or not and the new trends in the online shopping

Keywords: *Online-shopping, E-commerce, M-commerce, Bit-coin, Crypto-currencies and Long-tail, E-cheque.*

Online shopping is a form of e-commerce which allows consumers to directly purchase goods or services from a seller over the Internet using a web browser and also with any other intermediary service. Consumers find a product of interest by visiting the websites of the retailers directly or by searching among alternative vendors using a shopping search engine, which displays the same product's availability and pricing at different e-retailers. As of 2017, customers can shop online using a range of different computers and devices, including desktop computers, laptops, tablet computers and smart-phones.

An online shop evokes the physical analogy of buying products or services at a regular "bricks-and-mortar" retailer or shopping centre; the process is termed as business-to-consumer (B2C) online shopping. When an online store is set up to enable businesses to buy from other businesses, the process is called business-to-business (B2B) online shopping. A typical online store enables the customer to browse the firm's range of products and services, view photos or images of the products, along with information about the product specifications, features and prices.

Online-shopping is also known as electronic shopping or internet-shopping. Whereas an online store may also be called an e-web-store, e-shop, e-store, Internet shop, web-shop, web-store, online store, online storefront and virtual store. Mobile commerce (or m-commerce) describes purchasing from an online retailer's

354 million as of June 2015[1] and is expected to cross 500 million in 2017. Despite being the second-largest user base in world, only behind China (650 million, 48% of population), the penetration of e-commerce is low compared to markets like the United States (266 million, 84%), or France (54 M, 81%), but is growing at an unprecedented rate, adding around 6 million new entrants every month. The industry consensus is that growth is at an inflection point. In India, cash on delivery is the most preferred payment method, accumulating 75% of the e-retail activities. Demand for international consumer products (including long-tail items) is growing much faster than in-country supply from authorised distributors and e-commerce offerings.

Objectives of the study:

- The main objective of the study is to find whether prefer online shopping or not?
- To make out the most preferred online shopping websites.
- To find out the product category where people go in for online shopping.
- To find out if people are satisfied with their shopping experiences.
- To know the latest trends in online shopping.
- To know the preferred mode of payment.
- And finally to be aware of the buying behavior of the people.

Research methodology:

Survey was conducted to study the online shopping experience of the customers. To analyze the opinion and reaction towards different online shopping websites general public from Hyderabad was selected. The sample size was of 100 Respondents. The questionnaire consisted of closed ended questions, which focused on testing opinion of consumers on their online shopping experiences.

Demographic profile: Gender-59% male, 41% female, and age group - 62% (18-30 years), 38% (30-50 years), and 90% heavy internet user. 67% had access to someone else's money and 33% to their own money.

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An Approach to Public-Key Cryptography using Diffie - Hellman Key Exchange Algorithm

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Abstract-The ability to distribute cryptographic keys has been a challenge for centuries. The Diffie-Hellman was the first practical solution to the problem. However, if the key exchange takes place in certain mathematical environments, the key exchange become vulnerable to a specific Man-in-Middle attack, first observed by Vanstone. This paper is an effort to solve a serious problem in Diffie-Hellman key exchange, that is, Man-in-Middle attack. In this paper we have used RSA algorithm along with Diffie-Hellman to solve the problem. We explore the Man-in-Middle attack, analyse the countermeasures against the attack.

Key Words-Cryptography, Diffie-Hellman, Man-In-Middle Attack, Primality Testing.

I. INTRODUCTION

Cryptography and encryption/decryption methods fall into two broad categories- symmetric and public key. In symmetric cryptography, sometimes called classical cryptography, parties share the same encryption/decryption key. Therefore, before using a symmetric cryptography system, the users must somehow come to an agreement on a key to use. An obvious problem arises when the parties are separated by large distances which is commonplace in today's worldwide digital communications. If the parties did not meet prior to their separation, how do they agree on the common key to use in their crypto system without a secure channel? They could send a trusted courier to exchange keys, but that is not feasible, if time is a critical factor in their communication.

The problem of securely distributing keys used in symmetric ciphers has challenged cryptographers for hundreds of years. If an unauthorized user gains access to the key, the cryptographic communication must be considered broken. Amazingly, in 1977, Whitfield Diffie and Martin Hellman published a paper in which they presented a key exchange protocol that provided the first practical solution to this dilemma. The protocol, named the Diffie-Hellman key exchange (or key agreement) protocol in their honour, allows two parties to derive a common secret key by communications consider methods to defend against the attack and demonstrate their effectiveness.

II.BACKGROUND AND REVIEW

Modular Arithmetic:

Given any positive integer n and any non-negative integer a, if we divide a by n, we get an integer quotient q and an remainder r that obey following relationship:

$$a = qn + r, \quad 0 \le r \le n; \quad q = \lfloor a/n \rfloor$$

Where $\lfloor x \rfloor$ is largest integer less than or equal to x

FIG shows the relationship $a = qn + r$, $0 \le r \le n$;

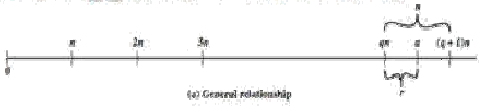

Fig. 1 General Relationship

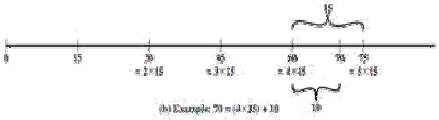

Fig. 2 Example

The Modulus

If a is an integer and n is a positive integer, we define $a \bmod n$ to be the remainder when a is divided by n. Integer is called

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Application of Euler's Theorem: The RSA Cryptosystem

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Abstract

The RSA Cryptosystem is an asymmetric key cipher in which the the encryption keys aremade completely public. The security of the RSA lies in an algorithm based on Euler'sTheorem and Fermat's Little Theorem. This cryptosystem has proven to be unbreakable, aslong as it is implemented correctly, for over 30 years. This system is a classic example of howthe theorems of ancient mathematicians used to advance mathematical thought in history arebeing used to advance technology today.

Keywords: RSA,asymmetric,encryption,ciphertext,cryptosystem

I. INTRODUCTION

In the 1970's, three researchers at MIT, Ron Rivest, Adi Shamir, and Len Adleman, introducedto the world the first type of public key cipher, creatively named RSA. The idea was publishedin a paper, *A Method for Obtaining Digital Signatures and Public-Key Cryptosystems*, in 1978.The researchers began the paper with a very accurate prediction, "The era of 'electronic mail' maysoon be upon us". In 1978, the primary means of communication was paper mail, in whichthe mail is supposedly private and signed. But even paper mail has its disadvantages. Today, aspredicted by the creators of RSA, email is a primary source of communication, and these threeresearchers invented a cipher that preserves the two important characteristics of the paper mailsystem. In 1982, Rivest, Shamir, and Adleman created the RSA Data Security Corporation tomarket and promote their cipher. Fourteen years later, the RSA cipher sold for securein ernet comm unications, RSA ciphers are also used in the exchange of money over the internetand ATM machines.

The RSA cryptosystemrelies heavily on "several very famous, old, and relatively simple mathematical facts" [4]. Theseinclude Fermat's Little Theorem and Euler's Theorem. In Rivest, Shamir, and Adleman's originalpaper, they combine these two theorems to explain how the RSA cipher works.

II. SYMMETRIC & ASYMMETRIC KEYS

In 1976, Stanford University graduate stucent Whitfield Diffie and his mentor, Martin Hellman introduced the idea of the public key cipher. Until the idea of a public key cipher, the ciphers that existed were those in which the sender and receiver were required to secretly agree on an encryption key. These ciphers are called Symmetric or Private or

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A Novel Biomedical Knowledge Base for Genomic and Proteomic Analysis using Graph Clustering and Collaborative Filtering

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Abstract: ***Gene analysis has a huge scope in identifying the genetic disorders early and performs the respective diagnosis. Gene regulatory modules micro RNA (miRNA) and transcription factor (TF) play a very important role in gene regulation. Clustering is a main challenge in gene analysis. This reflects huge impact on genetic field. Thus in existing system the multiple genomic and proteomic analysis are scattered in multiple distributed systems. In our proposed architecture, we try to develop a common knowledge base for genomic and proteomic analysis using graph clustering, collaborative filtering (CF) and depth first search (DFS). Clustering is used to group the genes and regulatory modules for each and every gene expressions. Finally the challenge of deriving taxonomy for a particular gene id is resolved using Bayesian Rose Tree (BRT).***

Keywords: ***Gene Ontology, Regulatory Modules, Graph Clustering, Collaborative Filtering, Depth First Search, Bayesian Rose Tree***

I. INTRODUCTION

Usage of computer and technology, huge amount of medical data's creates a huge scope of data mining techniques. Data mining techniques are widely used and popular among the medical research groups. Data mining technique are applied to obtain the solution from large amount of knowledge base, relationship / association among the variables, predict a specific disease based on historical datasets, assigning weightage to the variable etc. The objective of this research article is to develop a common knowledge base for genomic and protein patterns to identify the genetic disorders invoking regulatory modules as well. Also integration of collaborative filtering, graph based clustering, depth first search and Bayesian rose tree representation would provide an efficient and easy solution for representing the gene terms and identifying the associated diseases for a particular gene ID.

Increasing huge amount of biomolecular valuable data and information in life sciences there is large scope for gene analysis. The DNA compromises of gene and proteins. Gene analysis focus on identifying the association between the biomolecular entities. Thus in existing system the multiple genomic and proteomic analysis are scattered in multiple distributed systems. In our proposed architecture, we try to develop a common knowledge base for genomic and proteomic analysis, which can be accessed by doctors, scientists, researchers and others to provide solution for more genetic disorders. Thus analysis of gene and protein data provides vital opportunity for bioinformatics domain which produces biologically meaningful data and solutions. To systematize the knowledge base ontology methods and techniques are used to handle the gene terms.

Our proposed architecture help in understanding complex biological patterns and associations. For grouping of same gene information for a particular gene disorder graph clustering (for clustering regulatory modules like miRNA, Transcription Factor (TF) and gene), Collaborative filtering and depth first search (for gene ontology - Molecular Function (MF), Biological Process (BP), and Cellular Component (CC)) approachesare been used. Clustering is defined as a group of similar data elements or data

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Image Segmentation Using Dense Region Approach Of Clustering

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ABSTRACT - Image segmentation is an interesting and developing concept in the field of computer vision. The application of different graph theoretic technique became more useful in image segmentation process. In this paper a dense region method of clustering is used for image segmentation. Here the concept of dense region algorithm is used to find out the maximum dense region of the image by applying gaussian filter and some morphological operators. By using the constraint retrieved images that are located close to each other in the feature space, image retrieval is done. This approach is experimented with real world images which show the effectiveness of the method.

Keywords: Clustering, Images, Maximum, Segmentation

I. INTRODUCTION

Image segmentation is very important and challenging problem and a necessary role in image analysis as well as in high-level image interpretation and understanding such as robot vision, object recognition, and medical imaging. The goal of image segmentation is to partition an image into a set of disjoint regions with uniform and homogeneous attributes such as intensity, color, tone or texture, etc. Many different segmentation techniques have been developed till now. In this paper, a clustering based method for image segmentation will be considered. Classification can be of two types i.e. supervised and unsupervised. Unsupervised classification is known as clustering. In supervised classification we need some prior information about the classification. But in the unsupervised classification no prior information about the classification is needed, i.e. It automatically generates the clusters.

Clustering is a process by which we can group together the objects such that the objects belongs to the same cluster will have same property but objects belongs to different cluster will have different property. There are mainly two types of the structure of a spatial data set in which different point processes overlap.

Clustering techniques are a standout amongst the most utilized calculations as a part of Image segmentation, uniquely used to think about a new proposition with them. There are basically two types of method of clustering in graph theoretic approach 1) Hierarchical clustering 2) Partitional clustering algorithm. Where the primary contrast between them is that Hierarchical strategies create a settled arrangement of partitions, while partitional strategies deliver stand out allotment. Even though Hierarchical strategies can be more exact, partitional strategies are utilized as a part of utilizations including extensive information sets, similar to the ones related with pictures, because of the reality the development of a tree structure is computationally restrictive. The complexity of Hierarchical algorithm is $O(n^2d)$ where n is the number of pixels of the image and d is the number of features. Whereas the complexity of partitional algorithm is $O(n^2d)$.

The basic issue for picture division inspirations driving most partitional bunching calculation is that they don't use spatial

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MODERN GRAPH-THEORETIC APPROACH FOR CLUSTERING AND IMAGE SEGMENTATION

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ABSTRACT

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Clustering is a process by which we can group together the objects such that the objects belongs to the same cluster will have same property but objects belongs to different cluster will have different property. There are mainly two types of clustering namely partitioning and hierarchical. At present other technique has been developed. Many of them are hybrid in nature. Nevertheless, based on the basic architecture, clustering can be classified as density-based, grid based, model-based, sample-based etc. Density-based clustering methods are done based on density. It is believed that density-based clustering methods have the potential to reveal the structure of a spatial data set in which different point processes overlap.

Clustering techniques are a standout amongst the most utilized calculations as a part of Image segmentation, uniquely

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Efficient Scan Based Testing for Memories

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Abstract: We all know that embedded systems have built in memory within the processor. But this memory should be tested by someone in order to store the data in a efficient manner. For this purpose we have built in self test repair (BISTR) technique, which is widely used to test repair embedded random access memories. This paper proposes a reconfigurable built in self test repair (ReBISTR) technique for test repair of RAMs with different sizes and redundancy organizations. An effective and efficient BIST algorithm has been proposed to allocate redundancies of defective RAMs. In this reconfigurable built in self test repair redundancy analysis is performed by using redundancy algorithm for various RAMs. When the RAMs are operated in normal mode, reconfigurable built in self repair technology is used to reduce the set up time. Due to the complexity of memory architecture, the possibilities of occurring manufacture defects are more. So memory testing is necessary. BISTR technique is cost effective but widely used as solution for memory testing. The and architecture are simulated in Xilinx ISE 14.7.

Keywords: SoC, BIST, BISTR, Test Pattern Generator, FPGA.

I. INTRODUCTION

The number of transistors integrated per square inch on the die has been doubled for very 18 months from the invention of integrated circuits according to Moore's law. In addition to this the size of transistors are decreased and the frequency of the circuits are being increased. Due to this testing of very large scale integrated circuits has been facing many challenges. By using different techniques we are going to test the digital VLSI circuits and minimizing the power consumption during testing. We have different types of testing levels involved for completion of testing the circuit. Testing is done at different levels of manufacturing like gate level testing, transistor level testing, circuit level testing etc. we have three testing levels after the manufacturing of the circuit. Manufacturing test is performed after the circuit comes out of the manufacturing line to screen the defective parts. Basic principle of manufacturing testing involves three basic components namely circuit under test, automatic test equipment, and automatic test equipment memory to store the test pattern generation tools. For testing the circuit many test vectors are applied to the input, these input vectors and tier responses are stored in automatic test equipment. Then circuit under test is analyzed. If the circuit under test responses matches with the fault free responses, then the circuit is considered to be working properly. Manufacturing test of a circuit which contains sequential elements like flip flops or latches is complicated task. This involves

- Scan design
- Built in self test
- Test compression
- Test power issues

The test pattern generator produces test vectors that are applied to the tested circuit during pseudo-random testing of combinational circuits. The nature of the that generator directly influences the fault coverage then achieved the influence of the type of pseudo-random pattern generator on the stuck-at fault coverage. Linear feedback shift registers (LFSRs) are commonly used as a test pattern generators and the generating polynomial which is primitive to give the maximum period. We shown that primitive polynomials usage is not necesssary and additionallly the polynomial usage is even undesirable in the most cases. This truth has documented with the help of statistical graphs. The need of right selection of an LFSR seed and generating the polynomial is shown here. a mixed-mode BIST design is for ISCAS benchmarks as the VLSI circuits complexity is constantly increases, So the need of a built-in self-test (BIST) is necessary here. Built-in self-test gives the chip to test itself and to analyse the circuit's response. Hence, it is very complex and as the external ATE (Automatic Test Equipment) is expensive So it may be completely omitted or its complexity can be significantly reduced. Moreover, the BIST gives an easy access to the internal structures of a tested circuit, that are highly hard to reach from the outside. We have already many proposed BIST equipment design methods. Some type of a pseudorandom pattern generator (PRPG) is used to produce test vectors for testing a circuit in most of the state-ofthe-art methods. These test vectors has applied to a circuit either in modified format by additional circuitry or as they are in order to obtain a better fault coverage.

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Abstract: We all know that embedded systems have built in memory within the processor. But this memory should be tested by someone in order to store the data in a efficient manner. For this purpose, we have built in self test repair (BISTR) technique, which is widely used to test repair embedded random access memories. This paper proposes a reconfigurable built in self test repair (ReBISTR) technique for test repair of RAMs with different sizes and redundancy organizations. An effective and efficient BIST algorithm has been proposed to allocate redundancies of defective RAMs. In this reconfigurable built in self test repair redundancy analysis is performed by using redundancy algorithm for various RAMs. When the RAMs are operated in normal mode, reconfigurable built in self repair technology is used to reduce the set up time. Due to the complexity of memory architecture, the possibilities of occurring manufacture defects are more. So memory testing is necessary. BISTR technique is cost effective but widely used as solution for memory testing. The and architecture are simulated in Xilinx ISE 14.7.

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Smart Dustbin

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Abstract: *In this paper, a system of smart dustbin is proposed. The proposed smart dustbin can control the overflow of the waste through the ultrasonic sensors which are interfaced with arduino. A separate GSM module is incorporated which sends a message to the concerned authority of municipal council regarding the waste level in the dustbin. This smart dustbin is currently deployed after testing in the Shirpur Warwade Municipal Council, Shirpur in the state of Maharashtra under the Swachha Bharat Abhiyan 2018.*

Keywords: *Arduino, Ultrasonic Sensor, GSM module, Smart Dustbin.*

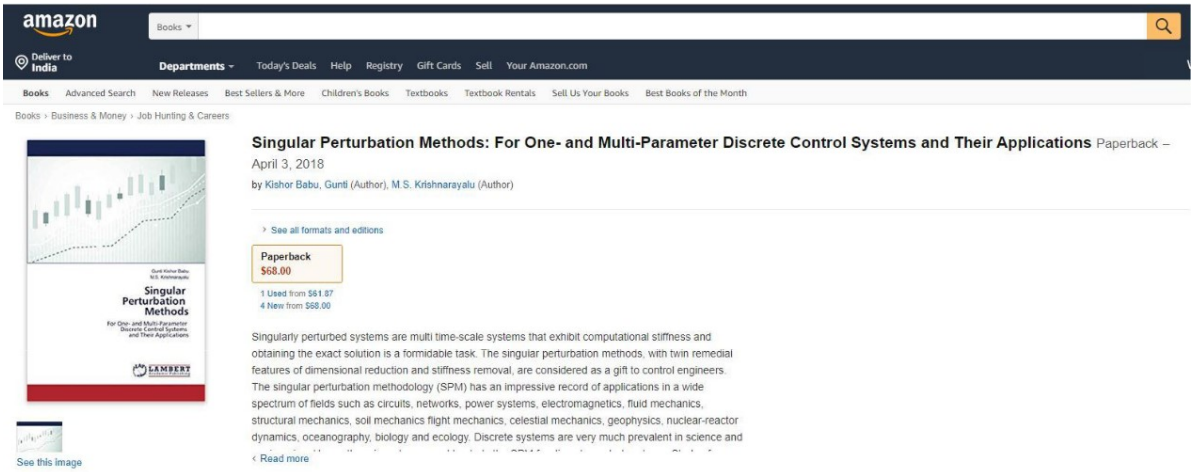
I. INTRODUCTION

The world is in a stage of up-gradation, there is one stinking quandary. We have to deal with Garbage. In our quotidian life, we visually distinguish the pictures of garbage bins being ove full and all the garbage spills out. An astronomically inimi se challenge in the urban cit es is solid waste management not only in Ind a but for most of the countries in the world. Hence, such a system has to be build wh ch can eradicate th s quandary or at least drop i to the minimum level. A society will get its waste dispatched felicitously only i the dustbins are placed well and amassed well. The main quandary in the current waste management system in most of the Indian cities is the insalubrious status of dustbins. Now with the elevate of technology, it is the correct time that we should utilize technology for waste management systems. As we have visually perceived hat technology with analytics has made the world a better place to live by its application in the field of genetics, indemnification, marketing, engineering, banking etc. in past many years. So, in his Project, we have integrated analytics and electronics in order to create optima vicissitudes in the conventional methodology of waste amassment. Most of the urban cities and town in Ind a are not well designed to facilitate the felicitous garbage d spos ng and amassment mechanism. Adscititiously, the cities are expanding rapidly putting the pressure on subsisting infrastructure which is not expanding a the same pace that of urbaniza ion. As the govt. of India has launched keenly intellective city project to utilize the IT-enabled solution so there is an implicit need to make the city cleaner.

In past few decades there is a rapid magnification in the rate of urbanization and thus there is a desideratum of sustainable urban development plans. Now utilizing early age technology and strategic approach, the concept of keenly intellective cities are coming up all around the world. While the noetic conception comes up form keenly intellective cities there is a requisite for keenly intellective waste management. The conception of smar dustbin is for the keenly intellective buildings, colleges, hospitals, and bus stands. The astute dustbin thus thought is an amendment of mundane dustbin by elevating it to be smart utilizing sensors and logic. The smart dustbin is an incipient conception of implementation which makes a mundane dustbin keenly intellective utilizing ultrasonic sensors for garbage level detection and sending the message to the ut lizer updating the s atus of the bin utilizing GSM modem.

As people are getting more keenly intellective so are the things. While the noetic conception comes up for smart cities there is a requisite for keenly intellective waste management. The conception of keenly intellective dustbin is for the smart buildings, colleges, Hospitals, and bus stands. The astute dustbin thus thought is an amendment of mundane dustbin by elevating it to be keenly intellective utilizing sensors and logic. keenly intellective dustbins is an incipient conception of implementation which makes a mundane dustbin keenly intellective uti izing ultrasonic sensors for garbage level detection and sending the message to the utilizer updating the status of the bin utilizing GSM modem.

II. LITERATURE SURVEY



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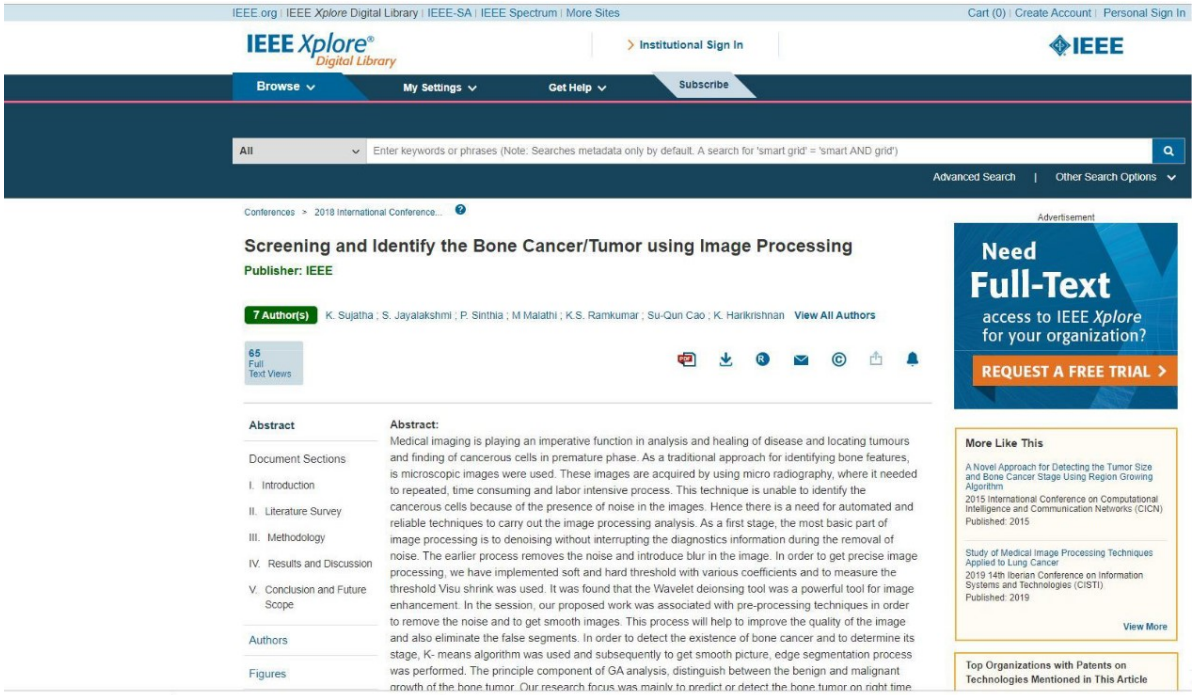
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III. Methodology
IV. Results and Discussion
V. Conclusion and Future Scope
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Abstract:
Medical imaging is playing an imperative function in analysis and healing of disease and locating tumours and finding of cancerous cells in premature phase. As a traditional approach for identifying bone features, is microscopic images were used. These images are acquired by using micro radiography, where it needed to repeated, time consuming and labor intensive process. This technique is unable to identify the cancerous cells because of the presence of noise in the images. Hence there is a need for automated and reliable techniques to carry out the image processing analysis. As a first stage, the most basic part of image processing is to denoising without interrupting the diagnostics information during the removal of noise. The earlier process removes the noise and introduce blur in the image. In order to get precise image processing, we have implemented soft and hard threshold with various coefficients and to measure the threshold Visu shrink was used. It was found that the Wavelet deionsing tool was a powerful tool for image enhancement. In the session, our proposed work was associated with pre-processing techniques in order to remove the noise and to get smooth images. This process will help to improve the quality of the image and also eliminate the false segments. In order to detect the existence of bone cancer and to determine its stage, K- means algorithm was used and subsequently to get smooth picture, edge segmentation process was performed. The principle component of GA analysis, distinguish between the benign and malignant growth of the bone tumor. Our research focus was mainly to predict or detect the bone tumor on right time
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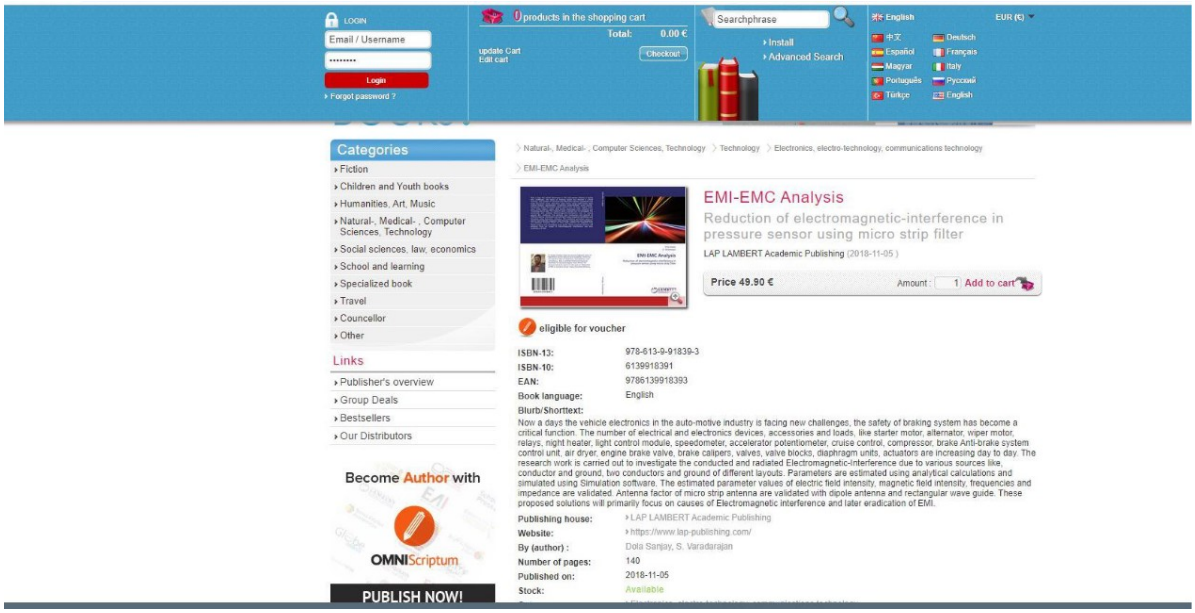
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Now a days the vehicle electronics in the auto-motive industry is facing new challenges, the safety of braking system has become a critical function. The number of electrical and electronics devices, accessories and loads, like starter motor, alternator, wiper motor, relays, night heater, light control module, speedometer, accelerator potentiometer, cruise control, compressor, brake Anti-brake system control unit, air dryer, engine brake valve, brake calipers, valves, valve blocks, diaphragm units, actuators are increasing day to day. The research work is carried out to investigate the conducted and radiated Electromagnetic-interference due to various sources like, conductor and ground, two conductors and ground of different layouts. Parameters are estimated using analytical calculations and simulated using Simulation software. The estimated parameter values of electric field intensity, magnetic field intensity, frequencies and impedance are validated. Antenna factor of micro strip antenna are validated with dipole antenna and rectangular wave guide. These proposed solutions will primarily focus on causes of Electromagnetic interference and later eradication of EMI.
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Research paper

Performance Improvement of Sri Yantra Shaped Multiband Antenna with Defected Ground Structure

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Abstract

A hybrid fractal antenna inspired from sri yantra geometry covering multiple bands in the microwave frequency spectrum is presented in this paper with a reduced size of 40mm x 30mm x 1.6mm. The presented design aims at a multiband antenna with a polygon slots inscribed in a circular patch with defected ground structure and the effect of Sri Yantra fractal iterations on the antenna characteristics are also studied. The gains achieved at respective bands for Sri Yantra geometry are 4.61dB at 4.04GHz, 2.71dB at 4.94GHz, 4.77dB at 5.88GHz, 3.41dB at 6.60GHz, 5.12dB at 7.24GHz, 3.11dB at 8.88GHz and 3.47dB at 10.92GHz.

Keywords: Multiband, Sri-yantra shape, fractal, polygon slot, defected ground.

1. Introduction

The present day mobile technology facilitates universal wireless communication access to citizens worldwide with ever evolving features. Since last few decades, rapid development of the communication technology such as cell phone technology, satellite communication for examines and recovering of local information has demanded to operate with dual or multiband characteristics. Ultra wide band (UWB) systems used for short range communications with stable gain. Now, mobile communication system operate at various frequency bands requires a multiband antenna. Recently, compact size antenna design is the main aspect in the wireless communication. Recent demands in antenna design include operability at higher end of the microwave spectrum. The 5G systems are probable to operate at centimeter and millimeter wave frequency bands, in which there is an unexploited spectrum worldwide.

There are several methods for enhancing the number of characteristics like impedance bandwidth, gain, efficiency, impedance matching of micro strip patch antenna, which includes self-iterating fractal structures, altering(defecting) the ground plane (Defected Ground Structure), employing slots of different shapes on the patch, Substrate Integrated Waveguide (SIW) and optimization techniques. In [1], by introducing the circular and hexagonal ring slots in the bow tie antenna design , the wide band antenna characteristics has been altered to multiple resonances at patch antenna with FR-4 substrate, have also been observed in producing multiple bands at 2.7GHz, 4.8GHz and 6.2GHz with better gain characteristics [4]. A hybrid fractal monopole antenna has been developed with MIMO system for covering multiband for the handheld mobile device applications [5]. Due to the self-similarity, multiband fractal antenna implemented using Coplanar Waveguide (CPW) feed and also circular polarization exhibited [6]. The idea of DGS with a meaningful mathematical modeling for different convention shapes in antenna design is better explained in [7]. New geometries of DGS such as a square slot on a ground plane of CPW feed [8] and a wide U slot design in the partial ground plane [9] have illustrated the effectiveness of DGS in enhancing multiband operation.

In this paper, an edge fed Sri Yantra circular fractal antenna is presented with iterative rectangular slots in ground. This proposed antenna results multi resonances with good impedance matching and sufficient gains achieved. This paper can be organized into following sections. Section 2 describes about the model designing and parameters listed in tables. Section 3 demonstrates the discussion and results comparison shown in tables. Section 4 explains about the experimental authentication with results. Section 5 discusses about the conclusion and Section 6 about references.

2. Design Methodology

The Sri Yantra fractal shape is better implemented on a circular patch with narrow feed with design parameters derived from [10-

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Bandwidth Enhancement of Circular Ring Fractal Antenna for Wireless Applications

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Ch. Murali Krishna ✉, P. Krishna Kanth Varma, P. James Vijay

Conference paper
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Abstract

A pentaband direct fed circular patch antenna with ring fractals is proposed in this paper. The design and analysis of proposed antenna are done by using Ansoft HFSS. To enhance the bandwidth of patch antenna, fractals are implemented. The proposed antenna is designed to four iterations on the circular patch, which covers WLANs and WiMAX applications. The impedance bandwidths achieved are 390 MHz, 330 MHz, 190 MHz, 380 MHz, and 860 MHz at the resonant frequencies 1.68 GHz, 2.19 GHz, 2.73 GHz, 3.91 GHz, and 5.65 GHz, respectively. The corresponding peak gains at their resonant frequencies are 2.789 dB, 3.571 dB, 1.658 dB, 3.127 dB, and 1.803 dB respectively. The designed antenna is used for S-band and C-band applications.

Keywords

Circular patch Ring fractal Multiband

INTERNATIONAL JOURNAL OF INNOVATION IN ENGINEERING RESEARCH AND MANAGEMENT ISSN 2348 - 4918 , ISO 2000-9001 CERTIFIED, REFEREED PEER REVIEWED JOURNAL , ISO 2000-9001, EFI 5.89, WORLD SCINTIFIC IF 6.33

A PENTA BAND DESIGN IMPLEMENTATION OF NESTED CIRCULAR SLOT FRACTAL ANTENNA FOR MULTIBAND WIRELESS APPLICATIONS

P.Krishna Kanth Varma G.Sarathi Rama Priyanka Ch.Murali Krishna

ABSTRACT

The design and investigation of a penta band nested circular slot fractal antenna with line feeding technique is presented in the current work for multiband applications. The proposed antenna is fabricated on 1.6mm thickness Rogers RT duriod 5880 substrate material with a dielectric constant of 2.2 and size of 88.5mmx60mm. Four iterative steps are adapted in designing and achieving the required parameters of the antenna. The designed antenna resonates at multi frequency band applications from 4.5GHz (4.56GHz -4.60GHz), 5.3GHz (5.33GHz -5.40GHz), 7.02GHz (6.99GHz - 7.04GHz), 8.39GHz (8.30GHz -8.49GHz) and 9.7GHz (9.46GHz -9.61GHz). The radiation patterns revealed in the proposed antenna is Omni-directional patterns achieving a minimum gain of 1.07dBi and a maximum gain of 7.89dBi. After a proper structure selection and iterative analysis the antenna is designed and simulated to resonate at Microwave frequency band for applications like S-band and C-bands.

KEYWORDS

Micro-strip Patch Antenna, Fractals, Line Feed, Radiation Pattern, Microwave frequency bands, Omni directional.

FULL TEXT:

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REFERENCES

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A CFD Investigation of Heat Transfer Enhancement of Shell and Tube Heat Exchanger Using Al_2O_3-Water Nanofluid

K. Somasekhar [a] ✉, K.N.D. Malleswara Rao [b], V. Sankararao [c], Rafi Mohammed [c], M. Veerendra [a], T. Venkateswararao [d]

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Abstract

A multi pass shell and tube heat exchanger with 3 tubes modelling is done using CATIA and meshing has done using ICEM CFD software, simulations has done by using CFD-FLUENT software. Using Fluent, computational fluid dynamics software the pressure drop, heat transfer characteristics of Al_2O_3-water nanofluid, and Distilled water are analyzed under turbulent flow condition. Nanofluid such as Al_2O_3-H_2O is used as cooling medium instead of Distilled water. Finally the CFD simulated results are compared with experimental results. The effects of Peclet number, volume concentration of suspended nanoparticles, and particle type on the heat transfer characteristics were investigated. Based on the results, adding of nanoparticles to the base fluid (Distilled water) causes the significant enhancement of heat transfer characteristics.

Previous article in issue Next article in issue

Keywords

DESIGN AND IMPLIMENTATION OF ANTI-THEFT ATM

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ABSTRACT
Automated Teller Machines ATMs are used for different ways, mostly cash withdrawals. ATM users utilize many services on ATM and they will do some billions of transactions. Meanwhile robberies occurring in the ATMs are also high with the lack of security. The main objective of our study is to minimize the robberies occurring in the ATM's. In order to overcome this problem we have come up with a project that uses Raspberry Pi. The hardware components include Web cam to continuously monitor the stipulated area, a motor driver and a motor to open and shut down the doors when a burglar is detected, buzzer to alert the surrounding people and shops. Any person who wants to get into the ATM should provide a valid card near the doors. When the card is inserted, if it is valid the doors get opened else not. If burglars or thief's try to destroy and theft the ATM and once if the vibration is sensed, then information is passed to Raspberry Pi. Then to close the door of ATM the DC Motor is used. Thereby alerting the nearby public and bank authorities the buzzer also rings while the camera continuously monitors the whole ATM. The proposed method or system ensures to develop the advanced ATM anti-theft system. In this project a cost effective and an advance approach for ATM security has been proposed. It can be installed at some hidden place in the ATM so that it cannot be approached or destroyed by thieves. From existing ATM intrusion and theft control systems, this proposed system is distinctive in many ways. In future this can also be extended by sending an SMS alert to the nearest Police Station and also a relay can be used to trigger the gas inside the ATM to make the thief unconscious.

KEYWORDS: Vibration Sensor, Motor, Relay, Rfid, Buzzer, Gsm, Camera, And Raspberry Pi.

INTRODUCTION

As we daily see in news as many robberies are happening around India. ATM users utilize many services on ATM and they will do some billions of transactions. So due to the lack of security these robberies have been notifying every day in different places so, these incidents made me to think about having a high surveillance security system by using the raspberry pi. The proposed system uses the motion sensor to detect the unauthorized access and entry in to the premises , as the motion detect camera takes the real time image & send it to the user for analyzing further so that user can take the necessary actions, for this process we use different components like dc motor which is used to shut the door , the USB Camera captures the image and sends it to the USB port of the Raspberry Pi board.

sound starts from the buzzer. To close the door of ATM DC Motor is used. A relay will be triggered to leak the gas inside the ATM to bring the thief or burglar into unconscious stage. Camera is always in processing and will send video continuously to the PC and it will be saved in computer. To capture the robber occur time, RTC is used and that will send the robbery occur time to the nearby police station and corresponding bank with the message through the GSM. This will prevent the robbery from causing and the person involved in robbery can be easily carried.

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Synthetic Fibers of Polymer Matrix Composites- A Review

Journal Contribution posted on 28.07.2019, 13:31 by RAFFI MOHAMMED

Abstract—In today's world, Polymer Matrix Composites (PMC) are playing a vital role in place of
conventional materials as they are having high strength, high stiffness, low weight and low manufacturing cost.
Due to the above reasons they are widely used in automobiles, aerospace, marine, space satellites, sports kits,
etc. The important phase of PMC's is their reinforcement. Synthetic fibers, Natural Fibers, flakes and fillers are
some of the forms of reinforcement. The main purpose of reinforcement is to withstand the loads applied on the
composite. In this review article we have done the literature survey on various types of synthetic fibers like
Glass Fiber, Kevlar Fiber, Carbon Fiber and Aramid Fiber and their physical, mechanical and chemical
properties were emphasized and from this study we had came to a conclusion that Carbon Fibers are decent
fibers for lot of engineering applications when compared with Glass Fibers and Kevlar Fibers. Glass Fibers are
the economically favored fibers standing next to the Carbon Fiber.

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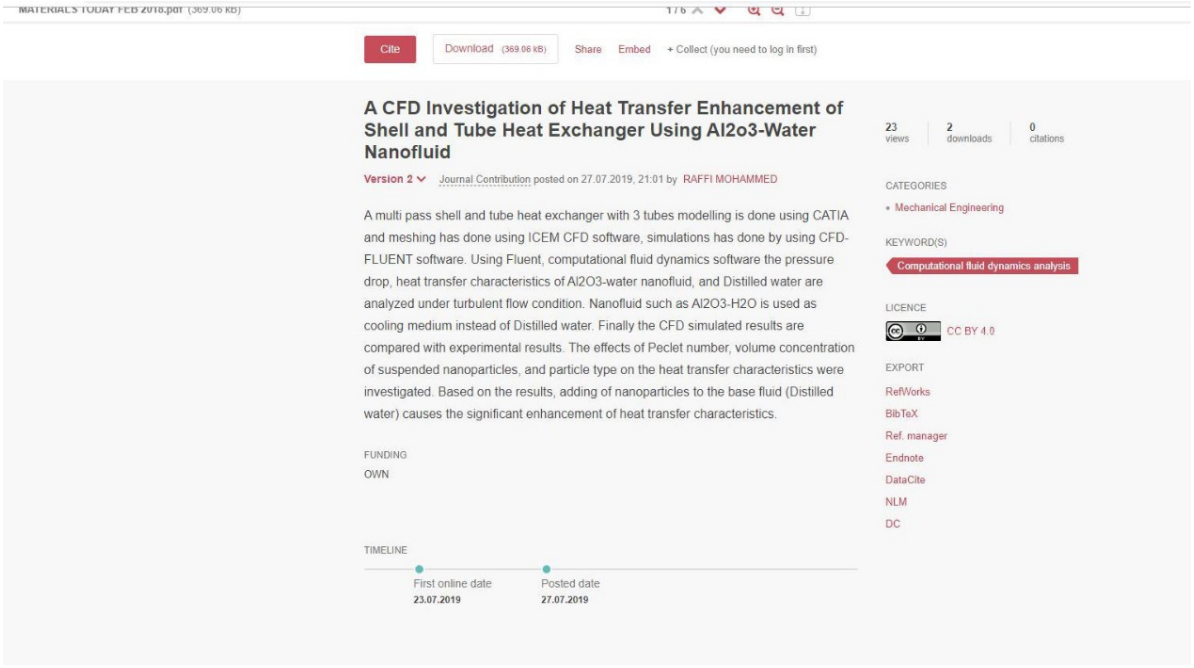
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A CFD Investigation of Heat Transfer Enhancement of Shell and Tube Heat Exchanger Using Al2o3-Water Nanofluid
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A multi pass shell and tube heat exchanger with 3 tubes modelling is done using CATIA and meshing has done using ICEM CFD software, simulations has done by using CFD-FLUENT software. Using Fluent, computational fluid dynamics software the pressure drop, heat transfer characteristics of Al2O3-water nanofluid, and Distilled water are analyzed under turbulent flow condition. Nanofluid such as Al2O3-H2O is used as cooling medium instead of Distilled water. Finally the CFD simulated results are compared with experimental results. The effects of Peclet number, volume concentration of suspended nanoparticles, and particle type on the heat transfer characteristics were investigated. Based on the results, adding of nanoparticles to the base fluid (Distilled water) causes the significant enhancement of heat transfer characteristics.
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Evaluation of Mechanical Properties of Epoxy Based Hybrid Composites & MCDM Technique for Composite Selection

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ABSTRACT

Fiber reinforced polymer composites has been used in a variety of application because of their many advantages such as relatively low cost of production, easy to fabricate and superior strength compare to neat polymer resins. Reinforcement in polymer is either synthetic or natural. Synthetic fiber such as glass, carbon etc. has high specific strength but their fields of application are limited due to higher cost of production. Recently there is an increased interest in natural filler based composites due to their many advantages. In this connection an investigation has been carried out to make better utilization of coal powder/coal fly ash /Bagasse ash as filler material along with glass fiber as reinforcement for preparation of epoxy based hybrid composites.

The objective of the present research work is to study the mechanical properties of glass fiber reinforced epoxy based hybrid composites. The effect of fiber loading and filler material on mechanical properties like tensile strength, tensile modulus, flexural strength, ILSS, hardness and Impact Strength of composites is studied. A multi-criteria decision making approach called TOPSIS is also used to select the best alternative from a set of alternatives based on different attributes (mechanical properties).

KEYWORDS: *Fiber Reinforced polymers, Tensile Strength, Flexural Strength, ILSS, TOPSIS*

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I. INTRODUCTION

In The Field Of Material Science Engineering, Development Of New Composite Materials (Or) Modification Of Existing Composite Is The Real Challenge For Most Of The Researchers. Polymer Epoxy Resins Are The Most Widely Used For High Performance Applications Because Of Their Excellent Mechanical And Thermal Properties High Chemical And Corrosion Resistance Low Shrink On Curing And The Ability To Be Processed Under A Variety Of Conditions [1] .To Develop New Class

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FABRICATION AND EXPERIMENTAL STUDY OF VAPOUR ADSORPTION REFRIGERATION SYSTEM

Author(s):

V. Nagarjuna | M Pachakhan | P Hemanth

Keywords:

Adsorber bed, COP, Generator, SCP

Abstract

Vapour Adsorption system (VAS) is the emerging technique in refrigeration which uses low grade energy like exhaust gases, solar energy etc. Inherently require large heat transfer surfaces to transfer heat to and from the adsorbent materials which automatically makes cost an issue. High efficiency systems require that heat of adsorption be recovered to provide part of the heat needed to regenerate the adsorbent. But on the other hand this system having lower COP as compare to existing systems which is due to lack of research and advancement in the system. The literature survey gives the information about selection of working pair. Activated carbon (adsorbent) and ammonia (refrigerant) are chosen as a working pair. The theoretical work gives the types, process and properties of adsorption refrigeration. The adsorbent bed is the heart of the VAS in which compressor is replaced by adsorber bed in Vapour compression refrigeration. Here the heat input is given by generator. This work will give the fabrication and testing of the vapour adsorption system for finding the values of COP and SCP. The system has been evaluated for various operating temperatures for a cycle time of 42 minutes. Under the standard operating conditions the results shows that the system have low COP but there are no effects like depletion of Ozone layer and Global Warming due to emission of CFC`S ,HFC`S , CO2

Other Details

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Development and Fabrication of MAC Technology for a Vehicle to Control Roll Back Effect

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[2] Department of Mechanical Engineering, V.K.R & V.N.B Polytechnic, Gudivada

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Abstract - *In this research a new mechanism is developed to control the roll back effect which is caused in automobile during the hill road drive. This paper gives a new method for controlling roll back effect by introducing MAC Technology in a vehicle. MAC Technology consist of a mechanism which can operate both clutch and break by single pedal. By implementing this technology in vehicle we can observe one more pedal beside the clutch pedal which is named as MAC pedal. MAC Technology can control the roll back effect at the time of movement whether moving forward or backward. It is the main advantage of MAC Technology when compared to existing techniques. MAC Technology and its mechanism has been fabricated and tested on a vehicle.*

Key Words: MAC (Manual Actuated control), Anti Roll Back Effect

1. INTRODUCTION

The entire research is to control the roll back effect and is aimed to recuce the accidents caused during the drive on the hill roads. This research paper gives one more solution to control the roll back effect by developing MAC Technology. Manual Actuated Control (MAC) mechanism operates by taking manual input according to the requirement.

2. PROBLEM STATEMENT

The problem which we identified to resolve was vehicle rolling back in mountain roads.

- In the hill roads a common problem encountered by the driver is to move the car from rest position or from parking on slant surface.
- When a vehicle moving on hill road in traffic the vehicle needs to be driven slowly this is the one more situation faced by a driver to control the car from rolling back.

(Disengage) and brake pedal (Engage), shift the gear from neutral to then first gear, disengage the brake, engage the clutch and accelerate the vehicle. Meanwhile there is a possibility of the vehicle rolling back due to disengage of brakes. The driver has to control clutch, brake, and accelerator while changing the gear all at one point of time. Failure of any one of these leads to hit any vehicle behind by this module of driving, driver may feel nervous. The aim of this research is to provide a safer and comfortable ride for the driver on inclined roads with low cost and easy maintenance.

3. LITERATURE REVIEW

Cook George developed a hill holder mechanism which can hold the vehicle on slope road surface for two seconds by using the brake pressure by developing Anti-creep and hill holder brake system. This system helps to hold the vehicle while driver disengages the brakes and getting to operate the accelerator [1].William Kent developed a new system by giving input to system by utilizing a load sensor connected to a wheel brake to detect a change in wheel braking torque and transfer responsively with a mechanical brake control device to actuate [2].Grzegorz laniszewski stated that by using the piston cylinder, which is controlled by an electronic unit is coupled to a pressurized hydraulic system and effects to hold brake pedal for two seconds [3].William K.Messersmith approach a new method to hold the vehicle by applying brakes for controlling roll back effect by using the load cell with electrical control. This system needs continuous power source for the operation and display outputs, inputs [4].Alvin L. Berger used a one-way clutch when engaged it will protect the vehicle from roll back effect [5]. A.Arunkumar, T. Muthumani, V. Balasubramani developed a Ratchet and Pawl mechanism to arrest backward motion to the front axle when vehicle gets to roll back [6]

4. WORKING OF MAC TECHNOLOGY

In this Research, MAC technology is developed to control the roll back effect of vehicle and also aim to provide a comfort ride for a driver. By understanding the existing technologies and by determining the actual requirements

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EXPERIMENTAL ANALYSIS ON DIESIEL ENGINE

Author(s):

SHAIK ABDUL SIDDIHIQUE, RAFFI MOHAMMED, SK ABDUL AZEEZ

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Keywords:

Abstract

In the present work, an investigation has been carried out on, in-cylinder flow for non-reacting as well as firing condition with different types of combustion chamber geometries. The multi-dimensional CFD code Diesel-RK is used for the simulation of air motion inside the cylinder and combustion process. Three-dimensional computational domains constituted the intake ports, combustion chambers, and the exhaust ports, which were capable of simulating complete engine cycles and can work on any operating conditions. The investigation has been carried out to study the effect of combustion chamber geometries

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Production and Analysis of Composite Construction Materials with Admixture of Coal-Bagasse Based Fly Ash and Perlite by ANSYS Approach

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Abstract – *In this paper the effect of compositions of bagasse ash and perlite admixture on thermal stresses and other mechanical properties of Clay were investigated. The raw clay gotten from Suryapet in Telangana state. First processed to very fine particles of clay were also dried at atmosphere temperature to remove moisture present. A composite mixture of this dried bagasse ash and perlite with the processed clay was made at various propartions of the bagasse ash and perlite, with a little addition of water for plasticity. Samples of rectangular dimensions were then produced from the mounting press by the process of compaction with a very high pressure. The samples were dried and then finally fired in the furnace at 800°C for a final curing. Properties which include thermal shock resistance, bulk density, cold crushing strength and porosity were obtained by the appropriate standard test methods. The microstructures and weight loss percentage(%) corresponding to temperature variation of the fired samples were characterized with SEM-EDS and TGA. The results show that the amount of bagasse ash and perlite admixture affects the properties variously; porosity and thermal resistance increases with percentage increase in bagasse ash and perlite, thermal and mechanical properties were also evaluated by ANSYS.*

Keywords: Bagasse ash and perlite, Clay, SEM &TGA

1. INTRODUCTION

In this paper main objective is development of thermal insulated construction material by admixture of Bagasse Ash. Main reason for adaption of Bagasse ash, Perlite it consist excellent thermal resistive properties and cohesive developing countries like India .Due to increasing urbanization many houses and industries to be construct as per the requirement of the people. Energy saving is an important issue in the world because of both economic and environmental concerns. Consumption of energy from buildings constitutes about 30% of total consumption with about half of this lost through the walls. Indian standard states that, depending on the location and climate, walls should be made of material with a heat transfer coefficient of 0.41–0.72 $W/m^2 K$, the lower the better. If the thermal resistance is further improved, then heat loss will be decreased and, hence many brick manufacturers are seeking to produce such materials. Earthenware clayey raw material is generally used with few pre-treatment steps for extruded perforated bricks. Firing temperature is generally of the order of 1100°C. The product consists of vertical perforations to reduce heat transfer through the brick. There are two different thermal conductivity values of these bricks: first involves the bulk of the material constituting the walls, while the second involves thermal conductivity of the entire product consisting of large vertical holes of rectangular cross-section. The Bagasse ash, Perlite as reinforcement in a clay matrix for making composite clay bricks and the Bagasse ash to be cut and crushed to micron sizes for proper mixing with the matrix of clay to develop composites Hand molding technique is employed to manufacturing composite clay bricks. Along developing suitable molds for Mechanical characterization.

2. EXPERIMENTAL PROCEDURE

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Mechanical Properties of Jute/E-glass Fiber Reinforced Polymer Composites influenced by Hygrothermal Effects.

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[2]Ph. D Scholar, KL University

Abstract: ***During service, almost all materials suffer degradation in their properties when subjected to different conditions such as high temperature and moisture. Composite materials are no exception to this general degradation. Here it is proposed to study jute/E-glass fiber reinforced polymer composite at different temperatures with varying humidity conditions. The composite materials are tested for tensile and flexural properties at ambient conditions and in wet-hot conditions. Influences of these variables on microstructure of these composite materials are studied using scanning electron microscopy (SEM). It is found that tensile strength of the composites that have undergone treatments mentioned above is reduced which assigns the absorption of water molecules on the surface which weakened the composites.***

Key words: Environmental degradation, Moisture, Tensile, scanning electron microscopy (SEM), Jute, E-glass fiber

I. INTRODUCTION

Irrespective of nature of material, whether it is a metal or non-metal, it will fail if the conditions are severe-it may be high pressure or high temperature or adverse chemical environment or fields (electric or magnetic) which may cause damage to the material. This phenomenon is common in everyday life, since human beings always drive for weight reduction. They are led to explore light weight structures. As we know generally metals are heavier, there has been an intensive research to find alternative materials such as ceramics and polymers. Even in these two materials, polymers (plastics) are tough competitors to the ceramics as the former is lighter and could easily be fabricated into any kind of complicated shapes at very low temperatures, whereas ceramics need high temperature facilities to manufacture into products. An extensive research on different materials has clearly shown that it is an advantage to have composite materials consisting of two or more constituents (phases) with distinct physical and chemical properties. Therefore we have undertaken to study composite materials based on fiber reinforced composites. Jute fiber reinforced by E-glass fiber. With this background, it is supposed to study involving the composites consisting of FRP's. Effects of temperature and moisture on Jute/E-glass fibers are studied and micro structural correlation is also formulated.

II. MATERIALS

The material is Jute fiber reinforced by E-glass fiber composite. The materials are purchased from Ram composites Pvt. Ltd, Hyderabad. Jute/E-glass composites were prepared in square shape samples of size 25mmx25mmx3mm by the conventional hand layup process.

III. EXPERIMENTATION

Samples that are used in this investigation are by Hand layup process and the samples are of square shape of size 25mmx25mmx3mm. These samples are subjected to hygrothermal treatment in an environmental chamber at 71°C ± 2 °C and 85% ±4 % Relative Humidity. Later these samples were tested for mechanical properties like tensile and flexural tests. A photograph of

ANALYSIS OF AUTOMOTIVE INTAKE MANIFOLD USING CAE SOFTWARE

V.Sai Surendra[1], M.Vimal Teja[2], B.Sudhakara Rao[3], K.Bhavanarayana[4], Rafi Muhammed[5]

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ABSTRACT: *In automotive engineering, an intake manifold or inlet manifold is the part of an engine that supplies the fuel/air mixture to the cylinders. This project focused on simulation testing of automotive intake manifold design using computer aided engineering software. Finite element random vibration analysis is conducted on excavator intake manifolds designs for material cast iron and aluminium alloy. The purpose of this project is to study the computational maximum stress on the model due to the effect of engine vibrations and pressure pulsation loads. The softwares used are PRO-E, 4.0, HYPERMESH-10 and ANSYS-11, based on the simulation results obtained, the maximum stress of both materials is compared to distinguish which is better in resisting the vibration loads applied.*

Keywords: Automotive Intake Manifold, Modal analysis, Intake Manifold Analysis

1. INTRODUCTION

The primary function of the intake manifold is to evenly distribute the combustion mixture (or just air in a direct injection engine) to each intake port in the cylinder head(s). Even distribution is important to optimize the efficiency and performance of the engine. It may also serve as a mount for the carburetor, throttle body, fuel injectors and other components of the engine [1-4]. Due to the downward movement of the pistons and the restriction caused by the throttle valve, in a reciprocating spark ignition piston engine a partial vacuum (lower than atmospheric pressure) exists in the intake manifold [5-6]. This manifold vacuum can be substantial, and can be used as a source of automobile ancillary power to drive auxiliary systems: power assisted brakes, emission control devices, cruise control, ignition advance, windshield wipers, power windows, ventilation system valves, etc[7-8].

2. DESCRIPTION

In this work static and modal analysis of the intake manifold made of cast iron and aluminium was carried out and is compared.

- Length of the intake manifold = 357 mm
- Maximum load capacity = 30Mpa

Material Properties:

1.Cast Iron Young's modulus = 1.8×10^5 MPa
Poisson's Ratio = 0.40

DESIGN AND ANALYSIS OF LEAF SPRINGS USING COMPOSITE MATERIAL FOR LMV

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ABSTRACT: *The automobile vehicles have number of parts which can be able to replace by composite material, but due to the improvement of mechanical properties of composite material. It has more elastic strength and high strength to weight ratio has compared with those of steel material. So, out of many components one of the components of automobile, the leaf spring which use for carried out the whole weight of the vehicle is best option for replacement of steel material by composite material. For reduce the weight of leaf spring the analysis was carried out on the Light duty Vehicle Mahindra Model Bolero Maxi Truck leaf springs with same dimensional geometry. The material select for leaf spring are Graphite epoxy composite material which is more economical with similar mechanical and geometrical properties to the steel leaf spring. The aim of this report was to design and analysis of Leaf springs. It is modeled by using Auto CAD, and Static analysis is done on the Leaf springs by using ANSYS 16.0 software. Deflections, stresses values are calculated.*

KEYWORDS: **Leaf Springs, Graphite Epoxy, ANSYS 16.0, Auto CAD.**

I. INTRODUCTION

In now a day the fuel efficiency and emission gas regulation of automoiles are two important issues. To fulfil this problem the automobile industries are trying to make new vehicle which can provide high efficiency with low cost. The best way to increase the fuel efficiency is to reduce the weight of the automobile. The weight reduction can be achieved primarily by the introduction of better material, design optimization and better manufacturing processes. The achievement of weight reduction with adequate improvement of mechanical properties has made composite a very good replacement material for conventional steel. In automobile car out of many components one of the compenents of automobile which can be easily replaced is leaf spring. A leaf spring is a simple form of spring, commonly used for the suspension in wheeled vehicles. The suspension of leaf spring is the area which needs to focus to improve the suspensions of the vehicle for comfort ride. The suspension leaf spring is one of the potential items for weight reduction in automobile as it accounts for 10 to 20% of unspring weight.

It is well known that springs are designed to absorb shocks. So the strain energy of the material becomes a major factor in designing the springs. The introduction of composite material will make it possible to reduce the weight of the leaf spring without reduction in load carrying capacity and stiffness. Since the composite material have high strength to weigh ratio and have more elastic strain energy storage capacity as compared with steel. It can be easily observed that material having lower density and modulus will have a greater specific strain energy capacity. Thus composite material offer high strength and light weight. In this work, leaf springs of automobile vehicle are Mahindra Model Maxi Truck is considers for further investigation. The suspension quality can be improved by

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EXPERIMENTAL ANALYSIS OF NANO – FLUIDS (AL2O3 & SIO2) THROUGH DOUBLE PIPE HEAT EXCHANGER

Author(s):

Sk Abdul Azeez | Raffi Mohammed | A. Rahul Kumar | B. Narendra Kumar, Y. Venkatesh

Keywords:

CSTR-PID-ZN-Fuzzy-MRAM-MATLAB

Abstract

In this research work forced convection flows of nano-fluids consisting of water with nanoparticles AL2O3and SIO2in a horizontal tube with constant wall temperature are investigated numerically. A single-phase model having two-dimensional equations is employed with either constant or temperature dependent properties to study the hydrodynamics and thermal behaviors of the nano-fluid flow. The velocity and temperature vectors are presented in the entrance and fully developed region. The variations of the fluid temperature, local heat transfer coefficient and pressure drop along tube length are shown in the paper. Effects of nanoparticles concentration and heat transfer coefficient are presented. Numerical results show the heat transfer enhancement due to presence of the nanoparticles in the fluid in accordance with the results of the experimental study used for the validation process of the numerical model.

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Effects of Supercharger and Turbocharger on I.C Engine Performance – A Review

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Abstract- The aim of this paper is to study the different types of superchargers and turbo chargers in modern trends and those how far useful in now a days, as a demand of new efficient and eco friendly engines is incrementing new technologies are developing. Due to the rich air fuel mixture combustion emission will increase hence by turbo-charging the engine more power can be obtained with low emission. The behavior of I.C engine with application of turbo/super charger and need of turbo super charger installation is studied by observing of its effects. The environmental atmospheric density reduces with the increased altitude. However, boost pressure recovery cannot make sure the power recovery of diesel engines due to the changing overall system efficiency and pumping process. The principle aim of the designer is to improved power output by minimizing the exhaust emissions like CO, CO2, NOx ect.., the power output of a naturally aspirated engine depends on amount of air inducted into the engine cylinder, extent of utilization of the inducted air, the speed of the engine, quantity of the fuel admitted and its combustion characteristics, thermal efficiencies of the engine. Supercharger may also Called as forced induction to increase the power output of the engine. It is a pressure boosting device which supplies air or mixture at a higher pressure to the engine cylinder is mostly applicable for modern applications like racing cars, marine and automotive engines where weight and spaces are important.

Index Terms - **Turbocharger, Supercharger, Exhaust gas recovery, Inter cooler, CO, NOx.**

I. INTRODUCTION

1.1 Other Methods for Improvement of Performance of an Engine:

1. Increasing speed of the engine,
2. Use of higher compression ratio,
3. Utilization of exhaust gas energy,
4. Use of two stroke cycle.
5. Improving volumetric efficiency of the engine.
6. Increasing the charge density.

1. 2. INTRODUCTION TO SUPERCHARGING

It is known fact that the power output of an engine increases with an increase in amount of air or mixture in the cylinder at the beginning of compression stroke because it allows the burning of more quantity of fuel. The amount of air inducted per unit time can be increased by increasing engine speed or increasing air density during suction stroke. The increase in engine speed requires rigid and robust engine as the inertia load increases rapidly with an increases speed. The engine friction and bearing loads also increase and volumetric efficiency falls with increasing speed of engine. Therefore this is not possible. Now another method in which we have to increase the suction pressure is called supercharging. Equipment used for this is called Supercharger.

DESIGN & ANALYSIS OF INVERTED EXTRUSION TOOL FOR COMPRESSOR HOUSING

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[redacted]

Abstract— *This project deels with design of Compressors which is a component of refrigerator, which compresses the air. Compressor housing is the main part of refrigerator. Compressor housing consists of adaptor and accumulator. It's also consists of inside rotor, motor and oil. As the adaptor is connected to the compressor by welding, there might be chances of leakage of oil. The Aim of the project is to avoid welding and prevent leakage. This can be done by introducing Inverted extrusion tool. So the tool has been designed in catia, where both the piercing and extrusion (or) flanging can be done at a time. This operation is done by modifying the flanging punch. The punch will first pierce the component and then flanging within the single stroke both the operation will be completed. In Extrusion tool design, various perameters has been taken into consideration such as press load, spring back effect, thickness of component, depend upon the extrusion length. The project includes 3-D die design of sheet metal of FLANGING TOOL; the die is designed using "UNIGRAPHICS" as modelling tool. Design includes concepts such as tool shut height, Flange tool calculations and tool cost estimation. The results obtained from simulation tool "SOLID WORKS SimulationXpress" are compared with live component results.*

Keywords— **Compressor, inverted extrusion tool, Flanging tool, unigrapics.**

I. INTRODUCTION

In today's practical and cost conscious world, sheet metal parts have already replaced many expensive cast, forged and machined products. The reason is obviously the relative cheapness of stamped, mass produced parts as well as greater control of their technical and aesthetic parameters. That the world slowly turned away from heavy, ornate and complicated shapes and replaced them with functional, simple and logical forms only enhanced this tendency towards sheet metal products. Sheet metal processes can be broken down into two major classifications and one minor classification.

Shearing processes- processes which apply shearing forces to cut, fracture, or separate the material.

Forming processes- processes which cause the metal to undergo desired shape changes without failure, excessive thinning, or cracking. This includes bending and stretching.

Bending processes- Bending is the process of folding a sheet about a straight line axis which lies in the neutral plane.

Drawing processes- In drawing, a blank of sheet metal is restrained at the edges, and the middle section is forced by a punch into a die to stretch the metal into a cup shaped drawn part.

Finishing processes – processes which are used to improve the final surface characteristics.

II. THEORETICAL BACKGROUND

A. *Introduction*

Sheet metal is one of the most important semi finished products used in the steel industry, and sheet metal forming technology is therefore an important engineering discipline within the area of mechanical engineering. Sheet metals are characterized by a high ratio of surface area to thickness. Sheet metal forming is basically conversion of a flat sheet metal into a product of desired shape without defect like fracture or excessive localized thinning.

B. *Fundamentals of metal forming*

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Analysis on combustion geometry on different combustion chambers

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To Cite this Article

Dr Abdul siddique Sk, Raffi Mohammed and Sk Abdul Azeez "Analysis on combustion geometry on differen. combustion chambers", *International Journal for Modern Trends in Science and Technology*, Vol. 4, Issue 5, MAY 2018, pp.39-42.

ABSTRACT

The present research work concentrates on combustion chamber geometry of single cylinder four stroke DI diesel engine with specification of 5.2kw, 1500rpm. The proper mixing of air and fuel in shorter time is essential to lessen the ignition lag phase. In order to get proper air fuel mixing, a systematic air movement also called swirl is essential, which produce higher relative velocity between fuel droplets and air. The spray cone of the injected liquid fuel gets disturbed because of air movement and turbulence inside the chamber. Since, the turbulence is mandatory for proper mixing and the fact that this could be achieved by the shape of the combustion chamber geometry.

KEYWORDS: *Nitrogen Oxide (NOx), Exhaust Gas Temperature (E.G.T), Carbon Monoxide (CO)*

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I. INTRODUCTION

This system is having a hemi spherical shaped combustion chamber with single injector having three 0.3mm nozzles. In this chapter, four combustion chamber geometries (1) Toroidal, (2) Shallow Depth, (3) Re entrant and (4) Double wedge shallow are considered for optimization. Computational Fluid Dynamics software Diesel-RK is used to model the combustion phenomenon in compression ignition diesel engine.

A four stroke, single cylinder, naturally aspirated, computer software is used for the test rig for recording the test parameters such as fuel rate, temperatures, air flow rate, load, brake power etc. From these data the engine performance characteristics such as brake thermal efficiency, brake specific fuel consumption, volumetric efficiency and mechanical efficiency are calculated. The calorific value and the density of the diesel fuel which is used for test are given as input to the computer software.

II. RESULTS AND DISCUSSIONS

Fabrication of Water Dispensing System Using Different Coins

B. Narendra Kumar*[1], Raffi Mohammed*[1], Sk Azeez*[1], Y. Venkatesh*[1] and A. Rahul Kumar*[1]
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Abstract— Automated coin based water dispensing system has advanced technology and these machines are used to the mankind by different coins. The machine is operated by microcontroller and sensor. The water dispensing system is works on sensor signal which is send to the microcontroller. The system use infrared sensor (IR) has a coin detector that is used to sense particular coin and send information to microcontroller about valid coins, then it starts the motor to pour water in glass using motor as long as certain quantity of water in the glass. Here we save some water in water dispenser system for feature. This type technology is also used for cool drinks and milk etc..

Keywords— Water dispensing system, Water pump, Microcontroller, LCD & IR Sensor

I. INTRODUCTION AND LITERATURE REVIEW

Now a day's automatic water dispensing machines are used for drinking safe water which is operated by coins but my aim is coin based water dispensing machine is to be developed by using microcontroller which is operated by different coins of Rs. 1 & Rs. 5. Presently water has become the most commercial products in India and Scarcity of water also increased year by year from few decades. Increase of population and changing their lifestyle for water. In order to consider costs were taken into account, in rural areas are paying high amount for requirement of water than urban areas. In this system regulated power supply is designed to provide system with constant supply of 12 volts. The dispenser system will dispense of water only when the valid coins are inserted in the coin slot. The correctness of coin is detected by an IR sensor. If the coin is valid then the signal sends to the microcontroller and water pump will operated then pour the water in glass. Various studies on dispensing are discussed below. Raksh th N.et.al (2016): discus the coin operated water dispensing system is operated by pre-set of time using acceptable coins. This system has optional (or) float switch which detects the water level in the tank. I desl mukh et.al (2016): develop the automatic vending machine has been worked on arduino microcontroller for pouring low cost of water such way that to avoid wastage of water. This paper concluded the water vending machines are available and operated on only coins. D. A. Mhaske (2015): coin based water dispensing system. The coin is inserted in the coin slot then coin image was catch by camera using image processing of MATLAB code for coin detection. When coin signals is passed to ARM7 controller then the water will fall in glass. Aditi Mohan (2017): water dispensing machine dispenses water by detection of right coin using microcontroller. The system can be programmed for coins detection and for certain duration with the help of algorithm and programming in Arduino. This document is a template. For questions on paper guidelines, please contact us via e-mail.

II. FABRICATION OF MODEL

Coin based automatic water dispenser provides good quality of water for the human beings. We are showing our work as Fabrication of Water Dispersing System Using Different Coins of Rs. 2 & 5The following components are required for fabrication of model are listed below

1. Transformer
2. Rectifier

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A REVIEW ON EXPERIMENTAL ANALYSIS OF NANO-FLUIDS ON DIFFERENT HEAT EXCHANGERS

Author(s):

Sk Abdul Azeez | Raffi Mohammed | Y. Venkatesh

Keywords:

Heat exchangers, Nano-fluids, particle size

Abstract

In this research studied on different literature survey work forced convection flows of nanofluids consisting of water with nanoparticles Nano-fluids in a horizontal tube with constant wall temperature are investigated numerically. A single-phase model having two-dimensional equations is employed with either constant or temperature dependent properties to study the hydrodynamics and thermal behaviors of the nano-fluid flow. The velocity and temperature vectors are presented in the entrance and fully developed region. The variations of the fluid temperature, local heat transfer coefficient and pressure drop along tube length are shown in the paper which is surveyed by the different researchers studies. Effects of nanoparticles concentration and heat transfer coefficient are presented. Numerical results show the heat transfer enhancement due to presence of the nanoparticles in the fluid in accordance with the results of the experimental study used for the validation process of the numerical model

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Characterization of Marble Powder Filled Epoxy Composites

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Abstract— In present Research article the fabrication of the Epoxy based composites with and without the addition of filler materials (marble powder) by manual hand layup technique was done. After the fabrication of composites specimens were prepared from fabricated sheet as per ASTM Standards and mechanical properties like Tensile Strength(T.S), Tensile Modulus(T.M), Compression Strength(C.S), Flexural Strength(F.S), ILSS and Impact Strength(I.S) of the Composites were determined and the Effect of and filler content on mechanical properties were studied and the TOPSIS (Technique for Order Performance by Similarity to Ideal Solution) is implemented to measure the proximity to the ideal solution.

***Keywords*— Marble Powder, Mechanical Properties, TOPSIS**

I. INTRODUCTION

When two or more different materials are combined together to create a superior and unique material, this material comprehends to be a composite. In broader sense and terminology, this definition holds true for all composites. The most common example of a "composite" in day to day life is concrete. The basic fundamentals holds true for structural steel bar which provides the strength and stiffness to the concrete, while the cured cement holds the bar stationary [1]. A composite tends to be a combination of two materials in which one of the materials, called the reinforcement, is in the form of fibers, sheets, or particles, and is embedded in the other materials called the matrix [2]. Usually matrix is a ductile or tough material and reinforcing materials are stronger with low densities which can be metal, ceramic, or polymer. Generally, there must be a substantial volume fraction (~10% or more) of the reinforcement to exhibit better mechanical properties.

Borsellino et.al. [3] Stucied the behavior of composite structures reinforced with marble powder. They researched on the variation in mechanical and physical properties of the composite with different matrix materials (epoxy and polyester resins) and different weight fractions of reinforced particles. Their work shows that a composite with 60% marble powder with epoxy resin gave much superior properties compared to monolithic marble.

Bilgin et.al. [4-7], investigated the usability of marble powder as an additive for industrial bricks. They concluded that, the presence of marble powder had a positive effect on the mechanical, physical and chemical properties of the bricks. They have suggested that the use of marble dust can contribute to the economy and also minimize environmental pollution.

Arunit et.al. [8-9] examined the effect of post curing temperature on the properties of a polymer matrix particle reinforced composite. Their aim was to draw a relationship between the post curing mode and the composite application. Their work suggests that the composite material should be cured at 60-800C. They also concluded that with increasing curing temperature, the glass transition temperature increases but the material becomes more brittle.

Imran Oral [10] studied the effects of marble powder, type of coagulant and their dosages on the ultrasonic properties of the epoxy resin/marble powder composites. His work also showed that the morphological and ultrasonic properties of the epoxy resin improved by addition of marble powder. He concluded that the ultrasonic non-destructive method is very useful for evaluating the elastic properties of epoxy/marble powder composites.

Bahar Demirel [11] has investigated the effect of using waste marble powder as a fine additive on the mechanical properties of concrete. He prepared different concrete-marble powder-sand mixture for mechanical testing. His work suggests that the addition of waste marble powder resulted in the enhancement of the compressive strength of the concrete and also a decrease in the porosity of the concrete.

Marras et al. [12-14] studied the effective recovery and reuse of by-products of marble processing industries. Their focus was to integrate these by products with industrial applications. They concluded that the addition of marble dust and other traditional constituents improved the quality of industrial bricks. Their work shows that marble powder can partially replace the clay in the bricks, leading to less waste generation.

TOPSIS is a multiple criteria method to identify solutions from a finite set of alternatives based upon simultaneous minimization of distance from an ideal point and maximization of distance from a nadir point. TOPSIS has been applied to a number of applications many researchers. Singh et al. [15] studied the selection of material for bicycle chain in Indian scenario using MADM Approach. They concluded that both MADM and TOPSIS methods User friendly for the ranking of the parameters. Huang et al. [16] studied the multi-criteria decision making and uncertainty analysis for materials selection in

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FABRICATION & MECHANICAL CHARACTERIZATION OF MARBLE POWDER FILLED EPOXY COMPOSITES

Author(s):

Raffi Mohammed1, 2, 3,5 | B Raja Kumar | Sk. Abdul Azeez | B Narendra Kumar, A. Rahul Kumar

Keywords:

Marble Powder, Mechanical Properties, TOPSIS

Abstract

In present Research article the fabrication of the Epoxy based composites with and without the addition of filler materials (marble powder) by manual hand layup technique was done. After the fabrication of composites specimens were prepared from fabricated sheet as per ASTM Standards and mechanical properties like Tensile Strength(T.S), Tensile Modulus(T.M), Compression Strength(C.S), Flexural Strength(F.S), ILSS and Impact Strength(I.S) of the Composites were determined and the Effect of and filler content on mechanical properties were studied and the TOPSIS (Technique for Order Performance by Similarity to Ideal Solution) is implemented to measure the proximity to the ideal solution.

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Modeling and Analysis of Body Structures for A 5-Door Car

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ABSTRACT

In this A vehicle body structure is the main supporting structure of a motor vehicle to which all other components are attached, comparable to the skeleton of an organism. The car body structure fatigue damage is mainly caused by the vehicle dynamic response, which is usually expressed as stress or strain time history. Stress/Strain calculations for fatigue life estimation can be performed in the time domain or Frequency domain. The detail car body stress analyses with ANSYS were performed based on 3D Ls-Dyna and mode analysis is also performed here. Modal analysis is usually used to determine the natural frequencies and mode shapes of car body structure. Vibration and Crash Analysis of Car Body using Ansys is carried out and including dynamic, static, crash analysis and so on. The main objective of the project is to find fundamental characteristics like frequency, stress and displacement for different material and velocity influence in the car body structure. If the fundamental frequency is increased beyond our designable value, if possible engineering changes can be made in the car body structure. In the car body structure the factor of safety value may be a half of the factor of safety of the existing material. Car body design can be modeled by using Catia modeling software. Analysis can be analysed by using 3D LS DYNA.

This project is analysis done on some of the body structure components with different materials and concludes that these components withstand the loads and sudden impacts without deflection or distortion. The scope of the project involves, Discretisation of sheet metal components of 5 door Cab body. Creation of LS-Dyna model suitable for safety analysis. Prepare the Built Report. CATIA V5 is the modeling package used to model the body structure components and LS-DYNA is the analysis package used to carry out analysis.

KEYWORDS: *LS-DYNA, CATIA V5*

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I. INTRODUCTION

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A vehicle body structure is the main supporting optimize fuel economy and performance. Over the years, various designs have been used and each of them has its benefits and drawbacks. Until the

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Computational Investigation of Bowl Type Combustion Chamber Direct Ignition C.I Engine- A Review

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To Cite this Article

Raffi Mohammed, Shaik Abdul Azeez, B Narendra Kumar and Y Venkatesh, "Computational Investigation of Bowl Type Combustion Chamber Direct Ignition C.I Engine- A Review", *International Journal for Modern Trends in Science and Technology*, Vol. 04, Issue 04, April 2018, pp.-43-47.

ABSTRACT

In this review article studied on Direct Injection Diesel combustion, the processes from ignition to pollutant formation are strongly influenced by the in-cylinder flow process. There is a need to clearly understand the fluid dynamics of in-cylinder flow in Internal Combustion engines. In DI diesel engines, the air-fuel mixing and subsequent combustion is controlled by the flow field in the cylinder and fuel injection characteristics. Fuel spray break-up, evaporation, and fuel vapor -air mixing prior to ignition are all mainly dependent upon the local flow fields in the nearby fuel droplets. In the present study 5.2kW single cylinder, four stroke direct ignition diesel engine is selected to investigate. This system is having a hemi spherical shaped combustion chamber with single injector having three 0.3mm nozzles. These experimental results are used to validate the CFD tool Diesel- RK software. It was observed that the flow pattern obtained in the analysis was in good agreement with experimental data. In this research paper, later flow analysis was conducted on four combustion chamber geometries Toroidal, Shallow Depth, Re-entrant and Double wedge shallow are considered for investigation.

KEYWORDS: *Direct injection (DI), EGR, Combustion chamber geometry, Compression Ignition, Computational Fluid Dynamics (CFD)*

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I. INTRODUCTION

Direct injection diesel engines are an important

become stringent during the recent years. Last three decades high growth in engine research and development has witnessed with the key issues

MODELLING AND ANALYSIS OF BODY STRUCTURES FOR A 5-DOOR CAR

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Abstract — *A vehicle body structure is the main supporting structure of a motor vehicle to which all other components are attached, comparable to the skeleton of an organism. The car body structure fatigue damage is mainly caused by the vehicle dynamic response, which is usually expressed as stress or strain time history. Stress/Strain caculations for fatigue life estimation can be performed in the time domain or Frequency domain. The detail car body stress analyses with ANSYS were performed based on 3D Ls-Dyna and mode analysis is also performed here. Modal analysis is usually used to determine the natural frequencies and mode shapes of car body structure. Vibration and Crash Analysis of Car Body using Ansys is carried out and including dynamic, static, crash analysis and so on. The main objective of the project is to find fundamental charecteristics like frequency, stress and displacement for different material and velocity influence in the car body structure. If the fundamental frequency is increased beyond our designable value, if possible engineering changes can be made in the car body structure. In the car body structure the factor of safety value may be a half of the factor of safety of the existing material. Car body design can be modelled by using Catia modelling software. Analysis can be analysed by using 3D LS-DYNA.*

This project is analysis done on some of the body structure components with different materials and concludes that these components withstand the loads and sudden impacts without deflection or distortion. The scope of the project involves, Discretisation of sheet metal components of 5 door Cab body. Creation of LS-Dyna model suitable for safety analysis. Prepare the Built Report. CATIA V5 is the modelling package used to model the body structure components and LS-DYNA is the analysis package used to carry out analysis.

Keywords — **LS-DYNA, CATIA V5**

I. INTRODUCTION

A vehicle body structure is the main supporting structure of a motor vehicle to which all other components are attached, comparable to the skeleton of an organism. The core element of any car is the body structure. The car body connects all the different components; it houses the drive train and most importantly carries and protects passengers and cargo. The body structure needs to be rigid to support weight and stress and to securely tie together all the components. Furthermore, it must resist and soften the impact of a crash to safely protect the occupants. In addition, it needs to be as light as possible to optimize fuel economy and performance. Over the years, various designs have been used and each of them has its benefits and drawbacks. Until the 1930s, virtually every car had a structural frame, separate from its body. This construction design is known as body on frame. Over time, nearly all passenger cars have migrated to unibody construction, meaning their chassis and bodywork have been integrated into one another.

The main functions of a body structure in motor vehicles are:

1. To support the vehicle's mechanical components and body
2. To deal with static and dynamic loads, without undue deflection or distortion.

These include:

- Weight of the body, passengers, and cargo loads.
- Vertical and torsional twisting transmitted by going over uneven surfaces.
- Transverse lateral forces caused by road conditions, side wind, and steering the vehicle.
- Torque from the engine and transmission.

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Abstract

In these paper, composite structures for conventional metallic structures has many advantages because of higher specific stiffness and strength of composite materials is discussed. The automobile industry has shown increased interest in the replacement of steel spring with fiberglass composite leaf spring due to high strength to weight ratio. This work deals with the replacement of conventional steel leaf spring with a Mono Composite leaf spring using E-Glass/Epoxy. The design parameters were selected and analyzed with the objective of minimizing weight of the composite leaf spring as compared to the steel leaf spring. The leaf spring was modeled in Pro/E and the analysis was done using ANSYS Metaphysics software.

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Motion Analysis of Switch Gear

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ABSTRACT

In this paper, the main function of a circuit brecker is to open up a circuit for a pre-defined time so as to prevent a sudden surge in current that could damage the equipment due to high heat is discussed. The equations of motion derived in this paper can predict the closing, opening of spring type operating mechanism in predefined time as well as be used to compute dynamic response of the moving contact. Using the optimized switch gear mechanism, the atlas of all feasible mechanisms for the spring-actuated controlling system of a circuit breaker has been synthesized.

KEYWORDS: *Circuit breaker, multi body dynamic analysis, switchgear, Switch on/off spring, , FEA, ANSYS.*

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I. INTRODUCTION

The dynamic response of circuit breakers can also be analysed using multi-body dynamics. This method is particularly important in analyzing the dynamics of complicated mechanisms. Basically, multi-body system is an assemblage of rigid machine members, the members which produce relative motions due to constraints. In multi-body dynamics, Lagrange equation is usually employed to derive a set of second order non- linear differential equations that are subsequently solved by numerical methods. However, the number of differential equations increases exponentially with increasing complexity. Not only does the derivation process become tedious, the computing time also increases significantly when solving these

Several different classifications of switchgear can be made.

- By the current rating.
- By interrupting rating
- Circuit breakers can open and close on fault currents
- Load-break/Load-make switches can switch normal system load currents
- Isolators may only be operated while the circuit is dead, or the load current is very small.

II. PRINCIPLE OF CIRCUIT BREAKER

In the close operation, as illustrated in Figs. 1 and 2, [7] link 7 is locked by the tripping latch and hence remains stationary. Link 2 is the follower of the driving cam, and link 6 generates the output

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CFD Analysis of Enhancement of Turbulent Flow Heat Transfer in a Horizontal Circular Tube with Twisted Tape Inserts

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Abstract: ***The present work includes the results of Cfd analysis of enhancement of turbulent flow heat transfer in a horizontal circular tube with twisted tape inserts with air as working fluid. The Reynolds number ranged from 6000 to 14000. It is observed that enhancement of heat transfer as compared to the conventional bare tube at the same mass flow rate was found to be a factor of 3 to 5 times, were as the friction factor rise was about a factor of 5 times for different tube inserts.***
Finally we compared results with theoretical values (Dittus-Boelter Equation) by using tool of package of ANSYS-Fluent. Geometries for plain tube, and tube with different inserts is developed in ICEM CFD (3D) with fine meshing and exported to Ansys-Fluent, then suitable boundary conditions are applied to these models and solved energy, momentum and turbulence equations and results obtained are discussed.
Keywords: Inserts, Reynolds number, Nusselt number (Heat transfer coefficient), Friction factor, Turbulent flow, and Enhancement Efficiency (Friction factor ratio).

I. INTRODUCTION

Heat transfer enhancement or intensification is the study of improved heat transfer performance. Recently adequate energy source and material costs have provided significant resources for the development of enhanced energy efficient heat exchangers. As a result, considerable emphasis has been placed on the development of various augmented heat transfer surfaces and devices. An enhanced surface is more efficient in transferring heat than what might be called as a standard surface. While considering the associated flow friction change is also to be taken into account. Analogies between momentum and heat transfer show that increasing the friction factor increases the heat transfer coefficient. The moody chart shows that in turbulent flow increasing the relative roughness of the surface increases the friction factor. This chart is based on the random sand grain type of source roughness. Surface roughness can be produced by the machining of the surface as well as casing, forming, and welding processes. Other types of surface have been produced, and their friction factors and heat transfer characteristics have been tested for possible use in heat transfer augmentation. The use of fins on the outer surface of tube enhance heat transfer is well known. Internally finned tubes have been used also to enhance heat transfer to fluids flowing inside tubes. Heat transfer and friction factor correlations have been presented for internally finned tubes under laminar and turbulent flow conditions. Enhancement devices such as twisted taps have been employed in the form of inserts into the tubes to promote increased heat transfer for the laminar and turbulent flow of viscous fluid. Coiled tubes can serve as a heat transfer enhancement device because the secondary flow produced by the curvature causes an increase in the heat transfer coefficient. In general, enhancing the heat transfer can be divided into two groups. Passive method, without stimulation by the external power such as a surface coating, rough surfaces, extended surfaces, swirl flow devices, the convoluted (twisted) tube, additives for liquid and gases. The other is the active method, which requires extra external power sources, for example, mechanical aids, surface-fluid vibration, injection and suction of the fluid, jet impingement, and use of electrostatic fields. Passive heat transfer enhancement techniques (for example, wall roughness, swirl flow inducement, and inserts) are preferred over active (for example, surface vibration, electro-static fields) ones to obtain more compact heat exchangers and to reduce energy costs. The increasing heat transfer with augmentation is accompanied by an increase in the friction factor. In some

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IMAGE RETRIEVAL EXTRACTION TECHNIQUE

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G. Prasanth Kumar, Asst. Professor in CSE, Ramachandra College of Engineering, Eluru
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ABSTRACT

Image Retrieval system is an effective and efficient tool for managing large image databases. A content based image retrieval system allows the user to present a query image in order to retrieve images stored in the database according to their similarity to the query image. In this paper content based image retrieval method is used on digital image data set. The main objective of this paper is to evaluate the retrieval system based on Hybrid features. The texture features are extracted by using pyramidal wavelet transform and the shape features are extracted by using Fourier descriptor. And the hybrid technique is the combination of both texture and shape. The major advantage of such an approach is that little human intervention is required. It is ascertained that the performance is superior when the image retrieval based on the Hybrid features, and better results than primitive set.

KEYWORD

Feature Extraction, Hybrid features, Image Retrieval

1. INTRODUCTION

Image Retrieval System provides an effective and sophisticated tool for maintaining and managing image databases. There is a significant amount of increase in the use of medical images in clinical medicine and disease research. Image retrieval (IR) is one of the most exciting and fastest growing research area in the field of medical imaging [2]. The goal of CBIR is to retrieve images from a database that are similar to an image placed as a query. In CBIR, for each image in the database, features are extracted and compared to the features of the query image. A CBIR method typically converts an image into a feature vector representation and matches with the images in the database to find out the most similar images. A comparative study has given on multiple databases [3,6,10] it is concluded that performance of DRD image is less compared to other database images.

The goal of CBIR is to retrieve images from a database that are similar to an image placed as a query. In CBIR, for each image in the database, features are extracted and compared to the features of the query image. A CBIR method typically converts an image into a feature vector representation and matches with the images in the database to find out the most similar images. In various studies different databases have been used to compare the study. The similarity between features are to be calculated by using algorithms i.e., used by well known CBIR systems such as IBM's QBIC[28]. For each specific feature there is a specific algorithm for extraction and another for matching.

In this paper evaluation of retrieval system based on hybrid features is carried out. The major advantage of this approach is that little human intervention is required. The databases used here is digital data of 200 images with multiple contexts.

A Collaborative E-transactions Fraud Detection using AdaBoost and Majority Voting

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ABSTRACT E-transactions fraud is a significant issue in budgetary administrations. Billions of dollars are lost because of e-exchanges misrepresentation consistently. There is an absence of research thinks about on breaking down true e-exchanges information inferable from privacy issues. In this paper, machine learning calculations are utilized to identify e-exchanges extortion. Standard models are right off the bat utilized. At that point, half and half strategies which utilize AdaBoost and greater part voting techniques are connected. To assess the model adequacy, a freely accessible e-exchanges informational index is utilized. At that point, a certifiable e-exchanges informational index from a budgetary organization is examined. Moreover, commotion is added to the information tests to additionally survey the heartiness of the calculations. The test results emphatically demonstrate that the larger part voting technique accomplishes great precision rates in distinguishing misrepresentation cases in e-transactions.

INDEX TERMS AdaBoost; classification; e-transactions; fraud detection; predictive modelling; voting.

I. INTRODUCTION

Fraud is a unjust or criminal misdirection meant to bring budgetary or individual gain [1]. In dodging misfortune from misrepresentation, two systems can be utilized: extortion anticipation and misrepresentation identification. Misrepresentation aversion is a proactive strategy, where it prevents extortion from occurring in any case. Then again, misrepresentation location is required when a false exchange is endeavored by a fraudster.

E-exchanges extortion is worried about the illicit utilization of e-exchanges data for buys. E exchanges can be expert either physically or carefully [2]. In physical exchanges, the e-exchanges is included amid the exchanges. In computerized exchanges, this can occur via phone or the web. Cardholders normally give the card number, expiry date, and card check number through phone or site.

With the ascert of web based business in the previous decade, the utilization of e-exchanges has expanded drastically [3]. The quantity of e exchanges in 2011 in Malaysia were at around 320 million, and expanded in 2015 to around 360million. Alongside the ascent of e-exchanges use, the quantity of misrepresentation cases have been continually expanded. While various approval methods have been set up, e-exchanges misrepresentation cases have not frustrated adequately. Fraudsters support the web as their character and area are covered up. The ascent in e-exchanges Sirce the traders need to hold up under the misfortune, a few merchandise are estimated higher, or rebates and impetuses are lessened. Along these lines, it is basic to lessen the misfortune, and a powerful misrepresentation location framework to decrease or take out extortion cases is imperative. There have been different examinations on e-exchanges misrepresentation location. Machine learning and related strategies are most ordinarily utilized, which incorporate counterfeit neural systems, lead acceptance methods, choice trees, calculated relapse, and bolster vector machines [1]. These techniques are utilized either independent or by consolidating a few strategies together to frame half and half models.

In this paper, a sum of twelve machine learning calculations are utilized for identifying e-exchanges extortion. The calculations run from standard neural systems to profound learning models. They are assessed utilizing both benchmark and certifiable e-exchanges informational indexes. Likewise, the AdaBoost and larger part voting strategies are connected for shaping cross breed models. To additionally assess the power and unwavering quality of the models, clamor is added to this present reality informational collection. The key commitment of this paper is the assessment of an assortment of machine learning models with a genuine e-exchanges informational collection for extortion recognition. While different analysts have utilized different techniques on freely accessible informational

AODV ROUTING PROTOCOL BASED SOLUTIONS TO PREVENT AND DETECT THE BLACKHOLE ATTACK ON A MANET

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ABSTRACT

Wireless Networks are getting prevalent due to their usability. Mobile Ad-HocNetwork (MANET) is a specially appointed remote system which works as a distributed, decentralized and self-sufficient framework. Because of the property of adaptability, flexibility and directness of MANET they are generally utilized in Emergency communications and military applications. As the nodes available in this network are independent they work as similar to routers. Because of this nature of the MANET where any node can join or leave the network with no consent, security of the network is the major issue.

Black hole is one of the security threat in MANET .The attacker node gives a bogus reply stating it is the optimum path to destination .Sometimes malicious nodes combine together which leads Co-operative attack In this work a survey has been conducted with different available methodologies and protocols

Keywords: MANET, Black Hole Attack, AODV

I. INTRODUCTION

A Mobile Ad-Hoc Network (MANET different networking function) perform network operations such as routing, packet forwarding, and route discovery. MANET performs these functions without using a well-established framework. While forwarding packets from starting point to destination is discovered based upon the routing protocol. Even though anyone of the available nodes in the network disconnects itself from others or moves out of the range from others, still the functioning of the network will not stop[1]. AODV [2] is one of the available reactive protocols which are responsible for establishing connection between source and destination. In AODV protocol source requests packets to its adjacent nodes to seek different available routes to destination. Once it gets the reply from its neighbor, source select one of the best route to send the data [3].

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Various Problem Solving Approaches with Python- A Case Study

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ABSTRACT: This paper provides the basic elements of the python program which can be best use for new researchers who are interested and implement their artificial intelligence, machine learning, complex data analysis, visualization, 3D software (Maya), web and internet development, database, games. Further testing issues and other data structures, modules and GUI programming in python are discussed.

Keywords:- *Python, Maya, Applications, Data Structures, GUI programming*

1. INTRODUCTION

Python is an exciting and powerful language. It is a high–level, interpreted, interactive, object-oriented and reliable language. Python is an open source project and it is a platform independent, scripting language. It has different features like simple, easy to learn, versatile, free and open source, high-level, interactive, portable, object-oriented, interpreted, dynamic, and extensible, embeddable, secure, robust, multi-threaded, garbage collection.

2. HISTORY OF PYTHON

Python was developed by Guido van Rossum in the late 1980's and early 90's at the national research institute for mathematics and computer science in the Netherlands. It has been derived from many languages such as ABC, modula-3, C, C++, algol-68, Smalltalk, UNIX and shell and scripting languages [1]

Why it is called 'python': python language was released by its designer Guido van Rossum, in Feb

2. Web development: Python is easily extensible language that provides good integration with data base and other web standards. Odoo is a consolidated business applications and Google App engine are the popular web applications based on python.
3. GUI based desktop applications: Simple syntax, modular architecture, rich text processing tools, and ability to work on multiple operations. Python has various GUI toolkits like wxpython, pyqt. Python is used to make 3D imaging software packages like Blender, 3ds Max, cinema 4D, Houdini, Lightwave and Maya. 2D imaging software such as Inkscape, GIMP, Paint shop pro and Scribus.
4. Games: Python has various modules, libraries, platforms that support development of games. PYSOY is a 3D game engine.
5. Enterprise and business applications: Python has suitable coding for containing larger applications. A large part of Youtube code is also

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Activity and Behavior Analytics for Big Data using Parallel and Distributed Hadoop Ecosystem

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ABSTRACT

Time and technology has its own role model with respect to the innovation. Technology and its model view to made things simpler for the end user; where the client need the pattern of the activity related to its domain. Information of extreme size diversity and complexity – is everywhere. This disruptive phenomenon is destined to help organizations drive innovation by gaining new and faster insight into their customers. Hence, in this paper we try to put the glimpse of the big data search mechanism in order to use the stochastic automata to see the graph or in other from which may be relevant to the client. In this aspect we have used the parallel computing the logs which already mined and transaction data in various domains in order to give a statistical data to the end user. It can be used in toth the way of prevention is better than care in order to make the things smarter and better way. In this paper we have considered both the automata theory to implement the stochastic automata using Hadoop giving raise the concept of efficiency, robustness and accuracy.

Keywords: Activity detection, Data Lake, temporal stochastic automata, Hadoop, Distributed computing, Hadoop, Distributed file system

I. INTRODUCTION

Hadoop promises shorter execution times or the ability to process greater quantities of data compared to sequential computation. However, in practice it is hard to realize a parallel implementation that comes close to achieving its theoretical potential. This is because efficient cooperation between processors is difficult to implement. Parallelism introduces a new set of concerns for the programmer: the scheduling of computations; placement of data; synchronization; and communication between processors. This adds greatly to the complexity to the programming task. An implementation must computing a result. A skillful programmer can produce efficient implementations in such languages. However they are hard to use effectively; furthermore the code produced is often unclear, brittle and machine-specific.

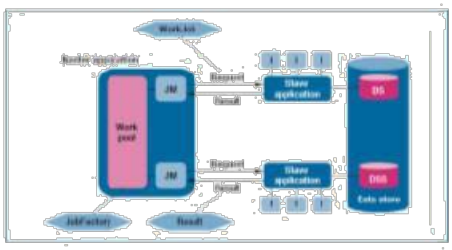

Fig.1.1. Illustration of the Parallel Computing

The weakness of these two approaches is that

Bandwidth Estimation of Network Connection

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Abstract- Capacity measures for a network connection across the Internet can be useful to many applications. Its applicability encompasses QoS guarantees, congestion control and other related areas. In this paper, we define and measure the available capacity of a connection, through observations at endpoints only. Our measurements account for variability of cross traffic that pass through the routers handling this connection. Related to the estimation of available capacity, we suggest modifications to current techniques to measure packet service time of the 'bottleneck' router of the connection. Finally, we present estimation results on wide area network connections from our experiments to multiple sites.

Keywords- Bandwidth, Tele communication traffic, Throughput, Delay effects, Time measurement, Computer science, Educational institutions, Application software, Current measurement, Volume measurement

I. INTRODUCTION

In this paper we Present techniques to estimate available capacity of an end-to-end connection. We define available capacity α (delta Δt), at time t, to indicate the amount of data that could be inserted into a network path at time, t, so that the transmit delay of these data packets would be bounded by a maximum permissible delay, Δ. In this paper, we make a distinction between the terms capacity and bandwidth by capacity, we mean data volume and not data rate, e.g., our available capacity measure indicates the volume of data that can be inserted into the network at time t, to meet the delay bound, and does not indicate the rate at which to insert. However, since the available capacity is estimated in discrete time, a bandwidth estimate can be obtained form it, by distributing the capacity over the intervals between the discrete time instants.

Some traditional techniques for available bandwidth use throughput to provide a coarse estimate of bandwidth, e.g., TCP [Pos 81c] with congestion control [Ja 88]. Hence, in this mechanism, the bandwidth available estimate is directly related to the throughput that the sender is willing to test at any instant. On a packet loss, this mechanism provides a loose upper bound for the available bandwidth. As noted in [LaBa 99], packet loss is actually a better estimate of buffer capacities in the network, than of available bandwidth.

Some other work on identifying the available bandwidth addresses the measurement of the bottleneck bandwidth e.g., [Bo 93], *bprobe* tool in [CaCr 95a], [Pa 97b] and [LaBa 99] or all link bandwidths of a network path [Ja 97]. The technique described in [LaBa 99] also estimates the changing bottleneck bandwidth due to path changes. But, bandwidth available on a network path, may often be less than the bottleneck bandwidth, and may also go to zero, due to cross traffic in the path. Our measure differs from these previous work, as we account for the capacity lost due to cross traffic, in our estimates. The *cprobe* tool in [CaCr 96a] provides an available bandwidth measure, which accounts for cross traffic. They do so by sending a stream of packets, at a rate higher than the bottleneck bandwidth, and then computing the throughput of this stream, using simple average. In our technique, we estimate available capacity as experienced by each probe packet using

Data Mining and its Applications

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ABSTRACT: *Data Mining is the process of extracting or mining knowledge from large amount of data. Data mining is the technology that meets up to the challenge of solving our quest for knowledge from these vast data burdens. It provides us with a user oriented approach to novel hidden patterns in data. Important disciplines ranging from machine learning, information retrieval, statistics and artificial intelligence have had impacts on the development of data mining. This paper evaluates data mining in theory and in practice. An overview of database systems, data warehousing, data mining goals, applications and algorithms was carried out.*

KEYWORDS: Data Mining, Data Warehouse Knowledge Discovery in Databases (KDD), Applications.

1. INTRODUCTION

In an information technology driven society, where knowledge is an invaluable asset to any individual, organization or government. Companies are supplied with huge amount of data in daily basis, and there is the need for them to focus on refining these data so as to get the most important and useful information in their data warehouses [1]. Data mining is a new technology which could be used in extracting valuable information from data warehouses and databases of companies and governments. It involves the extraction of hidden information from some huge dataset.

It helps in detecting anomalies in data and predicting future patterns and attitude in a highly efficient way. Applying data mining makes it easier for companies and government, during quality decisions from available data, which would have taken longer time, based on human expertise [1, 2].

Data mining techniques could be applied in a wide range of organizations, so long as they deal with collecting data, and there are several data mining software been made available to the market today, to help companies tackle decision making problems and invariably overcome competition from other companies in the same business.

Databases been the root technology that lead to data mining in form of evolution, then there is a brief literature on data warehousing and its relation to data mining, since all useful data collected by organizations are kept there, before they could be subjected to any further mining or analysis prior to decision making. There is an overview of data mining as a field, its evolution what motivated its coming into existence, data mining objective and the process of knowledge discovery in databases.

In this paper, an overview of database systems, its evolution, databases, data warehousing, and the relationship between data warehousing and data mining will be made. Database understanding would be incomplete without some knowledge of the major aspects which constitute the building and framework of database systems, and these fields include structured

Bandwidth Estimation of Network Connection

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Abstract- Capacity measures for a network connection across the Internet can be useful to many applications. Its applicability encompasses QoS guarantees, congestion control and other related areas. In this paper, we define and measure the available capacity of a connection, through observations at endpoints only. Our measurements account for variability of cross traffic that pass through the routers handling this connection. Related to the estimation of available capacity, we suggest modifications to current techniques to measure packet service time of the 'bottleneck' router of the connection. Finally , we present estimation results on wide area network connections from our experiments to multiple sites

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Warehouse Management-Improved Efficiency in a Small Warehouse

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Abstract— Recently new innovative warehouse layouts are suggested that do not follow usual restrictions of ubiquitous traditional designs. One of them, called fishbone layout, showed potential to reduce travel distances in unit-load warehouses by more than 20%. In manual-pick order-picking systems with case and item picking from multiple locations different routing policies are used. Small warehouses generally have different needs than large warehouses. They usually do not have warehouse management systems that are data intensive and involve high capital investment. Operational procedures are more nebulous and management control is less rigid. Because of the difference in operational approach, different measures are needed in order to enhance productivity. The study presented here considers arrangement and management policies to improve the order picking procedure in the existing company warehouse. The main objective was to reduce the overall picking time that is quite high due to the lack of proper management and the nature of the stored items. The first stage was to register the situation in the warehouse. The second stage involved the analysis of the obtained data, to identify promising modifications and quantify the benefits of adopting them. The proposed modifications were based on policies and methodologies suggested in the literature.

KEYWORDS: **INVENTORY CONTROL, ORDER PICKING, ORDER BATCHING, HEURISTIC, SMALL WAREHOUSE**

I. INTRODUCTION

It is well known that logistic costs have important influence on final successfulness of any company. According to the Logistics Cost and Service 2007 study [11], in western countries these costs represent almost 10% of sales. Warehousing, along with transportation and inventory carrying, is one of the three major drivers of total logistics cost, with 21% in US and 37% in EU. Order picking process, defined as the process of retrieving items from storage locations in response to a specific customer request is the most laborious and the most costly activity in a typical warehouse, with up to 55% of warehouse total operating costs (Tompkins et al. [2]). With a direct link with speed of delivery, it influences service level too. Order picking (OP) appears as one of the most significant activities in a warehouse. The picking tasks may contribute by over 65% in the warehouse operating costs.
In fact, the retrieval cost exceeds by far the storage cost of any given item (Coyle et al., 1996). The factors affecting the efficiency of OP typically include the product demand, the warehouse layout, the location of the items, the picking method in combination with the routing methods, the experience of the employees, and the extent of automation (Gattorna, 1997). Note that the high cost associated with the automation of the procedure forces the majority of companies to use manual operation, usually at the expense of efficiency and time. Small warehouses are usually quite distinct from large warehouses in a number of ways. First of all, typically in smaller warehouses stock-keeping unit (sku) density is quite high. Capital investment is quite low. Small warehouses usually do not invest in costly warehouse management systems, and automation is also lacking or limited. These differences necessitate different needs for the internal operations management. To be efficient, processes in small warehouses need to be carefully structured in order to meet productivity and accuracy goals.

II. REVIEW OF WAREHOUSE POLICIES RELATED TO ORDER PICKING

There is a variety of studies on methods, policies, principles and/or techniques developed to improve the overall OP procedure. The decisions usually concern policies for the picking of the product items, the routing of the pickers in

Full Disk Encryption (FDE) for Analyzing the Security System

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2. RK College of Engineering, Kethanaconda (v), Ibrahimpatnam (m), Vijayawada -521456 AP

Keywords
Full disk Encryption (FDE), Information Security, Authentication, File system-level encryption

Abstract: *Full Disk Encryption (FDE) system for analyzing the Security of the system is presented in this paper. Recent advances in FDE have enabled the use of hardware-based encryption, eliminating the need to use valuable CPU time for encryption, increasing performance, and maximizing security. This paper also comprises the implementation of the FDE, comparison of Full disk encryption vs. file system-level encryption and Boot key problem.*

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LPG Gas Monitoring System based on Arduino & Automatic Cylinder booking with Alert System & Leakage Reduced

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Abstract: LPG (Liquefied Petroleum Gas or Liquid) is one of the most important commodities in our house hold items. This LPG contains flammable hydrocarbon gases including propane, butane and mixture of these gases. There are approximately 30crore LPG users in which mostly 40% of the population. In our country it is not possible to supply LPG through pipes to each and every home as the production of LPG is very low. Hence the supply is done with the help of cylinders. Whenever we observe the LPG gas cylinder is empty we give request for a new cylinder by using IVRS (Interactive Voice Response System) SMS (Short Message Service) or Mobile applications. There is a delay in providing the gas cylinder. The main reason behind this is a delay in informing to the gas provider at the last moment when the gas is empty. Most of the illiterate people can't even complete the booking and also most of the times these land line phones are either busy due to congested calls or phones not working due to some technical issues. Another problem is that most of the times people book the refill with a prediction that the cylinder is going to be empty and hand over the old cylinder to the delivery men without knowing the exact quantity.

This paper proposes a system that will make entire LPG cylinder booking procedure automated without human intervention. This system continuously measures the weight of the cylinder and once it reaches minimum threshold it will automatically sends message to the authorized LPG Agent so that they can deliver the LPG cylinder in time. Along with the Automated cylinder booking we also designed feature related to the safety of the user in which it continuously monitor the leakage of LPG gas and alerts the user regarding leakage to avoid major accidents which costs human lives mostly.

Keywords: *Arduino Mega, Temperature sensor, GSM Modem, Gas Sensor, Load Cell.*

I. Introduction

The objective of the proposed system is to continuously measure the weight of the cylinder and as soon as it reaches the minimum threshold it will automatically sends an SMS alert to the user as well as Authorized LPG agent so that they can act accordingly. This system also designed to detect LPG gases such as propane and butane. The allowed level for butane is 600ppm above which it is considered to be of high level and poses a danger. The threshold level of weight of the cylinder is used for automatic cylinder booking. The main aim of this project is to monitor for liquid petroleum gas (LPG) leakage to avoid major fire accidents and also facilitating safety precautions where security has been an important issue and automatic cylinder booking without human intervention. The system detects the leakage of the LPG using gas sensor and alerts the consumer about the gas leakage by sending SMS. The system measure the weight of cylinder by using weight sensor and display corresponding weight in LPG display. The proposed system uses the GSM Modem to alert the person about the gas leakage via SMS and status of automatic cylinder booking.

When the system identifies that LPG concentration in the air reaches the specified level then it alert the consumer by sending SMS to registered mobile phone and alert the people at home by activating the alarm which includes Buzzer simultaneously and also display the same message on LCD to take the necessary action and switch on the exhaust fan or opening windows to decrease the gas concentration in the air.

II. Literature Survey

In the year 2011, A. MAHALINGAM, R. T. NAAYAGI, I. N. E. MASTORAKIS, "Design and Implementation of an Economic Gas Leakage Detector". This project developed system to detect the gas leakage and providing immediate alarm or intimation to the user.

Data Mining and its Applications

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ABSTRACT: *Data Mining is the process of extracting or mining knowledge from large amount of data. Data mining is the technology that meets up to the challenge of solving our quest for knowledge from these vast data burdens. It provides us with a user oriented approach to novel hidden patterns in data. Important disciplines ranging from machine learning, information retrieval, statistics and artificial intelligence have had impacts on the development of data mining. This paper evaluates data mining in theory and in practice. An overview of database systems, data warehousing, data mining goals, applications and algorithms was carried out.*

KEYWORDS: Data Mining, Data Warehouse Knowledge Discovery in Databases (KDD), Applications.

1. INTRODUCTION

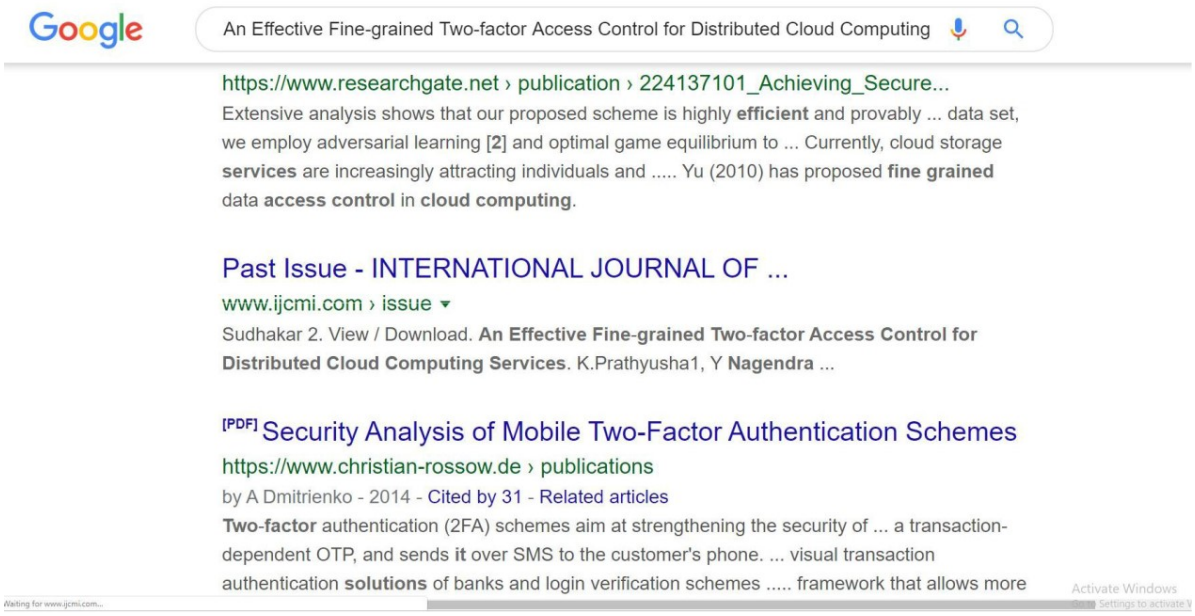
In an information technology driven society, where knowledge is an invaluable asset to any individual, organization or government. Companies are supplied with huge amount of data in daily basis, and there is the need for them to focus on refining these data so as to get the most important and useful information in their data warehouses [1]. Data mining is a new technology which could be used in extracting valuable information from data warehouses and databases of companies and governments. It involves the extraction of hidden information from some huge dataset.

It helps in detecting anomalies in data and predicting future patterns and attitude in a highly efficient way. Applying data mining makes it easier for companies and government, during quality decisions from available data, which would have taken longer time, based on human expertise [11, 12].

Data mining techniques could be applied in a wide range of organizations, so long as they deal with collecting data, and there are several data mining software been made available to the market today, to help companies tackle decision making problems and invariably overcome competition from other companies in the same business.

Databases been the root technology that lead to data mining in form of evolution, then there is a brief literature on data warehousing and its relation to data mining, since all useful data collected by organizations are kept there, before they could be subjected to any further mining or analysis prior to decision making. There is an overview of data mining as a field, its evolution what motivated its coming into existence, data mining objective and the process of knowledge discovery in databases.

In this paper, an overview of database systems, its evolution, databases, data warehousing, and the relationship between data warehousing and data mining will be made. Database understanding would be incomplete without some knowledge of the major aspects which constitute the building and framework of database systems, and these fields include structured


Google
An Effective Fine-grained Two-factor Access Control for Distributed Cloud Computing
https://www.researchgate.net › publication › 224137101_Achieving_Secure...
Extensive analysis shows that our proposed scheme is highly efficient and provably ... data set, we employ adversarial learning [2] and optimal game equilibrium to ... Currently, cloud storage services are increasingly attracting individuals and ..... Yu (2010) has proposed fine grained data access control in cloud computing.
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Activate Windows

Bandwidth Estimation of Network Connection

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Abstract- *Capacity measures for a network connection across the Internet can be useful to many applications. Its applicability encompasses QoS guarantees, congestion control and other related areas. In this paper, we define and measure the available capacity of a connection, through observations at endpoints only. Our measurements account for variability of cross traffic that pass through the routers handling this connection. Related to the estimation of available capacity, we suggest modifications to current techniques to measure packet service time of the 'bottleneck' router of the connection. Finally , we present estimation results on wide area network connections from our experiments to multiple sites.*

Keywords- *Bandwidth, Tele communication traffic, Throughput, Delay effects, Time measurement, Computer science, Educational institutions, Application software, Current measurement, Volume measurement*

I. INTRODUCTION

In this paper we Present techniques to estimate available capacity of an end-to-end connection. We define available capacity a (delta Δ), at time, t, to indicate the amount of data that could be inserted into a network path at time, t, so that the transmit delay of these data packets would be bounded by a maximum permissible delay,Δ. In this paper, we make a distinction between the terms capacity and bandwidth by capacity, we mean data volume and not data rate, e.g., our available capacity measure indicates the volume of data that can be inserted into the network at time t, to meet the delay bound, and does not indicate the rate at which to insert. However, since the available capacity is estimated in discrete time, a bandwidth estimate can be obtained form it, by distributing the capacity over the intervals between the discrete time instants.

Some traditional techniques for available bandwidth use throughput to provide a coarse estimate of bandwidth, e.g., TCP [Pos 81c] with congestion control [Ja 88]. Hence, in this mechanism, the bandwidth available estimate is directly related to the throughput that the sender is willing to test at any instant. On a packet loss, this mechanism provides a loose upper bound for the available bandwidth. As noted in [LaBa 99], packet loss is actually a better estimate of buffer capacities in the network, than of available bandwidth.

Some other work on identifying the available bandwidth addresses the measurement of the bottleneck bandwidth e.g., [Bo 93], *bprobe* tool in [CaCr 96a], [Pa 97b] and [LaBa 99] or all link bandwidths of a network path [Ja 97]. The technique described in [LaBa 99] also estimates the changing bottleneck bandwidth due to path changes. But, bandwidth available on a network path, may often be less than the bottleneck bandwidth, and may also go to zero, due to cross traffic in the path. Our measure differs from these previous work, as we account for the capacity lost due to cross traffic, in our estimates. The *cprobe* tool in [CaCr 96a] provides an available bandwidth measure, which accounts for cross traffic. They do so by sending a stream of packets, at a rate higher than the bottleneck bandwidth, and then computing the throughput of this stream, using simple averaging. In our technique, we estimate available capacity as experienced by each probe packet using

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An Advanced Domain-Sensitive Recommendation with User-Item Subgroup Analysis

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ABSTRACT:

Recently the amount of log and dimension data in the websites that needs to be processed and stored has exploded as the usage of site is increased. Therefore, the issue is suggested about the necessity of Enterprise Security Management (ESM) that is for integrated management of network system such as firewall, IPS, VPN, and etc. The precision control approaches characterize choice predicates precision to parts while the secrecy stabilization is to support the k-anonymity or l-diversity. A SSPPM it will fulfill the admittance control and local monitoring of data. Then again, security is accomplished at the premium of exactness of approved data. But, in our plan of the previously stated issue we didn't have key management of data, but in this we propose efficient results with authorized user and another hand original data sets will not be present for servers also. And best of our insight, the issue of fulfilling the exactness and requires the data maintains for various parts has not been considered some time recently. The procedures for workload-mindful anonymization for determination predicates have been examined in the writing. Notwithstanding, when delicate data is shared and a Secrecy Stabilization Picket Picket Mechanism (SSPPM) is not set up, an approved client can at present trade off the security of a man prompting with accurate data. In this paper, we propose a precision controlled security safeguarding admittance control structure. That Admittance control components shield delicate data from inapproved clients. This type of approaches are used for data manage on mining with efficient manner. These kind of results produce key for authorized once only.

Keywords: precision controlled data, secrecy stabilization

IMAGE RETRIEVAL EXTRACTION TECHNIQUE

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G. Prasanth Kumar, Asst. Professor in CSE, Ramachandra College of Engineering, Eluru
Ch. Raghu Kumar, Asst. Professor in CSE, Ramachandra College of Engineering, Eluru

ABSTRACT

Image Retrieval system is an effective and efficient tool for managing large image databases. A content based image retrieval system allows the user to present a query image in order to retrieve images stored in the database according to their similarity to the query image. In this paper content based image retrieval method is used on digital image data set. The main objective of this paper is to evaluate the retrieval system based on Hybrid features. The texture features are extracted by using pyramidal wavelet transform and the shape features are extracted by using Fourier descriptor. And the hybrid technique is the combination of both texture and shape. The major advantage of such an approach is that little human intervention is required. It is ascertained that the performance is superior when the image retrieval based on the Hybrid features, and better results than primitive set.

KEYWORD

Feature Extraction, Hybrid features, Image Retrieval.

I. INTRODUCTION

Image Retrieval System provides an effective and sophisticated tool for maintaining and managing image databases. There is a significant amount of increase in the use of medical images in clinical medicine and disease research. Image retrieval (IR) is one of the most exciting and fastest growing research area in the field of medical imaging [2]. The goal of CBIR is to retrieve images from a database that are similar to an image placed as a query. In CBIR, for each image in the database, features are extracted and compared to the features of the query image. A CBIR method typically converts an image into a feature vector representation and matches with the images in the database to find out the most similar images. A comparative study has given on multiple databases [3,6,10] it is concluded that performance of DRD image is less compared to other database images.

The goal of CBIR is to retrieve images from a database that are similar to an image placed as a query. In CBIR, for each image in the database, features are extracted and compared to the features of the query image. A CBIR method typically converts an image into a feature vector representation and matches with the images in the database to find out the most similar images. In various studies different databases have been used to compare the study. The similarity between features are to be calculated by using algorithms i.e., used by well known CBIR systems such as IBM's QBIC[28]. For each specific feature there is a specific algorithm for extraction and another for matching.

In this paper evaluation of retrieval system based on hybrid features is carried out. The major advantage of this approach is that little human intervention is required. The databases used here is digital data of 200 images with multiple contexts.

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Various Problem Solving Approaches with Python- A Case Study

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ABSTRACT: This paper provides the basic elements of the python program which can be best use for new researchers who are interested and implement their artificial intelligence, machine learning, complex data analysis, visualization, 3D software (Maya), web and internet development, database, games. Further testing issues and other data structures, modules and GUI programming in python are discussed.

Keywords:- *Python, Maya, Applications, Data Structures, GUI programming*

1. INTRODUCTION

Python is an exciting and powerful language. It is a high level, interpreted, interactive, object oriented and reliable language. Python is an open source project and it is a platform independent, scripting language. It has different features like simple, easy to learn, versatile, free and open source, high-level, interactive, portable, object-oriented, interpreted, dynamic, and extensible, embeddable, secure, robust, multi-threaded, garbage collection.

2. HISTORY OF PYTHON

Python was developed by Guido van Rossum in the late 1980's and early 90's at the national research institute for mathematics and computer science in the Netherlands. It has been derived from many languages such as ABC, modula-3, C, C++, algol-68, Smalltalk, UNIX and shell and scripting languages [1]

Why it is called 'python': python language was released by its designer Guido van Rossum, in Feb

2. Web development: Python is easily extensible language that provides good integration with data base and other web standards. Odoo is a consolidated business applications and Google App engine are the popular web applications based on python.
3. GUI based desktop applications: Simple syntax, modular architecture, rich text processing tools, and ability to work on multiple operations. Python has various GUI toolkits like wxpython, pyqt. Python is used to make 3D imaging software packages like Blender, 3ds Max, cinema 4D, Houdini, Lightwave and Maya. 2D imaging software such as Inkscape, GIMP, Paint shop pro and Scribus.
4. Games: Python has various modules, libraries, platforms that support development of games. PYSOY is a 3D game engine.
5. Enterprise and business applications: Python has suitable coding for containing larger applications. A large part of Youtube code is also

IMAGE RETRIEVAL EXTRACTION TECHNIQUE

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In this paper evaluation of retrieval system based on hybrid features is carried out. The major advantage of this approach is that little human intervention is required. The databases used here is digital data of 200 images with multiple contexts.

EFFICIENT AND EXPRESSIVE KEYWORD SEARCH OVER ENCRYPTED DATA IN CLOUD

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ABSTRACT: Searchable encryption enables a cloud server to conduct keyword look over encrypted information for the benefit of the information clients without taking in the fundamental plain texts. Nonetheless, most existing accessible encryption plots just help single or conjunctive keyword search, while a couple of different plans that can perform expressive keyword look are computationally wasteful. In this paper, we propose an expressive open key accessible encryption conspire in the prime-arrange gatherings, which permits policies strategies to be communicated in conjunctive, disjunctive or any monotonic Boolean equations and accomplishes noteworthy execution enhancement over existing plans. We formally portray its security, and exhibit that it is explicitly secure in the standard model. Likewise, we actualize the proposed plan utilizing a quick prototyping apparatus called Charm, and direct a few tests to assess it execution. The outcomes exhibit that our plan is significantly more effective than the ones worked over the composite-order groups.

KEY WORDS: Provable secure; public key encryption; keyword search

I.INTRODUCTION

Cloud storage has drawn research attention in the last few years with the development of cloud computing. There are some IT systems providing storage services such as Dropbox, iCloud and SkyDrive, and more and more users are getting used to storing and accessing their data by smart phones in cloud storage. For the protection of privacy and confidentiality of sensitive really needs, since the encrypted data are unreadable as random strings, which implies that the server cannot directly search with his requirement. In this scenario, how to obtain encrypted data therefore becomes a new security issue with regard to cloud storages over encrypted data.

Data as a Service (DaaS), as a main function of cloud computing, provides an assurance that data is provided on demand to user regardless of geographic or organizational separation of provider and consumer. To reduce costs and promote efficiency, organizations have been focusing on outsourcing their storage and computing needs currently. In DaaS, Public Key Encryption with Keyword Search (PEKS), as a fundamental searchable encryption component in Public Key Infrastructure (PKI), is efficient to both safeguard outsourced data (through encryption) and provide operability over encrypted data. Hence, PEKS has been introduced to eliminate secure concern in DaaS environment. The most urgent difficulty today in developing secure cloud computing is not promoting the efficiency of a kind of secure algorithm. Rather, it is the enhancement and optimization of infrastructure to support widespread and practical functions. In existing Internet and

Data Mining and its Applications

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ABSTRACT: *Data Mining is the process of extracting or mining knowledge from large amount of data. Data mining is the technology that meets up to the challenge of solving our quest for knowledge from these vast data burdens. It provides us with a user oriented approach to novel hidden patterns in data. Important disciplines ranging from machine learning, information retrieval, statistics and artificial intelligence have had impacts on the development of data mining. This paper evaluates data mining in theory and in practice. An overview of database systems, data warehousing, data mining goals, applications and algorithms was carried out.*

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1. INTRODUCTION

In an information technology driven society, where knowledge is an invaluable asset to any individual, organization or government. Companies are supplied with huge amount of data in daily basis, and there is the need for them to focus on refining these data so as to get the most important and useful information in their data warehouses [1]. Data mining is a new technology which could be used in extracting valuable information from data warehouses and databases of companies and governments. It involves the extraction of hidden information from some huge dataset.

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In this paper, an overview of database systems, its evolution, databases, data warehousing, and the relationship between data warehousing and data mining will be made. Database understanding would be incomplete without some knowledge of the major aspects which constitute the building and framework of database systems, and these fields include structured

The Data Privacy and Integrity with Threshold Secret Sharing Method in Cloud Supporting Internet

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ABSTRACT

Cloud-supported internet of Things (Cloud-IoT) has been broadly deployed in smart grid systems. The IoT front-ends are responsible for data acquisition and status supervision, while the substantial amount of data is stored and managed in the cloud server. Achieving data security and system efficiency in the data acquisition and transmission process are of great significance and challenging, because the power grid-related data is sensitive and in huge amount. In this paper, we present an efficient and secure data acquisition scheme based on CP-ABE (Cipher text Policy Attribute Based Encryption).Data acquired from the terminals will be partitioned into blocks and encrypted with its corresponding access sub-tree in sequence, thereby the data encryption and data transmission can be processed in parallel. Furthermore, we protect the information about the access tree with threshold secret sharing method, which can preserve the data privacy and integrity from users with the unauthorized sets of attributes. The [illegible] analysis demonstrates that the proposed scheme can fulfill effectively reduce the time cost compared with other popular approaches.

INTRODUCTION

With the support of modern information technologies like the Internet of Things (IoT) and cloud computing, smart grid has emerged as the next-generation power supply network, in which the electricity is generated according to the real-time demands of electric equipment or household appliances. To make the smart grid more intelligent, a great number of IoT terminals are deployed to gather the status of the power grid timely for the control center. Some sample applications are shown in Fig. 1, such as the power transmission line monitoring, power generation monitoring, substation state monitoring, smart metering, electric energy data acquisition, smart home. For instance, in power transmission line monitoring scenario, using preplaced sensors, the status parameters of the transmission line and power towers can be gathered in real time, so that any fault can be diagnosed and located in a timely manner.

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Role Based Authority over CP-ABE Access Control Scheme for Public Cloud Storage

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ABSTRACT:

The primary personality basec communicate encryption plot with steady size figure writings and private keys. Our development is a Key Encapsulation Mechanism (KEM), in this manner long messages can be scrambled under a short symmetric key. In our answer, figure writings and private keys are of steady size, and people in general key is direct in the maximal estimation of s. In addition, in our plan, the Private Key Generator (PKG) can powerfully include new incividuals without adjusting already disseminated data (as in IBE plans). We likewise take note of that there is no chain of importance between characters, in spite of HIBE. The general population enter is straight in the maximal size of S, and not in the quantity of decoding keys that can be conveyed, which is the quantity of conceivable characters. In this utilize a straightforward situation to acquaint the testing issues relating with bunch classification and key administration. We consider a source that sends information to an arrangement of beneficiaries in a multicast session. The security of the session is overseen by two principle useful substances: a Group Controller (GC) in charge of confirmation, approval and get to control, and a Key Server (KS). To guarantee classification amid the multicast session, the sender (source) shares a mystery symmetric key with all legitimate gathering individuals, called Traffic Encryption Key (TEK). To multicast a mystery message, the source scrambles the message with the TEK utilizing a symmetric encryption calculation. From the above papers, it is watched that how to share protected information in cloud without lost the keys. In this paper, we present a novel Digital mark, SSH key, Hashing capacities and key escrow calculations.

Keywords: Data usage, anonymous network, distributor, fake question, information spillage, finger print, fake actor.

1. INTRODUCTION

Distributed computing has turned into a huge innovation drift either in the modern or the in Cloud Computing, clients interface with the 'Cloud', which shows up as though it is a solitary element rather than various servers.

Supporting Reputation Based Trust Management for Cloud Services

#1.T.Rajya Lakshmi Asst Professor in Ramachandra College of Engineering, Eluru

#2.Ch.Venkatesh Asst Professor in Ramachandra College of Engineering, Eluru

Abstract: In cloud computing growth, the management of trust element is most challenging issue. Cloud computing has produce high challenges in security and privacy by the changing of environments. Trust is one of the most concerned obstacles for the adoption and growth of cloud computing. Although several solutions have been proposed recently in managing trust feedbacks in cloud environments, how to determine the credibility of trust feedbacks is mostly neglected. In this project the system proposed a Cloud Armor, a reputation-based trust management framework that provides a set of functionalities to deliver Trust as a Service (TaaS). "Trust as a Service" (TaaS) framework to improve ways on trust management in cloud environments. The approaches have been validated by the prototype system and experimental results.

Keywords: Cloud computing, Trust, Obstacles, Reputation, Feedbacks.

I. INTRODUCTION

The highly dynamic, distributed, and non-transparent nature of cloud services make the trust management in cloud environments a significant challenge. According to researchers at Berkeley, trust and security is ranked one of the top 10 obstacles for the adoption of cloud computing. Indeed, Service-Level Agreements (SLAs) alone are inadequate to establish trust between cloud consumers and providers because of its unclear and inconsistent clauses. Consumers' feedback is a good source to assess the overall trustworthiness of cloud services. Several researchers have recognized the significance of trust management and proposed solutions to assess and manage trust based on feedbacks collected from participants. In reality, it is not unusual that a cloud service experiences malicious behaviors (e.g., collusion or Sybil attacks) from its users. This paper focuses on improving trust management in cloud environments by proposing novel ways to ensure the credibility of trust feedbacks. In particular we distinguish the following key issues of the trust management in cloud environments: Consumers' Privacy. The adoption of cloud computing raise privacy Undoubtedly, services which involve consumers' data (e.g., interaction histories) should preserve their privacy. Cloud Services Protection. It is not unusual that a cloud service experiences attacks from its users. Attackers can disadvantage a cloud service by giving multiple misleading feedbacks (i.e., collusion attacks) or by creating several accounts (i.e., Sybil attacks). Indeed, the detection of such malicious behaviors poses several challenges. Firstly, new users join the cloud environment and old users leave around the clock. This consumer dynamism makes the detection of malicious behaviors (e.g., feedback collusion) a significant challenge. Secondly, users may have multiple accounts for a particular cloud service, which makes it difficult to detect Sybil attacks. Finally, it is difficult to predict when malicious behaviors occur (i.e., strategic VS. occasional behaviors). Trust Management Service's Availability. A trust management service (TMS) provides an interface between users and cloud services for effective trust management. However, guaranteeing the availability of TMS is a difficult problem due to the unpredictable number of users and the highly dynamic nature of the cloud environment. Approaches that

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Analysis of Avalanche Effect in Asymmetric Cryptosystem Using NTRU & RSA

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Abstract. Cryptography has come up as a solution which plays a vital role in information security system against malicious attacks. This security mechanism uses some algorithms to scramble data into unreacable text which can be only being decoded or decrypted by party those possesses the associated key. In this providing of security by two asymmetric encryption techniques Rivest -Shamir-Adelman (RSA) and Nth Degree Truncated Polynomial Ring Units (NTRU). Analyzing Avalanche effect in both the encryption techniques , it check which algorithm is more secured. Avalanche Effect means a change in one bit of the plaintext or one bit of the key should produce a change in many bits of the cipher texts.And observe performance analysis and variations of avalanche effect in both RSA and NTRU algorithms.

Keywords: Rivest-Shamir-Adelman (RSA), Nth degree Truncated polynomial Ring Units (NTRU),Encryption, Decryption, Cipher text, Secret key, Avalanche Effect.

I. INTRODUCTION

The development in technology and networking has posed serious threats to obtain secured data communication. Cryptography is technology to converts the plain text into cipher text, it provides the security of the secrete message but cryptanalysis breaking the cipher text. Several methods have been proposed which include public key- private key algorithms such as RSA and NTRU (Nth degree truncated ring unit). For the past two decades Cryptographic techniques have become essential part of any secure digital communication. All the cryptosystems can be classified in two types Private key systems and Public key systems. Avalanche Effect is calculated on public key crypto system include RSA anc NTRU.

A. Cryptography

Public key cryptosystems is generating two keys, public key and private key. Public key is used for encryption and private key is used for decryption. RSA and NTRU are examples of the public key crypto system is based on polynomial function.

2) Encryption

Input of the process is public key and plain text. Output of the process is cipher text.

3) Decryption

It is process of converting cipher text into plain text with help of private key.

B. Avalanche

It is the techniques to check level of the security in any cryptographic method. It is that a small changes in either the plain text or the public key, should produce a significantly change in the cipher text.

C. Statistical analysis

Information is varying from one technique to other technique in cryptography. In this we apply NTRU and RSA algorithms with one bit change in plain text and public key, to identify the best technique with help of some statistical methods.

II. MATHEMATICAL GROUNDWORK

A. RSA

A LIGHTWEIGHT SECURE DATA SHARING SCHEME FOR MOBILE CLOUD COMPUTING

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ABSTRACT: With the prominence of cloud computing, cell phones can store/recover individual information from anyplace whenever. Subsequently, the information security issue in portable cloud turns out to be increasingly extreme and anticipates further advancement of mobile cloud. There are generous examinations that have been led to enhance the cloud security. Be that as it may, the greater part of them are not pertinent for mobile cloud since cell phones just have restricted processing assets and power. Arrangements with low computational overhead are in extraordinary requirement for v\mobile cloud applications. In this paper, we propose a lightweight sharing scheme (LDSS) for versatile distributed computing. It embraces CP-ABE, an entrance control innovation utilized in ordinary cloud condition, yet changes the structure of access control tree to make it appropriate for versatile cloud situations. LDSS moves an expansive bit of the computational escalated get to control tree change in CP-ABE from cell phones to outer intermediary servers. Besides, to decrease the client renouncement cost, it introduce quality portrayal fields with execute lazy revocation, which is a thorny issue in program based CP-ADE frameworks. The test results demonstrate that LDSS can viably diminish the overhead on the cell phone side when clients are sharing information in versatile cloud conditions.

KEY WORDS: Data Storage, Secret Sharing, Cloud Computing.

I.INTRODUCTION

the development of cloud computing and the popularity of smart mobile devices, people are gradually getting accustomed to a new era of data sharing model in which the data is stored on the cloud and the In such a scenario, to achieve the satisfactory Performance, it is essential to use the resources provided by the cloud service provider (CSP) to store and share the data. Nowadays, various cloud mobile applications have been widely used. In these applications, people (data owners) can upload their photos, videos, documents and other files to the cloud and share these data with other people (data users) they like to share. CSPs also provide data management functionality for data owners. Since personal data files are sensitive, data owners are allowed to choose whether to make their data files public or can only be shared with specific data users. Clearly, data privacy of the persona sensitive data is a big concern for many data owners.

The state-of-the-ar privilege management access control mechanisms provided by the CSP are either not sufficient or not very convenient. They cannot meet all the requirements of data owners. First, when people upload their data files onto the cloud, they are leaving the data in a place where is out of their control, and the CSP may spy on user data for its commercial interests and/or other reasons. Second, people have to send password to each data user if they only want to share the encrypted data with certain users, which is very cumbersome. To simplify the privilege management, the data owner can divide data users into

Role Based Authority over CP-ABE Access Control Scheme for Public Cloud Storage

#1.Ch Venkatesh, Asst professor Ramachandra College Of Engineering, Eluru

#2.M.S.R.M.Mani, Asst professor Ramachandra College Of Engineering, Eluru

ABSTRACT:

The primary personality based communicate encryption plot with steady size figure writings and private keys. Our development is a Key Encapsulation Mechanism (KEM), in this manner long messages can be scrambled under a short symmetric key. In our answer, figure writings and private keys are of steady size, and people in general key is direct in the maximal estimation of s. In addition, in our plan, the Private Key Generator (PKG) can powerfully include new individuals without adjusting already disseminated data (as in IBE plans). We likewise take note of that there is no chain of importance between characters, in spite of HIBE. The general population enter is straight in the maximal size of S, and not in the quantity of decoding keys that can be conveyed, which is the quantity of conceivable characters. In this utilize a straightforward situation to acquaint the testing issues relating with bunch classification and key administration. We consider a source that sends information to an arrangement of beneficiaries in a multicast session. The security of the session is overseen by two principle useful substances, a Group Controller (GC) in charge of confirmation, approval and get to control, and a Key Server (KS). To guarantee classification amid the multicast session, the sender (source) shares a mystery symmetric key with all legitimate gathering individuals, called Traffic Encryption Key (TEK). To multicast a mystery message, the source scrambles the message with the TEK utilizing a symmetric encryption calculation. From the above papers, it is watched that how to share protected information in cloud without lost the keys. In this paper, we present a novel Digital mark, SSH key, Hashing capacities and key escrow calculations.

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1. INTRODUCTION

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In Cloud Computing, clients interface with the 'Cloud', which shows up as though it is a solitary element rather than various servers.

Bandwidth Estimation of Network Connection

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Abstract- *Capacity measures for a network connection across the Internet can be useful to many applications. Its applicability encompasses QoS guarantees, congestion control and other related areas. In this paper, we define and measure the available capacity of a connection, through observations at endpoints only. Our measurements account for variability of cross traffic that pass through the routers handling this connection. Related to the estimation of available capacity, we suggest modifications to current techniques to measure packet service time of the 'bottleneck' router of the connection. Finally , we present estimation results on wide area network connections from our experiments to multiple sites*

Keywords- *Bandwidth, Tele communication traffic, Throughput, Delay effects, Time measurement, Computer science, Educational institutions, Application software, Current measurement, Volume measurement*

I. INTRODUCTION

In this paper we Present techniques to estimate available capacity of an end-to-end connection. We define available capacity α (delta Δt), at time, t, to indicate the amount of data that could be inserted into a network path at time t, so that the transmit delay of these data packets would be bounded by a maximum permissible delay Δ. In this paper, we make a distinction between the terms capacity and bandwidth by capacity, we mean data volume and not data rate, e.g., our available capacity measure indicates the volume of data that can be inserted into the network at time t, to meet the delay bound, and does not indicate the rate at which to insert. However, since the available capacity is estimated in discrete time, a bandwidth estimate can be obtained form it, by distributing the capacity over the intervals between the discrete time instants.

Some traditional techniques for available bandwidth use throughput to provide a coarse estimate of bandwidth, e.g., TCP [Pos 81c] with congestion control [Ja 88]. Hence, in this mechanism, the bandwidth available estimate is directly related to the throughput that the sender is willing to test at any instant. On a packet loss, this mechanism provides a loose upper bound for the available bandwidth. As noted in [LaBa 99], packet loss is actually a better estimate of buffer capacities in the network, than of available bandwidth.

Some other work on identifying the available bandwidth addresses the measurement of the bottleneck bandwidth e.g., [Bo 93], *bprobe* tool in [CaCr 96a], [Pa 97b] and [LaBa 99] or all link bandwidths of a network path [Ja 97]. The technique described in [LaBa 99] also estimates the changing bottleneck bandwidth due to path changes. But, bandwidth available on a network path, may often be less than the bottleneck bandwidth, and may also go to zero, due to cross traffic in the path. Our measure differs from these previous work, as we account for the capacity lost due to cross traffic, in our estimates. The *cprobe* tool in [CaCr 96a] provides an available bandwidth measure, which accounts for cross traffic. They do so by sending a stream of packets, at a rate higher than the bottleneck bandwidth, and then computing the throughput of this stream using simple

A Study on "Investors' Attitude towards Mutual Funds in West Godavari District, Andhra Pradesh.

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Mr. G. Prabhu, MBA, M.Com., MHRM, AP-SET
Asst. Professor, Ramachandra College of Engineering, Eluru

Abstract

The concept of mutual fund was introduced in India by Unit Trust of India (UTI) in 1960s. As the name suggests, a 'mutual fund' is an investment vehicle that allows several investors to pool their resources in order to purchase stocks, bonds and other securities. As the mutual fund industry provides an option of diversified investment structure with varying degree of risk, it was supposed to be the most lucrative market for Indian investors. It was believed that it will surely tap the savings of common man. The diversification of schemes provides variety of options to suit the individual objectives according to their age, financial position, risk tolerance and return expectations. In the past few years, we had seen a dramatic growth of the Indian Mutual Fund industry with many private players bringing global expertise to the industry. Investment in mutual funds is effected by the perception of the investors. The objectives of the study are to identify the investor's perception on mutual funds and to analyze the factors affecting investors' perception towards mutual funds by using 200 convenience samples in West Godavari District, Andhra Pradesh. The study found that mostly the Lower Net worth Individuals have positive approach towards investing in mutual funds.

Keywords. *Assets under Management (AUM), Asset Management Company (AMC), Investment option, Liquidity, Mutual fund*

Introduction

Investment is a commitment of funds in real assets or financial assets. Investment involves risk and gain. In the present dynamic global environment, exploring investment avenues are of great relevance. Investment skills developed over a

Real assets, being tangible material things, are less liquid than financial assets. Compared to financial assets, returns on real assets are more difficult to measure accurately due to the absence of broad, ready, and active market. Financial assets available to individual investors are manifold, having different concomitant benefits to choose from. All financial investments are risky but the degree of risk and return differ from each other. An investor has to use his discretion, which is an art acquired by learning and practical experience. The knowledge of financial investment and the art of its management are the basic requirements for a successful investor.

Investment also lies in its liquidity, apart from risk and return on investment. Liquidity through easy marketability of investments demands the existence of a well organized Government regulated financial system.

Financial system comprises of financial institutions, services, markets and instruments, which are closely related and work in conjunction with each other. The litany of new financial institutions and instruments developed in recent years, with the ostensible objective of modernising the financial sector, is impressively long: Mutual Funds, Discount and Finance House of India, Money Market Mutual Funds, Certificate of Deposit, Commercial Paper, Factoring and Treasury Bills. Financial services through the network of elements (institutions, markets and instruments) serve the needs of individuals, institutions and companies. It is through these elements, the functioning of the financial system is facilitated.

Financial services comprise of various functions and services that are provided by financial institutions. Financial services are offered by both asset management companies, which include leasing companies, mutual funds, mer-

A Descriptive Study of 2-D, 3-D Graphics And Transformations

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[2]VKR,VNB& AGK College of Engineering, Gudivada, A.P.India

Abstract- *Computer Graphics is transforming our world significantly and rapidly. Computer Graphics is itself a very broad term and describes everything on the computer which is not text or sound. It can be a video, image, animation or anything else. It can be anything but everything is made up of 'pixel'. Pixel is the smallest unit of computer graphics. Computer Graphics is an art of drawing line, object, pictures etc. with the help of computer programming. There are two types of computer graphics: Interactive Graphics and Non-Interactive Graphics. Interactive graphics are those which have a two-way communication and the operator can control the operations like playing a video game on a computer. Non-interactive graphics are those in which where the user doesn't have any kind of control over the graphics.*

Keywords- Tansformations, Translation, Scaling, Rotation, Reflection, Shearing, Computer Graphics, Matrix representations.

I. INTRODUCTION

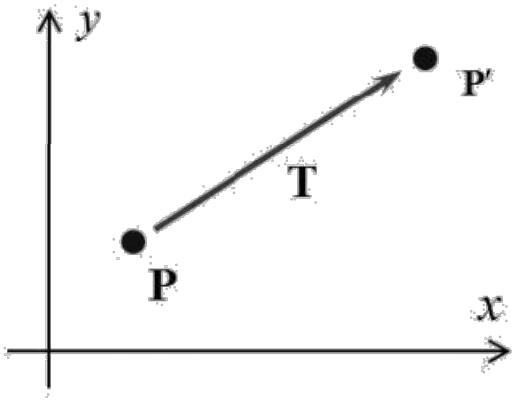
Computer Graphics definitely looks stunning and are often very complicated and takes a lot of time and effort to make. The techniques and hardware used today are very advanced and has automated most of the things. But this was not the case always. The development of Computer Graphics started in 1950's when it was designed using the vector graphics. Times changed and the methods also changed. Raster graphics comes into play and make things interesting and easy. But the problem was it doesn't look real and that's what stopped it being the mainstream technology. Nowadays, 3D graphics are used to design everything due to extra features of depth and originality. They are not very much different than 2D graphics apart from the fact that they have

II. 2-D GEOMETRICAL TRANSFORMATIONS

Changes in orientation, size and shape are accomplished with Geometric transformations that change the coordinate descriptions of objects

Basic Transformations

We describe the general proccdures for applying translation, rotation, and scaling parameters to reposition and resize two-dimensional objects



Translation

It is a process of changing position of an object along a straight-line path from one coordinate location to another. We translate a two-dimensional point by adding translation

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Abstract

Polarizing optical microscopic studies reveal that the EPAP Valerate is having single phase variant nematic and it is also enantiotropy. The low frequency static dielectric constant and microwave frequency dielectric permittivity increased with increase in the concentration of the solute in non-polar solvent benzene at room temperature. There is a decrease in the relaxation time as the concentration of the EPAP Valerate is increased in solute system. Dipole moment value is calculated experimentally and theoretically (AM1 Method) and also compared with the reported value. They are also in good agreement.Dipole moment value obtained from the dilute solution method is sufficient to determine the dipole moment in liquid crystal phase.

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Abstract

The phase transition temperatures and phases in ferroelectric series of 2-(4-n alkanoyloxy benzylidenamino) benzothiazoles (where n=12 and 16) are studied using polarizing micro scope (POM) and it reveals the occurrence of SmA phase. Dielectric parameter studied as a function of temperature can be used to determine the phase transitions temperature in LCs. The phase transitions are in good agreement with the dielectric studies data.

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Thermal and Dielectric behaviour of nematic EPAP Valerate mesogen

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Abstract

Polarizing optical microscopic studies reveal that the EPAP Valerate is having single phase variant nematic and it is also enantiotropy. The low frequency static dielectric constant and microwave frequency, dielectric permittivity increased with the increase of the concentration of the solute in non-polar solvent benzene at room temperature. The optical refractive index value decreased with the increase of the concentration of the solute in a non polar solvent benzene at room temperature. Dipole moment value obtained from the dilute solution method is sufficient to determine the dipole moment in liquid crystal phase. Keywords-EPAP Valerate , dielectric constant, refractive index, dipole moment, liquid crystal. I.INTRODUCTION Liquid Crystals (LC) represent systems of fascinating materials, which are widely recognized for their applications in display devices [1-4]. They are classified as to belong to an important phase of matter that is attached [5] with both scientific and technological importance. Materials in LC phase exhibit boh [6] the fluid and crystaline properties in such a manner to utilise them in many applications and modern appliances [7] like thermography, electro-optical (EO) displays, medical diagnostic tools. LC phases are a state of matter that carries the resemblances [8] of both anisotropic crystal and isotropic liquid. This phase of matter was discovered [9] in 1888 by an Australian Botanist Reintzer, and later named [10] as Liquid Crystals by Lehmann. Although LC retains the properties of liquid upto certain extent, it exhibits the anisotropy (pertinent to crystals) prevalently, when it is cooled down. This dual nature has resulted to cause profound influence on the physical properties in all phases. Hence, its response is expected to be of resulting [11] a subtle and complex nature to the external stimulus (viz., electrical, magnetic, mechanical, optical, thermal etc fields). Owing to particular combination

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Microarray Image Segmentation using Enhanced Hough Transform

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[2]Retd. Prof. Department of CSE, Anna University, Chennai - 602 025., [3]Assistant Professor, Dept. of IT, SCSVMV University, Kanchipuram.

Abstract--*Microarray is most effective tool among accessible for analysts to contemplate quality articulation profiles in the life sciences. Microarrays allow to Monitoring of articulations for many genes at the same time. Image investigation is a urgent assignment for microarray tests that can impact progressive examination like recognizable proof of differentially communicated genes. Over microarray examination, quality articulation levels can be accomplish and the organic data of an ailment can be characterize. The quality articulation information imbued in the microarray is acquire utilizing Image preparing strategies. The most difficult undertaking in microarray Image investigation is spot division.*

A handy solution to this issue is to outfit a calculation than can be utilized to find any spot inside the microarray Image. Upgraded Hough Transformation (EHT) is a dynamic component extraction system utilized as a part of Image investigation, PC vision, and advanced Image preparing. EHT calculation is tried on the DNA microarray Images to extend the

of qualities and extraction of the portrayal and chromosomal auxiliary data about these qualities. Microarrays are varieties of glass magnifying lens slides, in which a huge number of discrete DNA successions are printed by a mechanical cluster, subsequently, shaping round spots of known distance across. Each spot in the microarray picture contains the hybridization level of a solitary quality [1]. Wherever the measure of the fluorescence hybridization is influenced by things that occur amid the assembling of DNA microarray pictures [2], the productivity of the exploratory arrangement of the microarray pictures specifically influences the accuracy of the microarray information investigation [3].

Microarray Images taking care of reliably experience three phases: (I) gridding to distinguish the circumstance of the spot point of convergence of the Image and perceives their headings, (ii) division, which areas each microarray spot into nearer view and establishment pixels, and (iii) control extraction

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Thermmatology Scan Methodology Using Patel Sensor and Roku Processor

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Corresponding Author: Dr. Dola Sanjay S

Abstract: *Now A Day's Population Is Growing Rapidly As Well As Demand For Sea Foods Also Increases. Aquaculture The Fishes And Shrimp Depend On The Water Characteristics Of The Aqua Pond. The Parameters Of Water Can Vary A Lot During The Period Of A Day And Can Rapidly Changes Depending On The External Conditions. Hence It Is Necessary To Monitor These Parameters With High Frequency. For Maximizing Fish Yields, The Parameters Which Are To Be Kept At Certain Optimal Levels In Water. Wireless Sensor Networks Are Used To Monitor Aqua Farms For Relevant Parameters This System Consist Of Two Modules Which Are Transmitter Station And Receiver Station. The Data Transmits Through Gsm To The Data Base At Receiver Station. The Graphical User Interface Was Designed, To Convey The Data In The Form Of A Message To The Farmers In Their Respective Local Languages In Their Mobile Phones And Alerts Them In Unhygienic Environmental Conditions, In Order To Take Suitable Actions.*

Keywords: *Aquaculture, Wireless Sensor Networks And Arm Processor*

Date of Submission: 24-03-2018 Date of acceptance: 09-04-2018

I. Introduction

Aquaculture Has Been A Fast Growing Industry Because Of Significant Increases In Demand For Fish And Seafood Throughout The World. Its Economic Importance Is Increasing Economically. Aquaculture –Also Known As Fish Or Shellfish Farming. Aquaculture Produces Food Fish, Spot Fish, Bait Fish, Ornamental Fish, Crustaceans, Mollusks, Algae, Sea Vegetables, And Fish Eggs. Researchers And Aquaculture Producers Are "Forming" All Kinds Of Fresh Water And Marine Species Of Fish, Shellfish, And Plants.

In Shrimp Culture Monitoring Of Ecological Parameters Allows The Smooth Management Of Water Quality In The Ponds To Avoiding The Incidence Of Unfavourable Conditions That Can Be Harmful For Organisms Besides, Some Samples Observed To Be Most Sensitive To Low Dissolved Oxygen In Water. Recent Analysis Of Water Quality Requires A Constant Observing Of The Distinctive Water Quality Parameters In The Significant Catchments .Accurate Measurement Of Water Quality Requires Measurement Of Parameters Like Ph, Dissolved Oxygen, Water Temperature, Water Level Among Others At Different Depths On The Spatial Determination. Measuring Instruments Should Belong To Wireless Distributed Sensor Networks, Small, And Cheap Sensors Which Would Likely Be The Most Ideal Choice.

Real Time Information Systems Developed And Deployed At Low –Cost Short—Range Modules Of Wireless Sensor Network. The System Consists Of Smart Sensor Nodes, Coordinator/Gateway Node And Personal Computer. The Coordinator/Gateway Node Receives Data Acquired And Sends Command To Pc In Order To Make Human-Computer Visualization Interface. Wireless Sensor Networks Are Used In Different Environmental Applications Such As Nuclear Facility Monitoring, Forest Fire Detection, Earth Quake Detection Etc. The Wireless Sensor Node Has Resource Constraints Like Low Processing Power, Memory Size And Limited Battery Energy. We Proposed To Use Wireless Sensor Networks To Have A Distributed Collection Of Sensor Nodes (Ph, Humidity Temperature Sensor Etc) Networked Together In Some Fashion So That They Send The Raw Or Proceed Sensed Data To Some Central Location Called Base Station Or Database Server Through Gsm. There Is A Lot Of Research Activity In This Area Addressing Problem Like Sensor Node Are Battery-Powered, Any Reduction In The Number Of Bits Transmitted Will Power Expensed On Sensor Node Placement For Optimal Coverage ,Topology Formation ,Routing ,In –Network Data Processing Techniques To

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Efficient Scan Based Testing for Memories

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Abstract: We all know that embedded systems have built in memory within the processor. But this memory should be tested by someone in order to store the data in a efficient manner. For this purpose we have built in self test repair (BISTR) technique, which is widely used to test repair embedded random access memories. This paper proposes a reconfigurable built in self test repair (ReBISTR) technique for test repair of RAMs with different sizes and redundancy organizations. An effective and efficient BIST algorithm has been proposed to allocate redundancies of defective RAMs. In this reconfigurable built in self test repair redundancy analysis is performed by using redundancy algorithm for various RAMs. When the RAMs are operated in normal mode, reconfigurable built in self repair technology is used to reduce the set up time. Due to the complexity of memory architecture, the possibilities of occurring manufacture defects are more. So memory testing is necessary. BISTR technique is cost effective but widely used as solution for memory testing. The and architecture are simulated in Xilinx ISE 14.7.

Keywords: SoC, BIST, BISTR, Test Pattern Generator, FPGA.

I. INTRODUCTION

The number of transistors integrated per square inch on the die has been doubled for very 18 months from the invention of integrated circuits according to Moore's law. In addition to this the size of transistors are decreased and the frequency of the circuits are being increased. Due to this testing of very large scale integrated circuits has been facing many challenges. By using different techniques we are going to test the digital VLSI circuits and minimizing the power consumption during testing. We have different types of testing levels involved for completion of testing the circuit. Testing is done at different levels of manufacturing like gate level testing, transistor level testing, circuit level testing etc. we have three testing levels after the manufacturing of the circuit. Manufacturing test is performed after the circuit comes out of the manufacturing line to screen the defective parts. Basic principle of manufacturing testing involves three basic components namely circuit under test, automatic test equipment, and automatic test equipment memory to store the test pattern generation tools. For testing the circuit many test vectors are applied to the input, these input vectors and their responses are stored in automatic test equipment. Then circuit under test is analyzed. If the circuit under test responses matches with the fault free responses, then the circuit is considered to be working properly. Manufacturing test of a

The test pattern generator produces test vectors that are applied to the tested circuit during pseudo-random testing of combinational circuits. The nature of the that generator directly influences the fault coverage then achieved the influence of the type of pseudo-random pattern generator on the stuck at fault coverage. Linear feedback shift registers (LFSRs) are commonly used as a test pattern generations and the generating polynomial which is primitive to give the maximum period. We shown that primitive polynomials usage is not necesssary and additionallly the polynomial usage is even undesirable in the most cases. This truth has documented with the help of statistical graphs. The need of right selection of an LFSR seed and generating the polynomial is shown here, a mixed-mode BIST design is for ISCAS benchmarks as the VLSI circuits complexity is constantly increases. So the need of a built-in self-test (BIST) is necessary here. Built-in self-test gives the chip to test itself and to analyse the circuit's response. Hence, it is very complex and as the external ATE (Automatic Test Equipment) is expensive So it may be completely omitted, or its complexity can be significantly reduced. Moreover, the BIST gives an easy access to the internal structures of a tested circuit, that are highly hard to reach from the outside. We have already many proposed BIST equipment design methods. Some type of a pseudorandom pattern generator

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Wireless Video Surveillance Robot Using Raspberry Pi

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***Abstract*—This paper proposes a method for controlling a wireless robot for surveillance using an application built on Android platform. The Android application will open a web-page which has video screen for surveillance and buttons to control robot and camera. Android Smartphone and Raspberry pi board is connected to Wi-Fi. An Android Smartphone sends a wireless command which is received by Raspberry pi board and accordingly robot moves. The Video Streaming is done using MJPG streamer program that gets mjpeg data and sends it through a HTTP session. The Raspberry pi programming is done in python language. The experimental result shows that the video streamed up to 15 frames per second.**

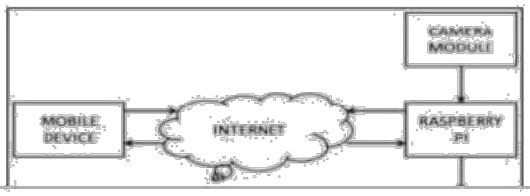
***Index Terms*—Android Application, Robot, Raspberry pi, Surveillance.**

I. INTRODUCTION

THE video surveillance has played supreme role in the research of last few decades. The application has wide range of purposes like traffic monitoring, understanding human activity. In [1] author has stated that, different kind of cameras is used for surveillance like fixed cameras, and pan and tilt cameras. These kinds of cameras are generally used for indoor security. In indoor security system multiple cameras are mounted on wall with different angels to track object. These

The above two types of systems need computer or laptop which makes the whole system bulky. In [3] the systems uses Bluetooth module for controlling robot using phones. But the range of Bluetooth is limited.

With the development in wireless communication and internet, security systems are rapidly improving. This paper describes a method for controlling a robot using a Smartphone. Fig. 1 shows the basic block diagram of the system. The main unit of robot is Raspberry Pi. Using motor driver IC two dc motors are connected to the GPIO of Pi. Servomotor is used for the tilt motion of a camera. A web server is built in Raspberry Pi using MJPG streamer program. An application is built for Smartphone. The application from Smartphone will open the web-page which has a screen for video streaming and buttons for the movement of robot and camera.



SECURE DATA SHARING AND SEARCHING AT THE EDGE OF CLOUD-ASSISTED INTERNET OF THINGS

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ABSTRACT: Over the last few years, smart devices are able to communicate with each other and with Internet/cloud from short to long range. As a consequence, a new paradigm is introduced called Internet of Things (IoT). However, by utilizing cloud computing, resource limited IoT smart devices can get various benefits like offload data storage and processing burden at cloud. To support latency sensitive, real-time data processing, mobility and high data rate IoT applications, working at the edge of the network offers more benefits than cloud. In this paper, we propose an efficient data sharing scheme that allows smart devices to securely share data with others at the edge of cloud-assisted IoT. In addition, we also propose a secure searching scheme to search desired data within own/shared data on storage. Finally, we analyze the performance based on processing time of our proposed scheme. The results demonstrate that our scheme has potential to be effectively used in IoT applications.

KEY WORDS: Secret Key Encryption And Public Key Encryption Searching Scheme, Key Generation, Data And Keywords Uploading, Data Sharing And Downloading And Data Searching And Retrieval.

I.INTRODUCTION

The Internet of Things (IoT) is considered as a future internet that extends the connection of the internet to all kinds of real-world physical smart devices. A report by Cisco estimates that by 2020 around 50 billion of such smart devices will be connected to the Internet. By connecting these billions of smart devices to the Internet, the IoT will provide developed smart and autonomous cyber-physical Parts of a large platform, hence, a huge amount of data are generated that requires high computational capabilities for storage, processing, and analyzing purposes in a secure and efficient manner. Generally, the smart devices have limited resources. On the other hand, cloud resources have virtually unlimited storage and processing capabilities with scalability and on-demand accessibility anywhere. Thus with the help of the cloud, the IoT smart devices can relieve the burden of limited resources. For IoT applications, smart devices require low latency, high data rate, fast data access, and real-time data analytics/processing with decision-making and mobility support. Due to several drawbacks, the cloud cannot fulfil all the aforesaid requirements.

However, edge computing adds many benefits to cloud-assisted IoT and supports aforesaid requirements by keeping data processing, communications, and storage operation on edge servers that are close to the devices at the edge of the networks. Moreover, due to smart devices' limited range of connectivity, the edge servers can serve as intermediaries for communications over long distances. These edge servers are any personal device or mobile device, stand alone servers, or network devices that are hosted within one hop far from the end devices. In addition, the edge servers also cooperate and

Design And Implementation Of A High Efficient Architecture Of FFT Processor

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ABSTRACT: *The complexity of communications and signal processing circuits increases every year. This is made possible by the CMOS technology scaling that enables the integration of more and more transistors on a single device. This increased complexity makes the circuits more vulnerable to errors. At the same time, the scaling means that transistors operate with lower voltages and are more susceptible to errors caused by noise and manufacturing variations. Soft errors pose a reliability threat to modern electronic circuits. This makes protection against soft errors a requirement for many applications. For some applications, an interesting option is to utilize algorithmic-based fault tolerance (ABFT) techniques that try to exploit the algorithmic properties to detect and correct errors. Signal processing and communication applications are well suited for ABFT. One example is fast Fourier transforms (FFTs) that are a key building block in many systems. Several protection schemes have been proposed to detect and correct errors in FFTs. In modern communication systems, it is increasingly common to find several blocks operating in parallel.*

KEY WORDS: Error Correction Codes (ECC), Fast Fourier Transforms (FFTs), Soft Errors

I.INTRODUCTION

One of the main problem in real time communication is repetition of corrupt messages. Here the data should be delivered with low delay and the use of techniques will avoid the overloads by transmitting. During the digital information transmitting through a channel, practically inevitable errors are produced. To ensure reliable transmission, the data are further encoded Via Error Correcting Code (ECC).This could be used to recognize and correct errors. In this work the well-known binary linear block Hamming codes are used because they have been used in the optimization problems that we accelerate thanks to the circuit explained further on. A binary linear (N, k) code is a k-dimensional subspace of the space of N-bit code words, and therefore has 2^K code words. But we solve for blocks or subsets of M code words in the code, where $M \leq 2^K$, used to

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4 Bit Comparator Design Based on Reversible Logic Gates

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Abstract—Today, reversible logic circuits has attracted considerable attention in improving some fields like nanotechnology, quantum computing, and low power design. In this paper 4 bit reversible comparator based on classical logic circuit is represented which uses existing reversible gates. In this design we try to reduce optimization parameters like number of constant inputs, garbage outputs and quantum cost. The results show that, the proposed comparator has 4 quantum cost and one constant input less than the prior design.

Index Terms—reversible gates; reversible comparator; quantum cost; constant inputs; garbage outputsQuantum cost refers to the cost of the circuit interms of primitive gate [4].

In proposed paper, 4 bit reversible comparator is designed. First of all, in section II some reversible logic gates, which are used in circuit construction, are described. Classical implementation of comparator is represented in section III. New design of 4 bit reversible comparator and comparing with prior design are presented in section IV and V, respectively. Finally, the conclusion is made in section VI.

II. Basic Reversible Logic Gate

I Introduction

Reversible logic has been considered as one of the promising practical strategies for power-efficient computing [1]. R. Landauer shows when one bit of information loses, KTln2 joules of energy dissipate (K is the Boltzman's constant and T is the operational temperature) [2]. Later, Bennett [3] proved that this energy could be saved by using reversible logic circuit. In fact, when the inputs cannot be recovered from circuit's outputs, information loss appears. Reversible logic circuits can handle this issue. In this logic, one to one mapping exists between the inputs and outputs, the number of inputs and outputs is equal, and inputs can be recovered from outputs. Reversible logic circuit utilizes in many applications such as nanotechnology, quantum computing, optical information processing, and quantum dot cellular automata (QCA). In order to achieving an optimized reversible circuit, some points should be considered:

1) Fan-out is forbidden.
2) Feedback and loop are not allowed.
3) Delay should be minimum.
4) Optimization parameters should be minimum. The parameters such as number of reversible gates, number of constant inputs, garbage outputs, and quantum cost (QC) can be named as optimization parameters and are defined as:
1) The inputs, which equal to 0 or 1, are constant inputs.
2) Garbage outputs are output vectors which do not generate any useful function.

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ICU Patient Health Monitoring System By Using Raspberry Pi

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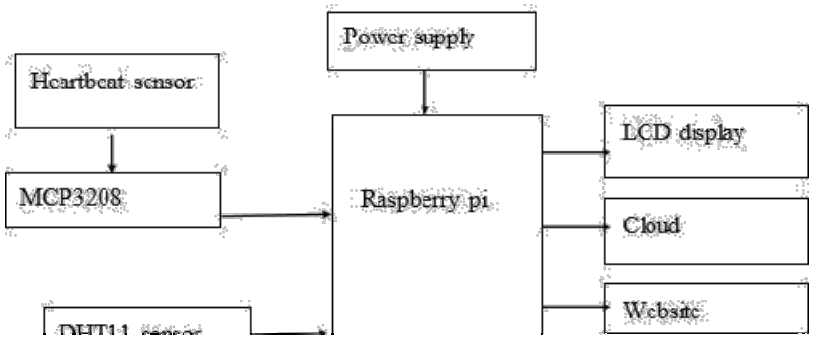
ABSTRACT: In India, everyday many lives are affected because the patients are not timely and properly operated. Also for real time parameter values are not efficiently measured in clinic as well as in hospitals. Sometimes it becomes difficult for hospitals to frequently check patient conditions. Also continuous monitoring of ICU patients is not possible. To deal with those types of situations, our system is beneficial. Our system is designed to be used in hospitals for measuring and monitoring various parameters like temperature, ECG, heart beat etc. The results can be recorded using Raspberry Pi displayed on a LCD display. Also the results can be sent to server using WIFI technology. Doctors can login to a website and view those results.

KEYWORDS: Raspberry–PI-3, Monitoring system, Sensors.

I. INTRODUCTION

Health is one of the global challenges for humanity [1]. In the last decade the healthcare has drawn considerable amount of attention. The prime goal was to develop a reliable patient monitoring system so that the healthcare professionals can monitor the patients, who are either hospitalized or executing their normal daily life activities. Recently, the patient monitoring systems is one of the major advancements because of its improved technology [2].

Currently, there is need for a modernized approach. In the traditional approach the healthcare professionals play the major role. They need to visit the patient's ward for necessary diagnosis and advising. There are two basic problems associated with this approach. Firstly, the healthcare professionals must be present on site of the patient all the time and secondly, the patient remains admitted in a hospital, bedside biomedical instruments, for a period of time. In order to solve these two problems, the patients are given knowledge and information about disease diagnosis and prevention. Secondly, a reliable and readily available patient monitoring system is required [4]. In order to improve the above condition, we can make use of technology in a smarter way. In recent years, health care sensors



DESIGN AND IMPLIMENTATION OF ANTI-THEFT ATM

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ABSTRACT
Automated Teller Machines ATMs are used for different ways, mostly cash withdrawals. ATM users utilize many services on ATM and they will do some billiors of transactions. Meanwhile robberies occurring in the ATMs are also high with the lack of security. The main objective of our study is to minimize the robberies occurring in the ATM's. In order to overcome this problem we have come up with a project that uses Raspberry Pi. The hardware components include Web cam to continuously monitor the stipulated area, a motor driver and a motor to open and shut down the doors when a burglar is detected, buzzer to alert the surrounding people and shops. Any person who wants to get into the ATM should provide a valid card near the doors. When the card is inserted, if it is valid the doors get opened else not. If burglars or thief's try to destroy and theft the ATM and once if the vibration is sensed, then information is passed to Raspberry Pi. Then to close the door of ATM the DC Motor is used. Thereby alerting the nearby public and bank authorities the buzzer also rings while the camera continuously monitors the whole ATM. The proposed method or system ensures to develop the advanced ATM anti-theft system. In this project a cost effective and an advance approach for ATM security has been proposed. It can be installed at some hidden place in the ATM so that it cannot be approached or destroyed by thieves. From existing ATM intrusion and theft control systems, this proposed system is distinctive in many ways. In future this can also be extended by sending an SMS alert to the nearest Police Station and also a relay can be used to trigger the gas inside the ATM to make the thief unconscious.

KEYWORDS: Vibration Sensor, Motor, Relay, Rfid, Buzzer, Gsm, Camera, And Raspberry Pi.

INTRODUCTION
As we daily see in news as many robberies are happening around India. ATM users utilize many services on ATM and they will do some billions of transactions. So due to the lack of security these robberies have been notifying every day in different places so, these incidents made me to think about having a high surveillance security system by using the raspberry pi. The proposed system uses the motion sensor to detect the unauthorized access and entry in to the premises , as the motion detect camera takes the real time image & send it to the user for analyzing further so that user can take the necessary actions, for this process we use different components like dc motor which is used to shut the door , the USB Camera captures the image and sends it to the USB port of the Raspberry Pi board.

sounc starts from the buzzer. To close the door of ATM DC Motor is used. A relay will be triggered to leak the gas inside the ATM to bring the thief or burglar into unconscious stage. Camera is always in processing and will send video continuously to the PC and it will be saved in computer. To capture the robber occur time, RTC is used and that will send the robbery occur time to the nearby police station and corresponding bank with the message through the GSM. This will prevent the robbery from causing and the person involved in robbery can be easily carried.

BLOCK DIAGRAM AND DESCRIPTION

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IOT Based Energy Meter Reading

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Abstract: The project is about making the energy meter smart by having a continuous automatic communication between the consumer's energy meter and the utility. The energy meter reading is communicated to the utility and to the consumer via internet. NodeMcu onto which the programming (c) is uploaded is used for internet connectivity. Monitoring and keeping tracking of your electricity consumption for verification is a tedious task today since you need to go to meter reading room and take down readings. Well it is important to know if you are charged accordingly so the need is quite certain. Well we automate the system by allowing users to monitor energy meter readings over the internet. Our proposed system uses energy meter with microcontroller system to monitor energy usage using a meter.

The meter is used to monitor units consumed and transmit the units as well as cost charged over the internet using WiFi connection. This allows user to easily check the energy usage along with the cost charged online using a simple web application. Thus the energy meter monitoring system allows user to effectively monitor electricity meter readings and check the billing online with ease.

I. INTRODUCTION

The internet of thing allows object to be sensed and controlled remotely across existing network infrastructure, creating opportunities for more direct integration between the physical world and computer based systems, and resulting in improved efficiency, accuracy and economic benefit.

The increasing generation needs empowered gadgets by wireless technology which includes Bluetooth, Radio Frequency Identification, Embedded sensors and many more. In that IOT technology has grown from its beginning and now presently widely using it. The electricity plays an important role in our life. Now-a-days as the consumers are increasing rapidly it became very hard to handle the electricity requirements. Without electricity it's impossible to survive and also it is important to save the electricity loss. As the generation is increases the consumer's requirements also increasing so in accordance with it the technology improvement is needed. So we developed the system with faster and improved technology i.e. IOT. The electricity also contains some issues like power theft. Power theft is a measure crime and it also directly affects the economy of our country. Transmission, generation and distribution of electricity include the loss of electricity. To avoid the losses we need to monitor the power consumption and losses, so that we can efficiently

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Low Power BIST based Multiplier Design and Simulation using FPGA

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Abstract – The ever increasing applications of integrated circuits in the day-to-day useful electronic gadgets is the driving force for the development of low power designs of configurable hardware designs. High speed and low power are the main parameters that are targeted by modern circuit designers. Among the fastest increasing applications the audio and video signal processing applications are growing at a very high rate. Mobile applications have increased the technological improvements for digital signal processing applications. Multipliers are the very imporant logic operational unit of any processing unit in digital signal processing applications. The speed and performance of multiplier is among the efficiency improvement parameters of any digital hardware design. Another important feature of hardware designs is self-testing ability. This feature provides reliability to the hardware mainly in case of configurable hardware applications. The built-in-self-test (BIST) feature helps in quick diagnosis of the hardware functional authenticity. This paper presents a BIST based implementation of a multiplier. The proposed design is realized using Xilinx Tool using VHDL. A low power Test Pattern Generator (TPG) is involved in the design for self-test design realization.

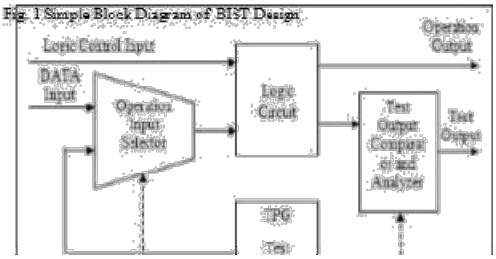
Keywords–Built-In-Self-Test, Test Pattern Generator, Linear Feedback Shift Register, Xilinx, VHDL

1. INTRODUCTION

Nowadays, a configurable hardware design performance can be evaluated using its operational speed and power. Field Programmable Gate Array (FPGA) is among the configurable devices that cope with the desired and promising power and speed based hardware performance. In FPGA the operation execution is based on the switching of the internal path of current through a combination of hardware resource architecture. A hardware based optimization of any design can be achieved by the skill based modification of the operational circuit architecture. A low power system offers the benefits like device portability, long battery life, good performance criteria, etc.

This feature helps the configurable integrated circuit hardware to test itself and in case of hardware fault it helps to re-locate the hardware resource within the integrated circuit. In the self-test operation, hardware is tested for its functional output with the help of a supplementary hardware. A simple block diagram of a BIST based design representation is shown in Fig 1. Here a Logic Circuit is the design that is a functional block of an integrated circuit hardware design. In the normal operation mode it performs the defined logic operation on DATA Input. When it is operated in Self -Test mode, a random sequence of data is generated by Test pattern Generator using control signal by BIST Controller. This test sequence is operated by Logic Circuit and the generated output of the logic operation is compared with the actual output. The comparator output indicates logic high if the output of the logic operation against the test inputs does not match with the actual output. This condition indicates a fault in the logic circuit hardware. In such cases a configurable hardware re-locates the circuit resources within the integrated circuit to avoid the faulty hardware.

Fig. 1 Simple Block Diagram of BIST Design



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Power Line Communication CMOS Receiver Design for UWB Communication

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***Abstract*— As the circuit complexity increases, the number of internal nodes increases proportionally, and individual internal nodes are less accessible due to the limited number of available I/O pins. To address the problem, we proposed power line communications (PLCs) at the IC level, specifically the dual use of power pins and power distribution networks for application/ observation of test data as well as delivery of power. A PLC receiver presented in this paper intends to demonstrate the proof of concept, specifically the transmission of data through power lines. The main design objective of the proposed PLC receiver is the robust operation under variations and drops of the supply voltage rather than high data speed. The PLC receiver is designed and fabricated in CMOS 0.18-μm technology under a supply voltage of 1.8 V. The measurement results show that the receiver can tolerate a voltage drop of up to 0.423 V for a data rate of 10 Mb/s. The power dissipation of the receiver is 3.26 mW under 1.8 V supply, and the core area of the receiver is 74.9 μm × 72.2 μm.**

***Index Terms*— Design-for-testability (DFT), PLC at ICs, PLC receiver, power line communications (PLCs).**

I. INTRODUCTION

WITH each new generation of deep submicrometer VLSI technologies, testing, debugging, and diagnosis of VLSI circuits become more difficult and expensive. In addition to higher circuit complexity for a deeper submicrometer technology, larger process variations, greater interconnection delays relative to transistor switching time, and larger leakage

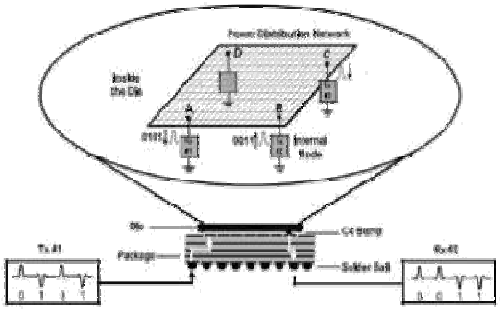

Fig. 1. Proposed conceptual PLC system in an IC environment.

power line communications (PLCs) at the IC level [1]. The PLC at the IC level would be useful for low data rate communications such as scan design, system debugging, and fault diagnosis. The approach also eliminates the need to route a data path from the node to an external data pin. To the best of our knowledge, PLC in an IC environment was exclusively reported in [1] and [21]–[29]. Fig. 1 shows the conceptual PLC system in an IC environment considered for our research.

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Design of High Performance Power Efficient Flip Flops using Transmission Gates

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Abstract— Flip-flop plays a major role in designing a synchronous circuits and memory. In this paper we have shown the comparison of performance for various circuits of flip flops. master-slave flip flops and transmission gates FFs are mostly used to collect the group of data for a storage purpose and the performance includes delay, area minimization and power reduction. The delay can be minimized by transistor sizing and variation of voltage. The proposed circuits are simulated and compared using 90nm and 45nm technology.

Keywords—flip-flops, masterslave, transmission gates, circuit optimization.

I. INTRODUCTION

The main purpose of flip- flops is used as data path structure and allowed for collection of data proceeded by combinational circuits and synchronization operation off level signal [5]. When the critical path occurs in the placement of FF a small data to output delay can be exhibited as well as when the circuit speed is primary concern, the logical effort can be concerned. FF can be simple or clocked, during the past 12 years the development has so much of low power FF have been created. According to actual chip design the convenient FF is mostly used as a preferred flip-flop because it is well balanced in power, performance and cell area [5]. The most popular and simplest FF is transmission gate and many of inverter+ transmission gate. In proposed work the delay can be further decreased by sizing of transistors and variation in voltage.

Timing behavior

Timing behavior if FF can be defined by two parts.

- Data to clock (D-Clk)
- Clock to output (Clk-Q)

The overall timing of a FF can be introduced and sum of the above contribution is affected by the clock duration. The influence of FF timing on pipeline speed performance can be minimized by the parameter data to output [5].

The minimum time between a data change and the trigger edge of clock pulse is defined as *setup time* by assuming the wide clock pulse the output will be guaranteed to change as to become equal to new data value [4].

The minimum time that the data signal must be held constant after the triggering edge of the clock signal [4].

II. PROPOSED WORK

In the proposed work we make further modification to improve the performance of various circuits by varying the values of the size of transistor and voltages. The comparison results show that the proposed work outperforms the traditional one. It shows that by doing the sizing and change of voltage, the delay can be minimized the average power and peak voltage

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Child Safety Wearable Device

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Abstract:

The main objective of our project is to safe guard little children. Now-a-days many children are kidnapped or lost their ways or fell into bore wells. .To avoid this we are building Child wearable safety device which is a device that completely monitors child's location and surrounding temperature , light intensity and humidity . A guardian can know the details of the child's location by his mobile and gets the warning if the child's surrounding temperature , humidity and light intensity is crosses beyond the general optimal values.

I Introduction:

The motivation for our project comes from increasing risks of losing little children lives in different cases such as kidnaps, losing their ways or fell into bore wells . Recently, two children are kidnapped and murdered in New Delhi According to NRCB report kidnap cases are increased by 7.5% today i.e., 82,999 cases are reported. Along with this many kids fell into bore wells and losing their lives. Recently a toddler fell into bore well in Hyderabad. so our idea is to implement preventive measures that are to be done automatically.

In today's world everything can be known to us by using internet. We can solve the problem by using internet,.

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Research Paper

Design and development of bi-directional IoT gateway using ZigBee and Wi-Fi technologies with MQTT protocol

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Abstract

With evolution of the smart things, to acquire data, gateways play a major role in interconnecting with various sensor nodes. Using different wireless protocols and standards with sensor nodes, gateway can transform information into a unique format that transmits into the cloud for further use. Which accepts the commands from external users in the remote location through a personal computer or a smartphone? The proposed gateway has its added advantages; (i) ZigBee and Wi-Fi wireless technologies connectivity is enabled, (ii) transforms the information into required protocol format, (iii) uses a light weighted MQTT protocol in transmitting and receiving environment, (iv) It provides the storage and analyzed data and (v) the sensor values can be observed and the devices can be controlled by a smartphone from remote location. Here we demonstrate the proof of concept for controlling the smart home appliances. This also represents a design and implementation of Bi-Directional IoT gateway using ZigBee and Wi-Fi technologies with MQTT protocol.

Keywords: *Gateway; IoT; ZigBee; Wi-Fi; MQTT Protocol.*

1. Introduction

In the recent era IoT is emerging rapidly throughout our life by finding its path to improve the quality of life by connecting many technologies, applications to the physical objects around us by automating the things. [1] Enormous attention has been paid towards digitization of the physical world such as home, offices, factories, vehicle's, cities etc. [2] [3] [21] The research made by IDC confirms IoT solutions in increasingly recognized as transformative to consumers, business, governments each of them will innovates, experiences and operates in the world, where end user will fell the tangible benefits of IoT. [4] [20] All the physical objects relate to sensing elements enabled by wireless sensor network(WSN) technologies in our daily life. [5] WSN consists of different wireless technologies such as Bluetooth (over IEEE 802.15.1), ZigBee (over IEEE 802.15.4), Wi-Fi (over IEEE 802.11) etc., every protocol has got it advantages and disadvantages based on speed, power and transmission capacity. [6] The gateway should can receive the data from all the sensor received from different nodes. To transmit the data we use a lighted weighted protocol MQTT [18].

2. General system architecture

General IoT gateways consists of different protocols for transferring the data to the cloud which received from the sensor nodes. Here the main objective is to implement a Bi-Directional gateway to avoid interoperability by transforming the information. A gateway is proposed with the protocol ZigBee and GPRS facilitating the data transmission. [12] A similar gateway was proposed with three communication protocols [13]. Many Authors as proposed to transmit the data to local and network and to cloud [14] [15].

According to the literature available the gateways for interconnection of wireless devices are of unidirectional which takes the data and stores in the cloud. The efforts focus on many domains such as smart homes, telemetry, smart industries, and soon.

INTERFERENCE ALIGNMENT SCHEME FOR A MIMO USERS USING MULTIUSER PRECODING

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ABSTRACT

This paper proposes an interference alignment scheme for a multiple input multiple output (MIMO) users using multiuser precoding. Firstly we explain the multiple access channel (MAC) - broadcast channel (BC) duality removes the ICI using interference alignment while maximizes the total capacity of the corresponding cell, but the interference alignment is not perform explicitly to all users and the number of transmit antennas required is generally higher than the multi-user precoding. So, we propose a new approach using multi-user precoding to perform maximization capacity of users in each cell and maximize the data rate. The experimental results shows that the performance of sum rate with different SNR values.

KEYWORDS —*MIMO, cellular network, interference alignment (IA), beam forming,Interfering broadcast channels(IFBC)*

I. INTRODUCTION

The fundamental concept of interference alignment is to align the interference signals in a particular subspace at each receiver so that an interference- free orthogonal subspace can be solely allocated for data transmission. Dirty paper coding is a technique that can pre-subtract interference at the transmitter. This requires the transmitted signals to be a result of successive encoding of information intended for the different users [1,2,3,4]. In pioneering work by Caire and Shamai[5], a set of achievable rates (the achievable region) for the MIMO BC was obtained by applying the "dirty paper" result[6] at the transmitter (or alternatively, coding for non causally known interference). It was also shown in[5] that the sum rate MIMO BC capacity equals the maximum sum rate of this achievable region for the two-user BC with an arbitrary number of transmit antennas (t>=1) and one receive antenna at each receiver (r1=r2=1). However, computing this region is extremely complex and the approach used in[5], to prove the optimality of dirty paper coding for sum rate does not appear to work for the more general class of channels (i.e., an arbitrary number of users and receive antennas) which we consider.

Multi-cell and multi-user downlink transmission schemes have been actively discussed for future generation cellular networks. In[7], the idea is to maximize the network capacity by efficiently mitigating interference. The aligning interferences onto multi-dimensional subspace (in-stead of one dimension) for simultaneous alignments at multiple non-intended base stations (BS). In the multi-cell MIMO Gaussian interfering broadcast channels (MIMO-IFBC), each BS supports multiple users within its cell. Therefore there exist two kinds of interference namely inter-user interference (IUI) and inter-cell interference (ICI). To mitigate both IUI and ICI, authors in[8] proposed a zero-forcing (ZF) scheme for the IFBC with the aim of maximizing the sum rate performance in a multiple-input single-output (MISO) scenario. In[9], the ZF scheme for the MIMO-IFBC was extended to the case of multiple receiver antennas. Authors provided a precise expression of the spatial multiplexing gain for two mutually interfering MIMO broadcast

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I. INTRODUCTION

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Smart Mirror

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Abstract: There is no end of objects that could be made "smarter," some being more suited to this than others. Mirrors, for example,provide a large surface ideal for displaying information and interacting with. This paper depicts the design and development of a smart mirror that represents an elegantinterface for glancing information for multiple people in ahome environment.A smart mirror is basically a mirror with a screen behind it. That screen can be an Android tablet or a computer monitor. Naturally, a monitor will make for a larger mirror. It's also a great way to repurpose an old LCD monitor.The mirror will possess the ability to display date, time, the current weather conditions and outside temperature, reminders, to-do lists. These features of the mirror will be scraped from the internet and implemented using the raspberry pi board. The pi board isprogrammed with the Rasphian operating system which is part of Linux. The mirror will also be lightweight, adjustable, durable and aesthetic.

Keywords: *Rasphian Operating System,Two way mirror,*

Introduction

This project has beendeveloped within the context of a time where every day we see more and more connected devices. The Internet transformed our lives by connecting us more easily to information and other people in the virtual world. Mobile phones then became smartphones and since then this concept has erupted and morphed into the Internet of Things, things which connect us to everyday objects. There are no end of objects that could be made "smarter", some being more suited to this than others. Mirrors, for example, provide a large surface ideal for displaying information .

The purpose of this project was to design and build what is commonly called a Smart Mirror, or a household mirror with an integrated digital display. The guiding principle of this endeavor was to produce a product that is simple to use, attractive to look at, and that incorporates several visual applications to make daily life more efficient.We look

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A Modified SRAM Based Low Power Memory Design

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Abstract— The present world aims in designing low power devices due to the rampant usage of portable battery powered gadgets. The proposed static random access memory (SRAM) design furnishes an approach towards curtailing the hold power dissipation. The design uses a tail transistor which aids in limiting the short circuit power dissipation by disrupting the direct connection between supply voltage and ground. This tail transistor also brings down the subthreshold current by providing stacking effect, which subsequently reduces hold power dissipation. A supply voltage of 0.8V is used which makes it eligible for low power applications. The designed SRAM cell has single ended write and read operations and is simulated using Cadence 45nm CMOS technology. Statistical and corner analysis is also performed for the proposed design for its robustness. The proposed SRAM cell has a hold power dissipation of 4.74154pW which is much less as compared to the standard 6T SRAM cell.

Keywords— hold power dissipation, SRAM, stacking effect, subthreshold current.

I. Introduction

Maximal electronic gadgets used today are battery powered; hence, power consumption becomes a critical issue. To expedite the operations, caches are provided on the same chip along with the processors. These caches contribute a lot towards the total power dissipation of the chip. SRAM is a main part of the cache, hence the reduction in its power consumption has always been researched [2]. The supply voltage is scaled in order to keep the dynamic power consumption under control [1]. This calls for the reduction in threshold voltage to maintain high drive current and performance [1]. The leakage currents increase exponentially and would contribute to about 50% of the total power dissipation in next generation processors for technologies below 100nm, as predicted by the International Roadmap for Semiconductors (ITRS) [8]. The constituents of leakage current are gate leakage current (I_G), junction leakage current (I_{JN}), current due to punch through (I_{PT}), subthreshold leakage current (I_{SUB}) etc.

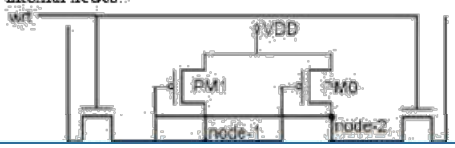
9T etc. SRAM cells [4]. The additional transistors consume more area which is a major concern presently.

In this work, the number of transistors used is the same as that in the standard 6T SRAM cell, however with a new circuit design to enable low power dissipation. The NMOS transistor used for the pull down mechanism is eliminated from one node and an additional NMOS transistor, called the tail transistor is appended to the inverter base. During transition, this tail transistor impedes the direct path from VDD to ground which curtails the short circuit power dissipation and also the subthreshold leakage. In addition to this, separate read and write ports are provided so that during read operation any disturbance in bitline does not influence the stored data, hence preventing data corruption. Ditline has the same purpose while the bitbar line is replaced by readline which gives read access to the internal node.

The remaining paper is constructed as follows. Section II illustrates the standard 6T cell and the low power (LP10T) cell under the heading prior work. Section III describes the proposed design. Section IV presents the simulation results and comparison of design metrics of the proposed design with the conventional 6T and LP10T. Finally, Section V summarizes the paper.

II. Prior Work

The conventional 6T SRAM cell consists of two cross-coupled inverters as illustrated in Fig.1. These cross coupled inverters PM0-NM0 and PM1-NM1, are used to store the data and ensure that the internal nodes of the cell always contain complementary values. Transistors NM2 and NM3 are the pass-gate transistors used to access the internal nodes.



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DESIGN AND IMPLIMENTATION OF ANTI-THEFT ATM

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ABSTRACT

Automated Teller Machines ATMs are used for different ways, mostly cash withdrawals. ATM users utilize many services on ATM and they will do some billions of transactions. Meanwhile robberies occurring in the ATMs are also high with the lack of security. The main objective of our study is to minimize the robberies occurring in the ATM's. In order to overcome this problem we have come up with a project that uses Raspberry Pi. The hardware components include Web cam to continuously monitor the stipulated area, a motor driver and a motor to open and shut down the doors when a burglar is detected, buzzer to alert the surrounding people and shops. Any person who wants to get into the ATM should provide a valid card near the doors. When the card is inserted, if it is valid the doors get opened else not. If burglars or thief's try to destroy and theft the ATM and once if the vibration is sensed, then information is passed to Raspberry Pi. Then to close the door of ATM the DC Motor is used. Thereby alerting the nearby public and bank authorities the buzzer also rings while the camera continuously monitors the whole ATM. The proposed method or system ensures to develop the advanced ATM anti-theft system. In this project a cost effective and an advance approach for ATM security has been proposed. It can be installed at some hidden place in the ATM so that it cannot be approached or destroyed by thieves. From existing ATM intrusion and theft control systems, this proposed system is distinctive in many ways. In future this can also be extended by sending an SMS alert to the nearest Police Station and also a relay can be used to trigger the gas inside the ATM to make the thief unconscious.

KEYWORDS: Vibration Sensor, Motor, Relay, Rfid, Buzzer, Gsm, Camera, And Raspberry Pi.

INTRODUCTION

As we daily see in news as many robberies are happening around India. ATM users utilize many services on ATM and they will do some billions of transactions. So due to the lack of security these robberies have been notifying every day in different places so, these incidents made me to think about having a high surveillance security system by using the raspberry pi. The proposed system uses the motion sensor to detect the unauthorized access and entry in to the premises , as the motion detect camera takes the real time image & send it to the user for analyzing further so that user can take the necessary actions. for his process we use different components like dc motor which is used to shut the door , the USB Camera captures the image and sends it to the USB port of the Raspberry Pi board.

sound starts from the buzzer. To close the door of ATM DC Motor is used. A relay will be triggered to leak the gas inside the ATM to bring the thief or burglar into unconscious stage. Camera is always in processing and will send video continuously to the PC and it will be saved in computer. To capture the robber occur time, RTC is used and that will send the robbery occur time to the nearby police station and corresponding bank with the message through the GSM. This will prevent the robbery from causing and the person involved in robbery can be easily carried.

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IoT Based Smart System for Avoidance of Fire Accidents on Running Buses

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Abstract

Now-a-days, fire accidents are occurring very frequently in public transport system which causes the loss of most valuable human lives and the government property. There are a number of methods to avoid fire accidents and to reduce the severity of loss in case of fire accidents in public transport system. But the damage is catastrophic as a rescue service could not reach at right time due to improper communication. So, we must further avoid and reduce the loss caused by fire accidents in buses. The main objective of our project is to detect the fire accidents and to inform the nearest respective authorities who can reach faster. Fire sensors are used to detect the fire when the crash or accidents caused. All the sensors are connected to a central controller whenever the fire is detected the controller activates the water sprinkles, sounds the alarms. A GPS module is integrated to the system through that the longitude and latitude of the location is send to the fire department authorities. Node MCU is used as the central controller in the proposed system. Final the data is send to the cloud through it will be available to all the govt. departments. Things speak cloud is used in the prototype.

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IoT Enabled Solar Power Monitoring System

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Abstract

This paper proposes a solution and method to monitor the dust accumulated on the solar panels to get the maximum power from for effective utilization. Always the output power of the solar panel depends on the radiation reached to the solar cell. The system also displays the malfunctioned solar panels lists and whether the electrical appliance is working directly on the solar panels or the loads is on the battery. All the panels are connected, and sensors are directly connected to the central controller which monitor the panels and loads. By incorporating the IoT technology the data received from the panels and appliance are send to the cloud from through internet for the future use as well the remote user can monitor the parameters of the connected devices. The user can view the current, previous, and average parameters such as voltage, current, temperature and sun light using a graphical user interface GUI. The controller is programmed with predefined conditions with user alerts when it falls below the specified conditions. Node MCU is used as a controller.

LOW POWER VLSI DESIGN FOR PROPOSED DUAL ADAPTIVE FILTER

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ABSTRACT: **Adaptive filters are the core functional block in the digital signal processing. Adaptive filter is basically used to reduce the power consumption. In this paper an updated adaptive filter is proposed which is used to calculate the inner product by shifting and accumulating of partial products. These are stored in look up table (LUT). The area is reduced as both convolution operation and correlation operation is performed by using the same LUT. The distributed arithmetic based design uses a look up table sharing for computation of the weight increment terms and filter outputs. It requires less number of LUT access for every output than the existing structure, for higher block size. In the design, number of adders does not increase with filter order. The advantage of the structure is reduction in its delay and area delay product (ADP). The adaptive filter will be multiplier less, which reduces the complexity of the circuit.**

KEY WORDS: Adaptive filters, Look up Table (LUT), VLSI, DSP

I.INTRODUCTION

With the latest improvements in the area of portable digital applications (PDA's) and wireless communication, power consumption analysis and reduction techniques have become as significant concern as speed, cost, and reliability in the circuit design level. Power consumption factors, which determine the amount of dissipated energy and heat, have a great influence on critical design issues such as: packaging and cooling requirements, power supply lines and capacity, and the number of circuits that can be integrated in a chip. The power consumption in a digital CMOS circuit consists of dynamic power consumption, static power consumption, and short-Dynamic power, which is used in charging node capacitances. As we know that in the areas of system on chip and VLSI designs, the low power Circuit designs is an important issue. As the dimensions of transistors are shrunk into the deep sub-micron region, the effect of static leakage currents becomes more significant. As the dimensions of transistors are shrunk into the deep sub-micron region, the effect of static leakage Currents becomes more significant. This aspect of power consumption can be Controlled to some extent by novel design, but is predominantly handled by process Engineering. Two areas that have been the focus of active research are asynchronous logic and adiabatic logic.

Scaling of transistor geometries have led to integration of millions of devices in a very small space, thus driving realization of complex applications on hardware and supporting high speed applications. This synergy has revolutionized not only electronics, but also industry at large. In order to reduce power, many researchers, designers and engineers have come up with many innovative techniques and have patented their ideas. Nevertheless, designers will need to budget and plan for power dissipation as a factor nearly as important as performance and perhaps more important than area. Low power techniques have been successfully adopted and implemented in designing complex VLSI circuits. As the demand for faster, low cost and reliable products that operate

VLSI design of a novel Area efficient FIR Filter design using RoBA multiplier

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Abstract: The increasing complexity of the DSP systems demanding higher computational performance in its architecture. But the traditional DSP arithmetic has limits in terms of speed of calculations. More over in some applications speed is more important than accuracy. In order to further enhance performance, approximate arithmetic circuits are designed with some loss of accuracy to reduce energy consumption and increase the speed. These approximate circuits have been considered for error-tolerant applications. In this paper, we propose an FIR filter based on Rounding Based Approximate (ROBA) Multiplier. In this multiplier the operands are rounded to the nearest exponent of two. This approximation will lead to simplification of multiplication operation thus reducing area and increasing speed. As the multiplier is the slowest element in the system, it will affect the performance of the overall FIR filter. The proposed ROBA multiplier based FIR filter was compared with HAAM and DRUM multiplier based FIR filters. The results shown significant reduction in the power and area of the FIR filter with proportional improvement in the multiplier speed. The Filter was implemented and tested

I. Introduction

In the field of electronic industry digital filters are used extensively. The noise ranges gradually increases by using analog filters for better noise performance can be obtained by using digital filters compared to analog filters. At every intermediate step in digital filter transformation able to perform noiseless mathematical operations. Our design includes the optimization of bit width and hardware resources without any impact on the frequency response and output signal precision. Addition (or subtraction), Multiplication (normally of a signal by a constant)Time Delay i.e. delaying a digital signal by one or more sample periods are three basic mathematical operations used in digital filters. The coefficients are multiplied by fixed-point constants using additions, subtractions and shifts in a multiplier block.

In VLSI Signal Processing two types of digital filters are most widely used one is FIR (finite impulse response)and the other is IIR(infinite impulse response).FIR as indicates that the impulses are finite in this filter and phase is kept linear in order to noise distortions and no feedback is used for such a filters. As compared to IIR, FIR is very simple to design.

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Burst rate based optimized IO queue management for improved performance in Optical Burst Switching Networks

Publisher: IEEE

5 Author(s) L. Bharathi ; N. Sangeetha Priya ; B. S. Sathish ; A. Ranganayakulu ; S. Jagan Mohan Rao View All Authors

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Abstract

Document Sections

I. INTRODUCTION

II. RELATED WORKS

III. BURST RATE BASED OPTIMIZED IO QUEUE MANAGEMENT (DBRQM)

IV. RESULTS AND DISCUSSION

V. CONCLUSION

Abstract:
The problem on loss free burst transmission has been well studied in Burst Switching Networks (BSN). There are number of approaches discussed for the performance development, but suffers to achieve higher performance. To overcome the issue, an burst rate based dynamic IO Queue management scheme has been presented. The method monitors the incoming burst traffic from more number of nodes and according to the rate of burst coming, the input output queue systems has been modified for their size. The burst in the queue system has been routed through available routes whenever identified. The method is capable of triggering the IO queue systems up and down according to the burst traffic. The proposed method improves the performance of burst switching networks.

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IMPLEMENTATION OF LOW POWER TRANSPOSED FIR FILTER USING CLOCK GATING TECHNIQUE

1. Dr. A.Ranganayakulu, Professor, ECE department, RECC, ELURU
2. Dr. Dola Sanjay, Professor & Principal, RECC, ELURU
3. Dr.B. S. Satish, Professor, ECE department, RECC, ELURU
4. Dr. Jagan Mohan Rao, Professor & HOD, ECE department, RECC, ELURU

ABSTRACT

The power minimization techniques have become the major concern in VLSI design. These are very crucial for enabling several battery powered applications. Many power optimization techniques at architecture level and circuit level were implemented to achieve lower power in past two decades. The paper developed here describes a novel method of clock gating for power minimization technique in the area of DSP applications. The information carrying 2's complement signal is partitioned as multiple words. A method for signal range comparison based clock gating at partitioned word level is developed. The generic implementation of VHDL model for transposed FIR architecture is developed and the work shows good direction of power saving and can be suitable for signal processing applications.

Among the FIR architectures Transposed FIR filter is more reliable for implementation in VLSI. With proposed clock gating method the transposed FIR architecture is designed and observed more power saving from non clock gating design of transposed FIR filter.

KEY WORDS: Transposed FIR filter, clock gating

1. INTRODUCTION

VLSI circuits are characterized for optimized power, speed, area, and cost apart from their functionality. CMOS technology has become default choice for the design of low power VLSI circuits. There are two types of power consumption in CMOS circuits. One is static power and the other is dynamic power. Static power is due to leakage current where as dynamic power is due to transient or leakage power consumption ($P_{transient}$) & capacitive load power (P_{cap}) consumption.

Different power dissipations are considered depending on the design problems. Suppose when studying the supply line sizing, the P_{peak} i.e., peak power is considered with respect to addressing cooling or battery requirements the average power dissipation p_{av} is considered.

Total power consumption in the circuit is given by

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Advanced Design of Wireless Communication Network for Building Monitoring

Publisher: IEEE

5 Author(s) B. S. Sathish ; P Ganesan ; L. Bharathi ; V. Suryanarayana ; A. Ranganayakulu View All Authors

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Abstract

Document Sections

I. Introduction

II. RELATED WORK

III. RESULTS AND DISCUSSION

IV. EXPERIMENTAL SETUP

Authors

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Abstract:
A wireless sensor system be projected to examine construction headed for appraise shaking smash up, the sensor preterit exploit routine built-up capacitive micro electro mechanical structure strain and 3D acceleration feeler and a low power state formally claim precise microcircuit designed for exciting battery life span up and about to 12 years. The strain sensors escalate at the base of the structure to subsist the arrangement unite plastic midpoint opening of the construction while an earthquake happens. They live sporadically or on stipulate preliminary the base station. The accelerometers square measure mounted at each floor of the formation to live the unstable response of the building throughout associate degree earthquake.

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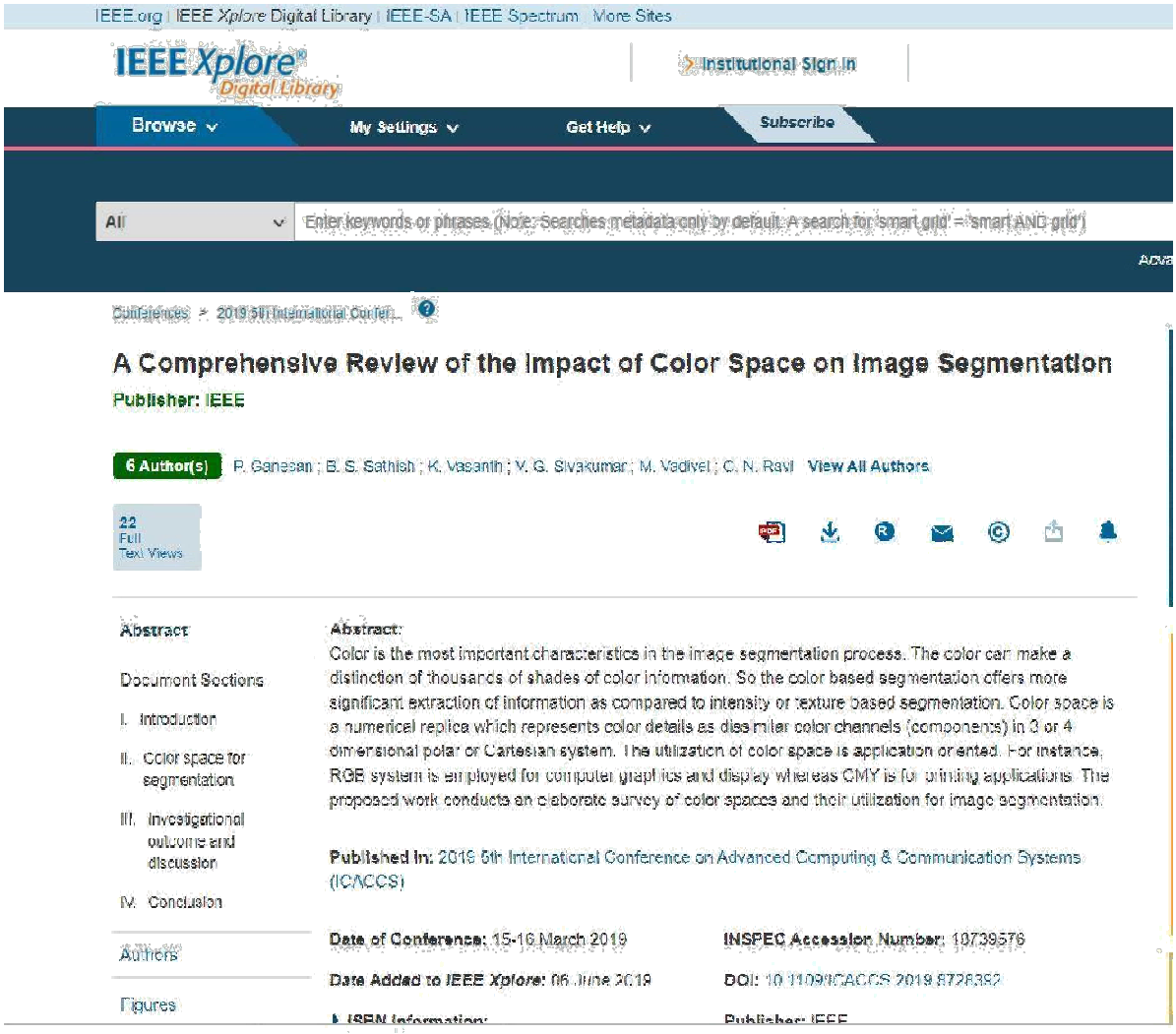
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A Comprehensive Review of the Impact of Color Space on Image Segmentation
Publisher: IEEE
6 Author(s)
P. Ganesan ; B. S. Sathish ; K. Vasanth ; V. G. Sivakumar ; M. Vadivel ; C. N. Ravi
View All Authors
22
Full
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Abstract
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I. Introduction
II. Color space for segmentation
III. Investigational outcome and discussion
IV. Conclusion
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Abstract:
Color is the most important characteristics in the image segmentation process. The color can make a distinction of thousands of shades of color information. So the color based segmentation offers more significant extraction of information as compared to intensity or texture based segmentation. Color space is a numerical replica which represents color details as dissimilar color channels (components) in 3 or 4 dimensional polar or Cartesian system. The utilization of color space is application oriented. For instance, RGB system is employed for computer graphics and display whereas CMY is for printing applications. The proposed work conducts an elaborate survey of color spaces and their utilization for image segmentation.
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Advanced Automatic Detection of Cracks in Railway Tracks

Publisher: IEEE

5 Author(s) B. S. Sathish ; P. Ganesan ; A. Ranganayakulu ; Sanjay S. Dola ; S. Jagan Mohan Rao **View All Authors**

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Abstract

Document Sections

I. Introduction

II. Related work

III. Results and discussion

IV. EXPERIMENTAL SETUP

Authors

Figures

References

Abstract:
In India rail transportation engage a major pose in endow with the essential transportation to maintain necessities of a hastily emergent financial system. At present, India possesses the fourth major railway net in the globe. The majority of the viable transportation conceded out by the railway system and consequently, any difficulty in the equal has the capacity to induce major damage to the financial system. A method for evade trains from devastating and crash with threat on railways is making known. According to the improvement, the techniques comprise a safety vehicle that travels along a railway a head of a train failure follow on in mishap generally get extensive means exposure still when the railway is not at fault and give to rail transport, among the unaware public, an unjustified image of inefficiency often fuelling calls for immediate reforms. This paper is intended at serving the railway control apprehensive to make stronger and expand the surveyor equipment vital through recent protection supervision.

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Novel Weather Data Analysis Using Hadoop and MapReduce – A Case Study

Publisher: IEEE

4 Author(s) V. Suryanarayana ; B.S. Sathish ; A. Ranganayakulu ; P. Ganesan View All Authors

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Abstract

Document Sections

I. Introduction

II. RELATED WORK

III. RESULTS AND DISCUSSION

IV. CONCLUSION

Authors

Figures

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Abstract:
Nowadays analyzing data of very large amount has become a big challenge. Data could be medical, scientific, climatically, meteorological, marketing or financial. Techniques of Data mining are used for extraction of unpledged material from large data set. Weather forecasting can be preferred to help many important sectors which are affected by climate like agriculture, air traffic, water resources, and tourism. Weather forecasting is an area of meteorology which is performed by accumulating data from various sources related to the present condition of the weather like rainfall, temperate, wind, and fog. It is the main challenging task for the scientists. Hadoop and MapReduce considered as the important techniques used to analyze a large data set. This paper develops a system that adopts the historical weather data of a region it applies the MapReduce and Hadoop methods to analyze this data.

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Security Aware Trusted Cluster Based Routing Protocol for Wireless Body Sensor Networks

Nachimuthu Sangeetha Priya[1] · R. Sasikala[2] · Srinivasan Alavandar[3] · L. Bharathi[4]

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Design and development of bi-directional IoT gateway using ZigBee and Wi-Fi technologies with MQTT protocol
P. Gopi Krishna [1]*, K. Sreenivasa Ravi [2], K Hari Kishore [3], K KrishnaVeni [4], K. N. Siva Rao [4], R. D. Prasad [4]
[1] Research Scholar, Departement of ECE, Koneru Lakzhamiah Education Foundation, Vaddeswaram, Guntur, A.P., India 522502
[2] Professor, Departement of ECM, Koneru Lakzhamiah Education Foundation, Vaddeswaram, Guntur, A.P., India

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COMPACT LOG PERIODIC DIPOLE ARRAY ANTENNA FOR MULTIBAND APPLICATIONS USING S-FRACTAL CURVE

CH Murali Krishna[1], P James Vijay[2], M Ravi[3]

[1]*Assistant Professor, Department of ECE, Ramachandra College of Engineering, Andhra Pradesh, India*
[2]*Assistant Professor, Department of ECE, S.R.K.R Engineering College, Andhra Pradesh, India*
[3]*Assistant Professor, Department of ECE, Ramachandra College of Engineering, Andhra Pradesh, India*

Abstract

Log periodic dipole array antennas are introduced for the development of broadband applications. In this paper, a low return loss S-shape fractal implemented on the printed log periodic dipole antenna is presented. This proposed design consists of log periodic slots in the ground plane and their self-complimentary structure is on the micro strip layer. This design offers multiband operation with fair values of return loss, VSWR, gain and impedance bandwidth in the entire range of frequency operation. The proposed S-shape LPDA design resonates at 2.54GHz, 2.90GHz, 3.70GHz, 4.28GHz, 4.98GHz, 5.52GHz, 6.42GHz, 7.48GHz, 8.12GHz, 8.82GHz and 9.40GHz for WiFi, WiMAX, WLAN, S-, C- and X-band applications with broad bandwidth.

Keywords: *Fractal Structure, Log Periodic Dipole Array, Multiband, Broad Bandwidth, Radiation Efficiency.*

***

1. INTRODUCTION

Broadband wireless technologies have seen a rapid growth by the successful development of wireless applications like Bluetooth, WiFi, WLAN and WiMAX etc. The Federal Communication Commission (FCC) allotted a frequency band of 3.1-10.6GHz as a commercial Ultra-wide band (UWB) system.

Printed antennas are mostly used due to the ease of integration with microwave circuits and fabrication. A multiband antenna is an emerging device in many commercial applications which provides both transmission and reception at multiple frequencies. This antenna should be able to control the desired frequencies, impedance bandwidths, gain & polarizations.

Log periodic dipole array (LPDA) antennas are well known from1950's and their geometries are based on the rules of Isbell & Carrel [1-3]. In the past years, a number of Printed LPDAs have been proposed and many techniques were implemented to realize UWB characteristics. In[4], printed Log-periodic dipole array was designed using Arlon AD250 substrate with dielectric constant=2.5 and thickness=0.51mm over the operating range 4.18GHz and

To achieve the multiband resonances in the antenna design, several methods are available. There are many examples like slots cut in the design, defected ground structures (DGS) and development of fractals etc. From many literature surveys, Koch fractal design [7-9], U-slot[10] and slots etched in the ground[11] are designed to obtain multiband resonances.

The primary focus of this paper is on low power wireless application bands. The dipole element can be redesigned into S-shape like a construction of Giuseppe peano fractal [12]. By altering this design, the characteristics of UWB-PLPDA antenna have been converted to those of multiband PLPDA antenna.

2. ANTENNA DESIGN METHODOLOGY

Log periodic arrays consists radiating dipole elements arranged in Log-periodic manner. The frequency scaled logarithmically, there is only one region is radiating and is being shifted due to by varying the frequencies. The dimensions of the long and short dipole elements will achieve the operating bandwidth and another parameter is relative spacing or spacing factor (σ), chosen from the directivity (D) and scaling factor (τ) graph. In this array,

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CH Murali Krishna[1], P James Vijay[2], M Ravi[3]

[1]*Assistant Professor, Department of ECE, Ramachandra College of Engineering, Andhra Pradesh, India*
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A Novel Rectangular Array Antenna Design Using Proximity Coupled for Gain Enhanced Characteristics

[1]CH MURALI KRISHNA, [2]NVK MAHA LAKSHMI, [3]T LAKSHMI PRASANNA
[1,2,3] Assistant professor, Department of ECE, Ramachandra College of Engineering, Eluru, India, 534007

Abstract — A novel rectangular microstrip patch is designed using proximity coupled feeding technique for wireless applications. In this paper, the proposed structure is designed at 5.2GHz and compares the performances of single element, 2-element and 4-element at same operating frequency. This antenna array has been designed, simulated and analysed on FR4 epoxy with dielectric constant 4.4 by which return loss, VSWR, gain, directivity and radiation pattern are computed. The main aspect of this paper is to design a high directivity antenna with high gain which covers broadband to cover C-band applications such as WiMAX, long distance radio telecommunications and satellite communications.

Keywords –**Microstrip array, Proximity coupled fed, series fed, Corporate fed, Gain, Efficiency.**

I. INTRODUCTION

In day- to-day life, the priority of wireless communication technology grows proportionally with our future generations. The heart of wireless communication systems is Antenna. Without the device antenna, there is no transfer or reception of data. Micro strip antennas place an essential role in today's research because of its crucial characteristic like narrowband as well as broadband. Micro strip patch antennas are widely used for antenna design due to its low cost, light weight and ease of fabrication [1-3]. The predictable bandwidth of micro strip antenna is in between 1% to 5%. Patch antennas are more required due to its low size in Bio-medical applications. There are many techniques for enhancing the gain such as defected ground structures [4-6], resonance gain methods [7], layers of dielectric are stacked above the patch [8-9] etc., To emphasize the gain of an antenna, it is very essential to control or suppress an undesirable wave. The analytical solutions for a metallic bar on a ground plane are explained in [10].

In this article, rectangular microstrip array designed using proximity coupled technique on FR4-epoxy glassy substrate material with their dielectric constant (ε_r) = 4.4 and height (h) = 0.159cm. This paper organized into five sections. Section 1 describes about the introduction. Section 2 explains the proposed design methodology and its parameters. Section 3 discusses about the simulation results and its performance comparison table. Section 4 concludes with conclusion. Section 5 describes about the acknowledgement and Section 6 mentions references.

II. ANTENNA DESIGN METHODOLOGY

Substrate selection is the main aspect in the design of microstrip patch antennas. Dielectric constant and thickness of substrate plays a vital role in the cross-polarization characteristics. Symmetrical radiation pattern obtained with small cross polarization the dielectric constant is smaller. If it increases then the radiation pattern deteriorates. The impedance bandwidth of the microstrip patch antenna is proportional with the substrate thickness [11].

Compared to all the feeding techniques, Proximity coupled fed has more advantages such as to reduce the harmonic radiation and it eliminates spurious radiation and provides very high bandwidth because of its design thickness. Proximity coupled fed techniques is also called as Electromagnetic coupling technique. The feed line is sandwitched between the two dielectric substrates. The ground plane placed at the bottom of the down substrate and radiating patch is placed on the top of the upper substrate. The dielectric constant of top substrate is lower compared to bottom substrate. In this design both the substrate materials are FR4-epoxy but their dielectric constants are $\varepsilon_{r_1} = 3.4$ for top and $\varepsilon_{r_2} = 4.4$ for bottom substrates respectively. The major problem with this feeding technique is difficult to fabricate because of its structure alignment.

A 50Ω CPW-FED RHOMBUS SHAPED PATCH ANTENNA USING RIGHTANGLED ISOSCELES TRIANGLE FRACTAL

A Multiband Slotted Log Periodic Dipole Array

Yet To Publish

Models for Integration of Renewable Energy Sources for Residential Low Power Applications

PRATHAP THANIKONDA [#1], SUBRAMANYA SARMA S [*2]

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Abstract— Renewable energy sources (RES) have emerged as an alternative source of energy generation and an effective replacement for conventional fossil fuel based power generation systems. Immense development has been made in renewable energy fields and methods to harvest it. To replace conventional power generation system, these renewable energy resources must be reliable, sustainable, stable, and efficient. But these resources have their own individual distinguished characteristics. Due to intermittent nature of renewable energy resources, the uninterrupted power availability cannot be guaranteed especially for residential consumers. Handling and integration of such diversified renewable power sources is not a trivial process. It requires high degree of efficiency in power extraction, transformation, and utilization. These objectives can only be achieved with the use of highly efficient, efficient, reliable, secure and cost-effective power electronic interface. This research work presents various models for integration of renewable energy sources to meet the requirements of off-grid connected residential low power applications.

Keywords— Green technologies, Residential loads, Solar PV system, Wind Turbine Generation, Fuel Cell, Energy Storage.

I. INTRODUCTION

Energy is one of the important and essential inputs for industrialization and economic development. Fossil fuels are the major resources and play a vital role to supply global energy demand. However, fossil fuel reserves are limited, and usage of fossil fuel sources has negative environmental and economic impacts. Renewable energy resources can be defined as energy resources that are replaced periodically by natural processes and are practically inexhaustible so that their reserves are not depleted when used. Renewable energy is also called as clean energy or green energy because it does not pollute the environment in the manner that non-renewable energy resources do. All forms of renewable energies are derived directly or indirectly from sun's energy and hence, renewable energy can be termed as infinite energy [3].

A. Disadvantage of using Non-Renewable energy sources

- The Non-renewable sources of energy those are using today are limited and are bound to exhaust some day
- The speed at which such resources are being utilized can have serious environmental changes.
- Non-renewable sources release toxic gases in the air when burnt which are the major cause for global warming.
- Since these sources are going to exhaust soon, prices of these sources are soaring day by day.
-

Thus there is a great need for electric power which has to be produced in a clean way that is through the Renewable energy sources like solar, wind, tidal, geothermal, biomass energy sources. These resources are very cheap and are abundant in nature.

B. Advantages of Renewable Energy Sources

- The sun, wind, geothermal, ocean energy are available in the abundant quantity and free to use.
- Renewable sources have low carbon emissions, therefore they are considered as green and environment friendly.
- Renewable sources help in stimulating the economy and creating job opportunities.
- No need to rely on any other countries for the supply of renewable sources.
- Renewable sources can cost less than consuming the local electrical supply. So availing renewable sources can cut electricity bills.
- Various tax incentives in the form of tax waivers, credit deductions are available for individuals and businesses who wish to go green.

A VOLTAGE-CONTROLLED DG UNIT-BASED DAMPING METHOD FOR MICRO GRID

[1] Dr. G Kishor Babu, [2] Prathap Thankonda, [3] VNSR Murthy
[1] Professor, [2] Assistant Professor, [3] Assistant Professor
[1,2&3] Department of Electrical and Electronics Engineering,
[1,2&3] Ramachandra College of Engineering, Vatluru, Eluru-534007, India.

Abstract: *Islanded operation, due to the effects of mismatched line impedance, the reactive power could not be shared accurately with the conventional droop method. To improve the reactive power sharing accuracy, this paper proposes an improved droop control method. The proposed method mainly includes two important operations: error reduction operation and voltage recovery operation. The sharing accuracy is improved by the sharing error reduction operation, which is activated by the low-bandwidth synchronization signals. However, the error reduction operation will result in a decrease in output voltage amplitude.*

Therefore, the voltage recovery operation is proposed to compensate the decrease. The needed communication in this method is very simple, and the plug-and-play is reserved. Simulations and experimental results show that the improved droop controller can share load active and reactive power, enhance the power quality of the micro grid, and also have good dynamic performance.

IndexTerms - Distributed Generation (DG), Micro Grid, Maximum Power Point (MPP), Voltage-controlled method, LCL filter

I. INTRODUCTION

The increasing application of nonlinear loads can led to significant harmonic pollution in a power distribution system. The harmonic distortion may excite complex resonances, especially in power systems with underground cables or subsea cables. In detail, these cables with nontrivial parasite shunt capacitance can appearance an *LC* ladder network to intensify resonances. In arrange to mitigate structure resonances, damping resistors otherwise passive filters can be located in the distribution networks [1,2]. Nevertheless, the mitigation of resonance propagation using passive components is subject to a few well understood issues, such as power loss and additional investment. Moreover, a passive filter may even bring additional resonances if it is designed or installed without knowing detailed system configurations.

To avoid the adoption of passive damping equipment, various types of active damping methods have been developed [3,4]. Among them, the resistive active power filter (R-APF) is often considered as a promising way to realize better performance. Conventionally, the principle of R-APF is to emulate the behavior of passive damping resistors by applying a closed-loop current-controlled method (CCM) to power electronics converters [5-8]. In this control category, the R-APF can be simply modeled control was designed to offer autonomous harmonic power sharing ability among parallel R-APFs. On the other hand, renewable energy source (RES) based distributed generation (DG) units have been adopted to form flexible micro grids and their interfacing converters also have the opportunity to address different distribution system power quality issues [9,10]. For current-controlled DG units, the auxiliary R-APF function can be seamlessly incorporated into the primary DG real power injection function by modifying the current reference [11]. But, conventional CCM can only just provide direct voltage support throughout microgrid islanding operation. To overcome this limitation, an enhanced voltage-controlled method (VCM) was recently proposed for DG units with high-order *LC* or *LCL* filters [12].

Islanded Mode Piagi and Lasseter [10] argued that the intentional islanding of generation and loads has the potential to provide a higher local reliability than that provided by the power system as a whole. Micro grids can operate either interconnected to the main distribution grid, or even in isolated mode [13]. From the grid's point of view, a micro grid can be operated within a power system as a single aggregated load and as a small source of power and other services supporting the network. For a customer, it is a low voltage distribution service with additional features like increase in local reliability, improvement of voltage and power quality, reduction of emissions, decrease in cost of energy supply etc. With the advent of renewable technology, researchers and designers have made remarkable progress in the development of different islanded hybrid system based algorithms [14]. A control scheme is

Planning of Islanding in Distribution Networks with Wind Power Generation and Energy Storage

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Abstract— *Present energy demand heavily relies on the conventional sources. But the limited availability and steady increase in the cost of conventional sources has shifted the focus toward renewable energy sources. Of the available alternative sources of energy, wind energy is considered to be one of the proven technologies. With a competitive cost for electricity generation, wind energy conversion system (WECS) is nowadays deployed for meeting both grid-connected and stand-alone load demands. However, wind flow by nature is intermittent. In order to ensure continuous supply of power, suitable storage technology is used as backup. In this work, the sustainability of a hybrid wind and battery system is investigated for meeting the requirements of a stand-alone loads. A charge controller for battery bank based on turbine maximum power point tracking and battery state of charge is developed to ensure controlled charging and discharging of battery. The control scheme is integrated and the efficiency is validated by testing it with various load and wind profiles in MATLAB/SIMULINK.*

Keywords— *Islanding mode, Energy Storage devices, Wind Turbine Generation, Grid connected operation, Off shore wind farm*

I. INTRODUCTION

Renewable energy is any natural source that can replenish itself naturally over a short amount of time, unlike the fossil fuels that are likely to run out in years to come. Recent research and development of renewable energy sources have shown excellent potential as a form of contribution to conventional power generation system. Renewable energy comes from many commonly known sources such as solar power, wind, running water, geothermal energy, and atmospheric fuels like hydrogen, etc.

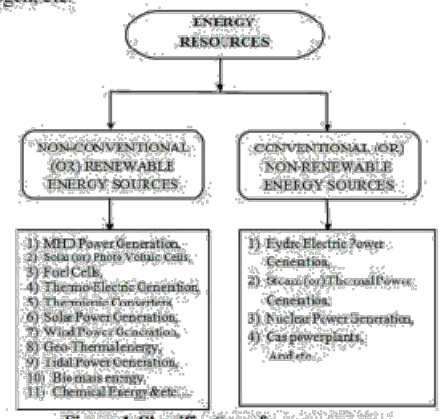

Figure 1 Classification of energy sources

A. *Drawbacks of conventional energy sources*

- Conventional energy sources are not renewable
- Conventional generation technologies are not environmentally friendly
- The cost of using fossil and nuclear fuels will go higher and higher
- Hydropower sources are not enough and the sites are normally far away from load centres
- Political and social concerns on safety are pushing nuclear power away

Planning of Distribution Networks with Renewable Sources, Energy Storage and Electric Vehicles

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Abstract *— Traditional distribution networks are suffering from low reliability, high amounts of power losses and poor voltage profile because of the radial nature of the system which allows unidirectional power flow from substations to load points. Integrating renewable energy sources (RES), in form of Distributed generation is a promising solution to most of the problems associated with traditional distribution networks. The focus of this work is to propose models for the leading distribution networks allowing the penetration of various renewable energy sources with the integration of energy storage devices and electric vehicles to the system. The proposed models of the distribution networks demonstrates the domination of renewable energy sources in the future distribution systems with promising benefits to power system.*

Keywords *— Electric Vehicles, Energy Storage devices, Solar PV system, Wind Turbine Generation, Fuel Cell, Charging Station*

I. INTRODUCTION

Currently, the on-going endeavour of deploying massive variable renewable energy sources (RESs) in the electricity grid is commonly observed.

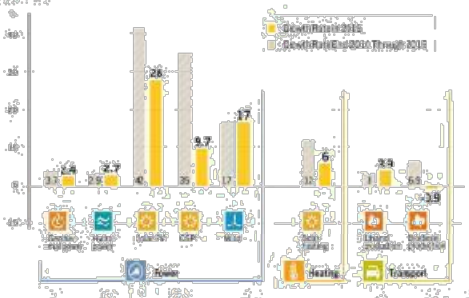
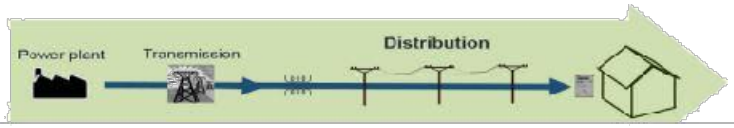


Figure1 Average annual growth rates of renewable energy capacity and bio-fuels production

To achieve these targets, the last decade saw a steady increase in the global demand for renewable energy, with an overall 30% increase. The growing penetration of RESs into the electricity power grid is profitable from a sustainable point of view and provides economic benefit for long-term operation. Reliable and secure energy supply is of high priority for modern society; unfortunately, however, this has arisen because of concern about the trend towards increasing renewable energy penetration, due to the intermittent nature of renewable generation sources, such as wind and solar generation.



An Exemplary Design of Multiple Source System for Grid Integration

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Abstract **– The main objective of this paper is to provide multiple sources which include Wind/PV system for supplying an isolated small community with electrical energy. For simultaneous power management, a control strategy has been implemented for grid connected PV- Wind-Battery system with an efficient multi input bi-directional DC-DC converter. A converter is used to step up power from wind, while a bidirectional buck–boost converter is used to control power from PV along with battery charging/discharging control. As compared with the existing grid connected hybrid systems, anticipated converter has compact number of power conversion stages with less component count and reduced losses which improves the efficiency and the reliability of the system. The proposed controllers are coordinated dynamic error driven PI regulators to control the interface converters. The projected converter has been implemented in MATLAB/SIMULINK environment and results have been discussed.**

Index Terms **– PV, Wind, Grid, Buck-Boost Converter, PI Controller**

I. INTRODUCTION

In remote isolated areas and scorched communities such as small islands, the main source of power supply are usually diesel generator sets and micro gas turbines. Fossil fuel for electricity generation has several drawbacks such as cost effective due to transportation to the remote areas and it causes global warming pollution and greenhouse gases. The need to provide an economical, viable and environmental safe renewable green energy sources which is very important. As green renewable energy resources such as wind and Photovoltaic (PV) have gained great acceptance as a substitute for conventional costly and scarce fossil fuel energy resources. Stand-alone renewable green energy is already in operation at many places despite solar and wind variations and stochastic nature. Isolated green energy hybrid operation may not be effective or viable in terms of the cost, efficiency and supply reliability unless an effective and robust stabilization of AC-DC interface scheme and maximum energy tracking control strategies are fully implemented. An effective approach is to ensure renewable energy diversity and effective utilization is by combining these different renewable energy sources to form a coordinated and hybrid integrated energy system. Hybrid green energy system is a valid alternative solution for small scale micro-grid electrification for remote rural and isolated village/island where the utility grid extension is both costly and geographically difficult. Hybrid renewable green energy system incorporates a combination of several diverse renewable energy sources such as photovoltaic, wind energy and possibly wave and fuel cell sources. A system using such diverse combination has the ful advantage of supply diversity, capacity and system stability that may offer the strengths of each type that complement others. The main objective of hybrid green energy scheme is to provide supply security for remote communities. Hybrid integrated green energy systems are also pollution free, and can provide electricity at comparatively viable and economic advantages to micro grid or diesel generator set utilized in village/island electricity. The proposed system consists of a multi-input hybrid PV–wind power generation system which has a buck/buck-boost-fused multi-input dc–dc converter and a full-bridge dc-ac inverter. This paper focuses on system engineering, such as energy production, system reliability, unit sizing, and cost analysis. A hybrid PV–wind system along with a battery is presented, in which both sources are connected to a common dc-bus through individual power converters. In addition, the dc-bus is connected to the utility grid through an inverter. The use of multi- input converter for hybrid power systems is attracting increasing attention because of reduced component count, enhanced power density, compactness, and centralized control. Due to these advantages, many topologies are pro-posed, and they can be classified into three groups, namely, non-isolated, fully isolated, and partially isolated multiport-topologies.

II. PROPOSED CONVERTER CONFIGURATION

RENEWABLE ENERGY BASED HYBRID POWER SYSTEM WITH RELIABILITY ENHANCEMENT

[1]Mr. Ch s k b Pradeep Kumar, [2]Dr.S. Krishna Kumar [3]Dr.J. Ranga
[1] Assistant Professor, [2]Professor, [3]Associate Professor,
[1]Department of EEE,
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Abstract - Recent developments in renewable energy sources have shown that they can contribute more to the grid along with conventional sources. In order to synchronize with the grid and to meet the ever increasing load demands during varying atmospheric conditions, various renewable energy sources needs to be integrated with each other. This paper describes modeling and simulation of a renewable energy based hybrid system connected to the grid through a intermediate DC bus. To optimize the power output from each of the renewable energy sources, Maximum power point tracking (MPPT), algorithm is used along with a buck boost converter to obtain a stable voltage. The output from the dc bus is used to drive a DC motor coupled with an alternator to supply ac power, which can be either connected to the grid or directly to the loads. The renewable energy sources used are wind turbine, and a PV cell. The design of the proposed hybrid system will effectively manage the optimal utilization of both the energy sources and ensures reliability in power supply during varying atmospheric as well as load conditions.

IndexTerms **- Hybrid system, Renewable energy Sources, DC Motor- alternator, grid.**

I. INTRODUCTION

Nowadays energy demand is steadily increasing, due to increase in loads. It is very much essential to meet the continuous increase in demand of electric energy. The solution to meet the increase in load demand can be obtained from the recent development in alternative energy sources which has excellent potential to contribute together with conventional power generation systems. The renewable energy source offers many advantages over conventional power generation systems, such as low pollution, diversity of fuels, reusability of exhausts, and onsite installation [1]. Hybrid systems combine two or more energy conversion devices, when integrated overcome the limitations inherent in each other source. In this system, the output from the renewable energy source cannot be fed to the loads directly because of voltage fluctuations, which may reduce the lifetime of the connected loads. Hence power supply from renewable energy system needs to be conditioned, before being connected to the dc bus. A control algorithm needs to be developed which will optimize energy from each renewable energy source [2]. In this paper power optimization is done with the help of Maximum power point tracking (MPPT), algorithm. The output from each renewable energy source is then fed to a boost converter, to obtain a constant dc voltage [3]. The dc voltage can be maintained at the required values and specified limits by varying the duty ratio of the converters, and then connecting to the DC bus [4]. The dynamic behaviour of the proposed system is simulated by changing wind speed, solar radiation and varying load conditions.

II. PROPOSED SYSTEM

The block diagram of the proposed system is shown in figure.1. The DC bus is used for integrating the entire renewable energy sources. To have an optimum, efficient and reliable operation of each source, MPPT algorithm is used. A boost converter is connected at the output of each renewable energy source. Modeling and simulations are conducted using MATLAB/ Simulink [1] to verify the effectiveness of the proposed system.

POWER EXCHANGING DISTRIBUTED POWER DEVICE TO BALANCE LOCAL LOADS

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Associate Professor
Ramachandra College of Engineering Eluru

Er .S .Jayalakshmi[#2]
Professor & HoD
Ramachandra College of Engineering Eluru

Dr S Krishna Kumar[#3]
Professor Ramachandra College of Engineering

ABSTRACT:

The suggested plan has elevated reliability, lower bandwidth dependence on the primary inverter, less expensive because of decrease in filter size, and usage of micro grid power while using the reduced electricity-link current rating for that primary inverter. This paper presents a dual current source inverter (DVSI) plan to boost the ability quality and longevity of the micro gric system. The control calculations are developed according to immediate shaped component theory (ISCT) to function DVSI in grid discussing and grid injecting modes. The proliferation of power electronics products and electrical loads with unbalanced nonlinear power has degraded the ability quality within the power distribution network these functions result in the DVSI plan an encouraging choice for micro grid offering sensitive loads. The topology and control formula are validated through extensive simulation and experimental results. The suggested plan is composed of two inverters, which allows the micro grid to switch power produced through the distributed energy sources (DERs) also to compensate the neighborhood unbalanced and nonlinear load.

Keywords: Grid-connected inverter, instantaneous symmetrical component theory (ISCT), micro grid, power quality.

1. INTRODUCTION:

Inside a micro grid, power from various alternative energy for example fuel cells, solar (PV) systems, and wind energy systems are interfaced to grid and loads using power electronic converters. A grid swapping power in the micro grid towards the grid and also the connected load. This micro grid inverter may either operate in a grid discussing mode while offering part of local load or perhaps in grid injecting mode, by injecting capacity to the primary grid. Maintaining power quality is yet

Adaptive Neuro - Fuzzy Inference Based Control applied to UPQC for Power Quality Improvement

[1]Satyanarayana Vanapalli, [2]M. Venu Gopala Rao
[1]Research Scholar, [2]Professor and HoD
[1]Department of Electrical & Electronics Engineering,
[1]Acharya Nagarjuna University, Nagarjuna Nagar, Guntur, A.P, India
[2]PVP Siddhartha Institute of Technology, Kanuru, A.P, India

Abstract: Power Quality (PQ) has become one of the major issues of concern for the distribution utilities. Custom power devices like Power Conditioners, Active Line controllers and reactive power compensators are gaining importance day by day in maintaining PQ Standards. The reliability of any PQ conditioning devices depends on the quality of control method used. This paper primarily emphasizes on development of a control scheme used to control of Unified Power Quality Conditioner (UPQC) for voltage sag / Swell compensation, voltage and current harmonic elimination in a distribution system. The fundamental and harmonic components from supply currents, voltages and sag / swell conditions are extracted using an extended Phase Locked Loop (EPLL). The UPQC is realized with the help two back to back connected Voltage Source Converters (VSC). The DC link voltage of UPQC thus realized is controlled with the help of Adaptive Neuro - Fuzzy Inference System (ANFIS) for achieving better dynamic response. Simulation results prove the effectiveness of ANFIS control algorithm when the load is non-linear in nature and the results presented depict the improved PQ standards and dynamic response of the system considered for study under steady state conditions.

Index Terms - Power Quality (PQ), Sag / Swell, Unified Power Quality Conditioner(UPQC), Adaptive Neuro - Fuzzy Inference System, Shunt Power Filter, Harmonic Compensation.

I. Introduction

PQ problems have been exists in power system utility for many years, but from past two decades they have become a major issues of concern. This is mainly due to the increased usage of solid state and power electronic devices. But these PQ problem impose a hepty cost to business interms of lost productivity and equipment damage. Utilities and customers are forced to invest huge amounts of money to monitor, study and for improvement of PQ issues.

The Unified Power Quality Conditioner (UPQC) is one of the best custom power devices used for compensation of PQ issues related to distortions in both source and load voltages as well as in currents. UPQC consists of a series and shunt Voltage Source Converters (VSC) connected to a common DC Link [1].

The shunt APF is used to compensate current harmonic components [2, 3, 4]; unbalance and reactive power components present in load current and also prevents the power system from the undesired effects caused by these distortions. By exchanging the active power with the system the Shunt APF (ShAPF) will compensate the DC voltage and constant DC voltage is restored. Many control strategies have been proposed for the improvement of performance of UPQC for compensating various distortions caused in load currents and supply voltages.

Proper compensation for any particular PQ issue can be provided if the issue related to PQ is detected or diagnosed properly [5]. Identifying the harmonic currents of the load current is the most important in the control structure ShAPF for harmonic current compensation and identifying correct level Sag / Swell or harmonic or sub-harmonic components in supply voltages in the control structure of Series APF (SeAPF) [6].

Control strategies such as instantaneous power theory (p-q theory)[7, 8], Synchronous reference frame (SRF) [9] control strategy assume that the distortion in load currents and voltages are equal in all three phases. But in most of the practical cases this assumption doesn't suit. Some of the control strategies have limited application and are too complicated to implement. Frequency domain based approaches like Fast Fourier Transform [10] can extract distortions of load currents and supply voltages accurately but are limited to steady state conditions only and [illegible]

Role Based Authority over CP-ABE Access Control Scheme for Public Cloud Storage

#1.Ch Venkatesh, Asst professor Ramachandra College Of Engineering, Eluru

#2.M.S.R.M.Mani, Asst professor Ramachandra College Of Engineering, Eluru

ABSTRACT:

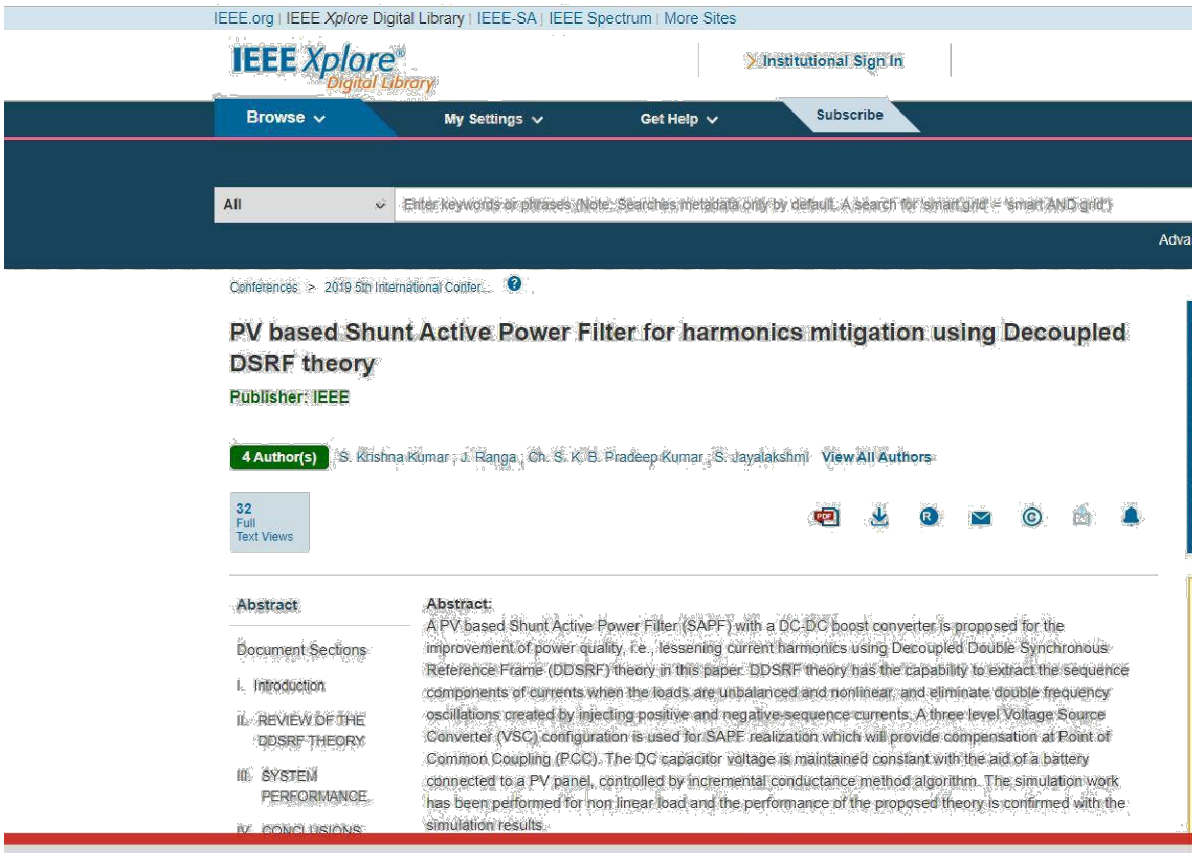
The primary personality based communicate encryption plot with steady size figure writings and private keys. Our development is a Key Encapsulation Mechanism (KEM), in this manner long messages can be scrambled under a short symmetric key. In our answer, figure writings and private keys are of steady size, and people in general key is direct in the maximal estimation of s. In addition, in our plan, the Private Key Generator (PKG) can powerfully include new individuals without adjusting already disseminated data (as in IBE plans). We likewise take note of that there is no chain of importance between characters, in spite of HIBE. The general population enter is straight in the maximal size of S, and not in the quantity of decoding keys that can be conveyed, which is the quantity of conceivable characters. In this utilize a straightforward situation to acquaint the testing issues relating with bunch classificat on and key administration. We consider a source that sends information to an arrangement of beneficiaries in a multicast session. The security of the session is overseen by two principle useful substances: a Group Controller (GC) in charge of confirmation, approval and get to control, and a Key Server (KS). To guarantee classificatior amid the multicast session, the sender (source) shares a mystery symmetric key with all legitimate gathering individuals, called Traffic Encryption Key (TEK). To multicast a mystery message, the source scrambles the message with the TEK utilizing a symmetric encryption calculation. From the above papers, it is watched that how to share protected information in cloud without lost the keys. In this paper, we present a novel Digital mark, SSH key, Hashing capacities and key escrow calculations.

Keywords: Data usage, anonymous network, distributor, fake question, information spillage, finger print, fake actor.

I. INTRODUCTION

Distributed computing has turned into a huge

In Cloud Computing, clierts interface with the 'Cloud', which shows up as though it is a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PV based Shunt Active Power Filter for harmonics mitigation using Decoupled DSRF theory
Publisher: IEEE
4 Author(s)
S. Krishna Kumar ; J. Ranga ; Ch. S. K. B. Pradeep Kumar ; S. Jayalakshmi
View All Authors
32
Full
Text Views
Abstract
Document Sections
I. Introduction
II. REVIEW OF THE DDSRF THEORY
III. SYSTEM PERFORMANCE
IV. CONCLUSIONS
Abstract:
A PV based Shunt Active Power Filter (SAPF) with a DC-DC boost converter is proposed for the improvement of power quality, i.e., lessening current harmonics using Decoupled Double Synchronous Reference Frame (DDSRF) theory in this paper. DDSRF theory has the capability to extract the sequence components of currents when the loads are unbalanced and nonlinear, and eliminate double frequency oscillations created by injecting positive and negative sequence currents. A three level Voltage Source Converter (VSC) configuration is used for SAPF realization which will provide compensation at Point of Common Coupling (PCC). The DC capacitor voltage is maintained constant with the aid of a battery connected to a PV panel, controlled by incremental conductance method algorithm. The simulation work has been performed for non linear load and the performance of the proposed theory is confirmed with the simulation results.

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Advanced Determination of object location using IPS

Publisher: IEEE

5 Author(s) B.S. Sathish ; P. Ganesan ; A. Ranganayakulu ; S. Dola Sanjay ; S. Jagan Mohan Rao View All Authors

12 Full Text Views

Abstract

Document Sections

I. Introduction

II. RELATED WORK

III. RESULTS AND DISCUSSION

IV. EXPERIMENTAL SETUP

Abstract:
In this manuscript the projected method overcome the drawback created by this current GPS, the alternate system of finding a human position. An alternating technique be term as IPS technique. Present GPS structure provide us the essential direct of people's spot, although its most important problem is more difficult while the individual depart inside or if he enter consign which have an extremely deprived signal connectivity.

Published in: 2019 5th International Conference on Advanced Computing & Communication Systems (ICACCS)

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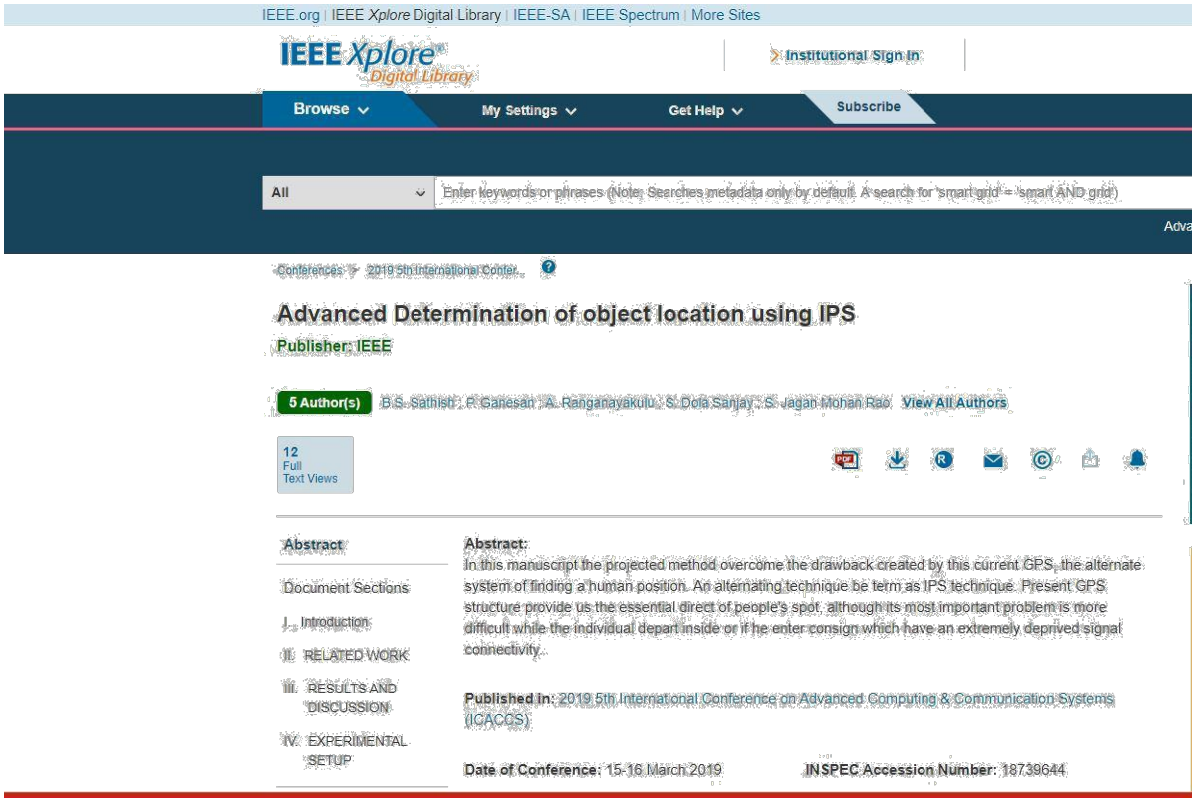
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Advanced Automatic Detection of Cracks in Railway Tracks

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In India rail transportation engage a major pose in endow with the essential transportation to maintain necessities of a hastily emergent financial system. At present, India possesses the fourth major railway net in the globe. The majority of the viable transportation conceded out by the railway system and consequently, any difficulty in the equal has the capacity to induce major damage to the financial system. A method for evade trains from devastating and crash with threat on railways is making known. According to the improvement, the techniques comprise a safety vehicle that travels along a railway a head of a train failure follow on in mishap generally get extensive means exposure still when the railway is not at fault and give to rail transport, among the unaware public, an unjustified image of inefficiency often fuelling calls for immediate reforms. This paper is intended at serving the railway control apprehensive to make stronger and expand the surveyor equipment vital through recent protection supervision.

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A Comprehensive Review of the Impact of Color Space on Image Segmentation

Publisher: IEEE

6 Author(s) P. Ganesan ; B. S. Sathish ; K. Vasanth ; V. G. Sivakumar ; M. Vadivel ; C. N. Ravi View All Authors

22 Full Text Views

Abstract

Document Sections

I. Introduction

II. Color space for segmentation

III. Investigational outcome and discussion

IV. Conclusion

Authors

Figures

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Abstract:
Color is the most important characteristics in the image segmentation process. The color can make a distinction of thousands of shades of color information. So the color based segmentation offers more significant extraction of information as compared to intensity or texture based segmentation. Color space is a numerical replica which represents color details as dissimilar color channels (components) in 3 or 4 dimensional polar or Cartesian system. The utilization of color space is application oriented. For instance, RGB system is employed for computer graphics and display whereas CMY is for printing applications. The proposed work conducts an elaborate survey of color spaces and their utilization for image segmentation.

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Burst rate based optimized IO queue management for improved performance in Optical Burst Switching Networks

L. Bharathi, Nachimuthu Sangeetha Priya, +2 authors S. Jagan Mohan Rao

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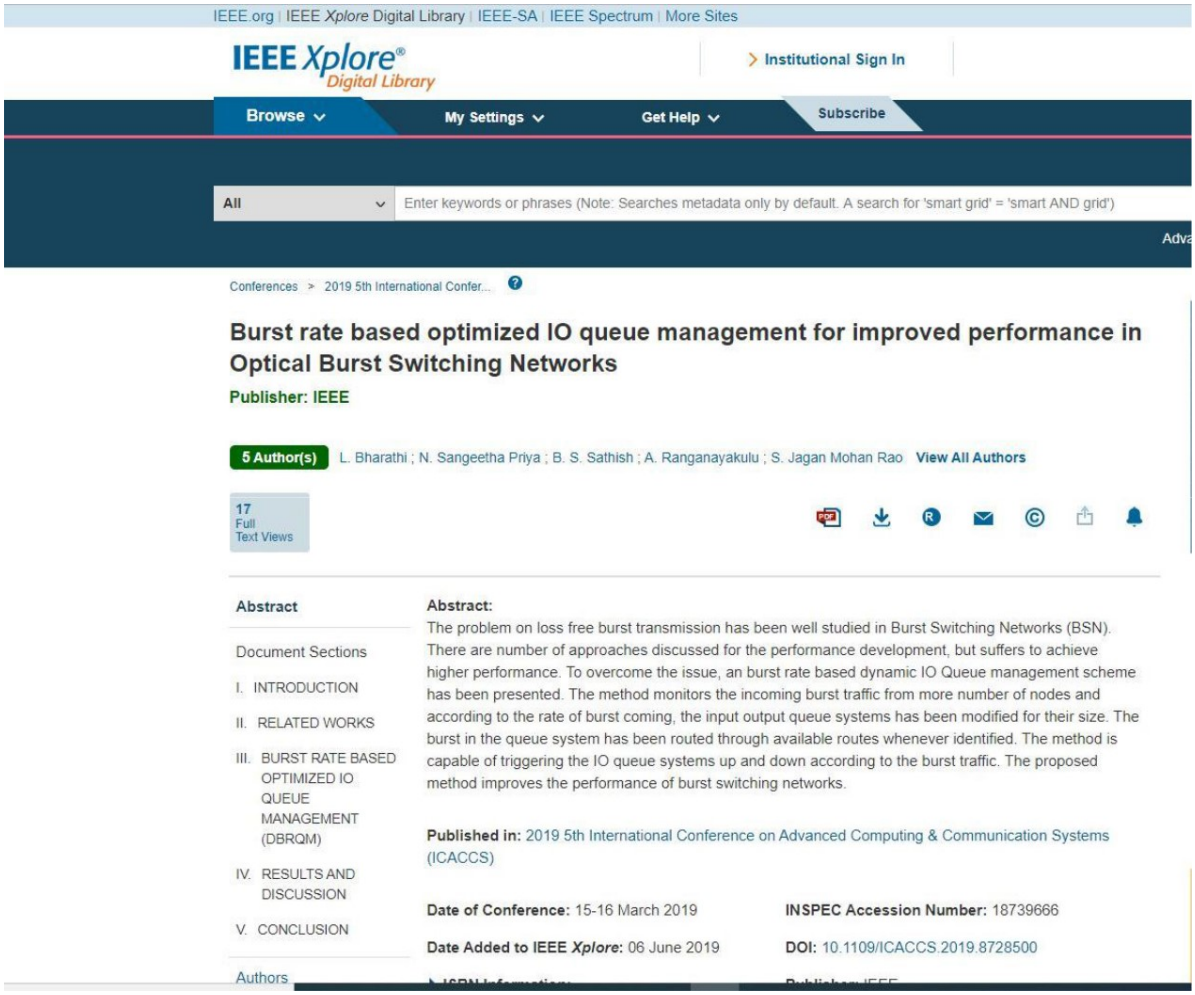
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II. RELATED WORKS
III. BURST RATE BASED OPTIMIZED IO QUEUE MANAGEMENT (DBRQM)
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Advanced Design of Wireless Communication Network for Building Monitoring

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Abstract:
A wireless sensor system be projected to examine construction headed for appraise shaking smash up, the sensor preterit exploit routine built-up capacitive micro electro mechanical structure strain and 3D acceleration feeler and a low power state formally claim precise microcircuit designed for exciting battery life span up and about to 12 years. The strain sensors escalate at the base of the structure to subsist the arrangement unite plastic midpoint opening of the construction while an earthquake happens. They live sporadically or on stipulate preliminary the base station. The accelerometers square measure mounted at each floor of the formation to live the unstable response of the building throughout associate degree earthquake.

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Abstract:
Nowadays analyzing data of very large amount has become a big challenge. Data could be medical, scientific, climatically, meteorological, marketing or financial. Techniques of Data mining are used for extraction of unpledged material from large data set. Weather forecasting can be preferred to help many important sectors which are affected by climate like agriculture, air traffic, water resources, and tourism. Weather forecasting is an area of meteorology which is performed by accumulating data from various sources related to the present condition of the weather like rainfall, temperate, wind, and fog. It is the main challenging task for the scientists. Hadoop and MapReduce considered as the important techniques used to analyze a large data set. This paper develops a system that adopts the historical weather data of a region it applies the MapReduce and Hadoop methods to analyze this data.

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Design and Analysis of Asymmetric CPW-Fed Arcs Loaded Circular Patch Antenna

V Sai Mounika, R.V.R.N.S.Ramya, Ch Murali Krishna

Abstract: A novel asymmetric grounded coplanar waveguide (CPW) circular patch antenna with arcs loaded are presented for multiband applications. This antenna is formulated of a monopole, extended circle, arcs loaded and asymmetrical ground planes. This structure excites at four frequencies such as 2.38GHz, 3.40GHz, 7.66GHz and 8.95GHz with impedance bandwidths are 160MHz (2.30-2.46GHz), 90MHz (3.35-3.44GHz), 7.66GHz (7.00-7.91GHz) and 630MHz (8.62-9.25GHz). The radiation characteristics at the centered frequencies are closer to Omni-directional patterns. Although this proposed antenna resonant frequencies could be easily adjusted to some commercial applications like LTE, Bluetooth, GPS, WLAN, broadband communications and satellite communication.

Index Terms: CPW-fed, Asymmetric grounds, Arcs loaded, multibands, omnidirectional.

I. INTRODUCTION

In present scenario, the wireless communication can be used for cellular telephony, wireless access to the internet, wireless home networking and so on. It involves transfer of information without any physical connection between two or more points, because of this absence of any physical infrastructure wireless communication has certain advantages like cost effectiveness, speed is high. It generally works through electromagnetic signals that are broadcast by enabled sections. Section 2 describes model designing and parameters listed in tables. Section 3 describes the results and discussion comparison shown in tables. Sections 4 describes conclusion and section 5 about describes about references.

II. CIRCULAR PATCH ANTENNA CONFIGURATION AND ITS RESULTS

Initially the circular patch antenna designed having antenna dimensions 21mm x 25mm is considered with asymmetrical coplanar wave guide (CPW) feeding. The 3D structure and top view of circular patch antennas are shown in figure 1.Proposed antenna is simulated on FR4 epoxy substrate material with dielectric constant 4.4 and loss tangent is 0.02 by using High Frequency structure Simulator (HFSS) simulation tool and the thickness of dielectric isolating medium is 1.6mm. Radius of circular patch antenna has been calculated by using following equations 1-3 [6-8].

$$a = F\left(1+\frac{2h}{\pi F\varepsilon_r}\left[\ln\left(\frac{\pi F}{2h}\right)+1.7726\right]\right)^{\frac{-1}{2}} \quad (1)$$

Where $F = \frac{8.791 \times 10^9}{f\sqrt{\varepsilon_r}}$ (2)

The effective radius of antenna is calculated by using the following empherical formula,

$$a_{eff} = a\left(1+\frac{2h}{\pi a\varepsilon_r}\left[\ln\left(\frac{\pi a}{2h}\right)+1.7726\right]\right)^{\frac{1}{2}} \quad (3)$$

Where a = radius of the circular patch antenna

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An UWB, Tri–Pentaband Spiral Fork Shaped Hexagonal Microstrip Patch Antenna for Wireless Applications

P Satya Sai, T Venkata Suma, Ch Murali Krishna

*Abstract: A spiral fork shaped hexagonal micro strip patch antenna is designed to operate at different frequencies, which are in ultra-wide band range (3.1-10.6GHz). The proposed antenna is designed on a FR4 epoxy material with dielectric constant 4.4and overall size of structure is 28*28mm². Coplanar waveguide feeding (CPW) is used in this design for easy simulation. This proposed triband structure resonates at 1.36GHz, 5.74GHz and 8.8GHz. The proposed pentaband antenna resonates at 2.38GHz, 3.64GHz, 6.76GHz, 7.36GHz and 8.98GHz with corresponding impedance bandwidths are 200MHz, 70MHz, 170MHz, 520MHz and 420MHz. The corresponding peak gains at their resonant frequencies are 1.77dB, 2.45db, 3.53dB, 4.54dB and 2.28dB respectively with good radiation characteristics. These antennas are suitable for S - , C - and X - band applications.*

Index Terms: Spiral fork shaped antenna, CPW feed, UWB, Triband, Pentaband, Peak gain.

I. INTRODUCTION

Wireless communication is one which transfers information between two or more points without any contacting medium from source to destination. It is easier to provide connectivity and accessing to the network from anywhere. Multiple members can access the communication through wireless connectivity simultaneously. From few years towards there is huge increase in data traffic. There is a necessary to

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frequencies. It has several advantages such as smaller in size, low profile, easy to fabricate, low cost and low spurious radiation [2]. These are capable of supporting multiple frequency bands and support dual polarization types. These are resistant to shock and vibration. There are different irregular shape microstrip antennas are available such as rectangular [3], square [4], circular [5], triangular, modified triangular [6] and elliptical [7] etc.

The main aspect in the microstrip antenna design is impedance matching to transmit information. There are several impedance matching techniques such as transmission line feed, coaxial feed, inset feed, aperture coupled feed and proximity coupled feed methods [8-9]. Compared with these methods, Coplanar Waveguide feed has several advantageous like broad bandwidth, high gain and radiation pattern, circular polarization and good radiation efficiency [10-11].

In this paper, initially hexagonal microstrip patch antenna has been designed with CPW feeding. The UWB antenna design methodology and its working principles are explained in section II. Section III explains the triband antenna design. Section IV expresses the pentaband antenna design. The simulated results of all these antennas are illustrated in Section V. The performance results of various designed antennas are described in section VI. Finally, the overall work

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SOLID PARTICLE EROSIVE WEAR OF POLYESTER HYBRID COMPOSITES USING TAGUCHI APPROACH

Suresh.J.S, Dr. M. Pramila Devi, Dr. M Sasidhar, Dr.K Sai Manoj

Abstract

Solid particle erosion has been considered as a severe problem for many failures in engineering applications. This article presents the analysis of erosion reaction of a glass fiber reinforced polyester composites with modified weight proportions of natural filler materials like Arabic gum tree coal powder(A.C.P), ambal tree coal powder(J.C.P) and Neem tree coal powders(N.C.P) which act as secondary reinforcement materials. Assessment of wear behaviour is carried out experimentally by an air jet type erosion test rig and Taguchi orthogonal arrays have been used. Taguchi method is well known technique that provides a universal and efficient methodology for design optimization and experiments were followed by using Taguchi experimental design (L27 orthogonal array). Use of orthogonal arrays significantly reduces the number of experimental configurations to be studied. Finally, the through experimentation has led to determination of significant process parameters and material variables that predominantly influence the wear rate of glass fiber reinforced polyester with modified weight proportions of natural particulate fillers of Arabic tree coal powder(A.C.P), ambal tree coal powder(J.C.P) and Neem tree coal powders(N.C.P) respectively.

Key words: Solid particle Erosion, Polyester, Natural fillers (A.C.P/J.C.P/N.C.P), Taguchi Method

1 INTRODUCTION

The subject of erosion wear of polymer composite has drawn attention of researchers in the past decades. Increasing utilization of polymer based composites in aerospace, transportation and processing industries indicates that the importance of polymer based composite materials in the applications where they can be subjected to multiple solid or liquid particle impact. Examples of such applications are pipe lines carrying sand slurries in petroleum refining, helicopter rotor blades, pump impeller blades, high speed vehicles and aircraft operating in desert environments.

In most erosion processes, target material removal typically occurs as a result of a large number of impacts of irregular angular particles, usually carried in pressurized fluid streams. Bitter J.G.A [1] studied and identified that the erosion is a material loss caused by the impingement of particles entrained in a fluid system impacting the surface at high speed. Hutchings [2] defines it as an abrasive wear process in which the repealed impact of small particles entrained in a moving fluid against a surface results in the removal of material from the surface. Erosion due to the impact of solid particles can either be constructive (material removal desirable) or destructive (material removal undesirable), and

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ROLE OF INFORMATION TECHNOLOGY IN HUMAN RESOURCE MANAGEMENT

S.Swapna Sabari
Research Scholar KL University, Assistant Professor (MBA Department), Ramachandra Engineering College.
Corresponding author E-mail : swapnasabari.g@rcee.ac.in

Abstract

Present scenario many organizations have been replacing face-to-face human resource management activities with electronic human resource management, (E-HRM) . E-HRM explains the HR function will create efficient and effective capabilities and contributes greatly on HRM effectiveness. This paper elaborates on role of information technology in human resource management. E-HRM in detail on the following aspects: Introduction of E-HRM, types of E-HRM, Functions of E-HRM ,role of E-HRM, level, nature of E-HRM, advantages and disadvantages E-HRM of determinants of attitude towards and it is expected to help people understand E-HRM more comprehensively and systematically. Rapid changes have been brought to our economy, society, and culture with the great development of science and technology, especially the usage of Internet and computer technology.

Key Words: *Human Resource Management, Information technology, E-HRM*

Introduction

In phenomena world, Information technological development and electronic instruments dominance are prominent role on and different sciences such as management in many organizations. Information technology contributes to this fact that today employees have a greater awareness on digitalization of work through employees in present in this area. New technologies have created a enormous change in new generation of employees and the organizational structure and organizational effectiveness has changed. The changes are organized in a way that today the absence of organization on the electronic based work. In present days many organizations or formally wider the businesses face many challenges such as globalization, the value chain for competitiveness and technological changes. To arise the web-based technology, the new concept of E-HRM, entered the field of human resources. This type of management is suitable for human resource professionals to create that causes promotion in their competencies and is playing an effective role. All organizational activities, including finance, business and personal activities in addition to saving resources, through a web-based system is achieved ,among the activities that organizations can do through the web sites, are considered as personnel matters. The present paper elaborates on electronic human resource management (E-HRM) in detail on the following aspects, namely definition of E-HRM, types of E-HRM, factors influencing utility, effectiveness of E-HRM, determinants of attitude towards E-HRM and the context for EHRM. Hopefully, this paper could help readers understand information technology impact in human resource management

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EMERGING TRENDS IN HR AS CREATIVE EMPLOYEE RETENTION STRATEGIES WITH REFERENCE TO INFORMATION TECHNOLOGY (IT) SECTOR

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ABSTRACT:
Purpose - The focal point of this research is to study the implications of retention, various reasons for attrition and also different ways to control attrition along with the employee retention strategies implementing by the Indian IT sector.
Research design, data and methodology - After thorough literature review on employee attrition and retention, questionnaire has prepared to collect the opinions of 200 employees which were chosen from 20 IT companies (10 each from large and medium size companies) with simple random sampling technique and also gathered the opinion of these companies HR managers on strategies they are implementing to retain their talent pool through personal and telephonic interviews.
Conclusions — The researchers identified job associated, compensation related and inter-personal relations for quitting their positions along with the outlook of Indian IT companies related to the identification and implementation of retention strategies like incessant hikes in compensation package, improved working conditions, continuous introduction of employee welfare facilities, and genuine promotional policy, recognition and rewards, career planning and development, and exemplary leadership.
Keywords: Retention, Attrition, IT Sector, India.

Introduction

The wave of globalization has brought many challenges across industries in general and IT sector in particular and one of the most important of them being the hurricane of employee attrition and retention. Attracting new and talented workforce is comparatively easy when contrasted to retain them which throw a challenge to the HR and other administrative people. This has created a severe stress to every position in the managerial cadre in designing and implementing policies as well as

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