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A COMPARATIVE STUDY OF STEGANOGRAPHY AND WATERMARKING

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Digital information revolution has brought about profound changes in our society and our lives. Many advantages of digital information have generated new challenges and new opportunities for innovation. In the fundamental part, we identify a few key elements of data hiding through a layered structure. Information hiding techniques have recently become important in a number of application areas. Digital audio, video, and pictures are increasingly furnished with distinguishing but imperceptible marks, which may contain a hidden copyright notice or serial number or even help to prevent unauthorised copying directly. However, many of the techniques proposed in this young and rapidly evolving field which can trace their history back to antiquity; and many of them are surprisingly easy to circumvent. In this paper an indepth analysis of steganography and watermarking have been shown by comparing the features of each on the basis of some of the parameters.

Keywords: Steg, Watermark, Encrypt, Scrambling, Ciphertext

COEXISTENCE OF DATA MINING AND PRIVACY OF DATA

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The technological revolution and the era of IT and IT enabled services has showcased a scenario that in every aspect revolve around the data, its use and the interpretation of data as per the need of the users. The use of techniques of data mining for data storage and data retrieval are getting importance due to the need of fast, efficient, customer oriented and secure data retrieval. The organizations have realized that data mining is “necessary for survival”. Apart from this, Privacy concerns are also gaining grounds as the customers have now realized the fact that it is their right

to determine which personal information about them or the organization is to be made available to others. So there is a conflict between different groups, i.e., consumers vs businesses, data subjects vs data miner. This paper is aimed at answering that whether these two conflicting concepts, data privacy and data mining coexist? The aim is to explore how exactly data mining can be a threat to privacy, and what type of legislative and technical steps should be taken to make sure that data mining and data privacy go together a long way.

Keywords: Privacy, Data Mining, Security, Knowledge Discovery

TO STUDY THE IMPACT OF GIS AND RS IN NATURAL RESOURCES MANAGEMENT

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Natural resources consisting of land, forest, water, mineral deposits etc. are invaluable asset for all living organisms to sustain life. For humans, these natural resources also help to maintain and enhance economic strength and development. Geographic Information Systems (GIS) is capable of capturing and storing data for any kind of analysis and visualization, Remote Sensing (RS) technology on the other hand is an integral part of decision making tool. There are ample examples of application of GIS and RS in assessment of natural resources such as water, forest, snow and ice, rangeland etc., developing management plans for park management, protected area management, rangeland management and many more. In this paper we discuss the impact of Geographic Information System and Remote Sensing system approach in natural resources management.

Keywords: Geographic Information System, Remote Sensing, Natural Resources Management, Environmental Management

AN INSIGHT OVERVIEW OF ISSUES AND CHALLENGES ASSOCIATED WITH CLUSTERING ALGORITHMS

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Data mining is the process of taking out of concealed prognostic information from a huge amount of databases. It is an influential technology which helps companies to focus on important information in their data warehouses. There are different steps in data mining process like Anomaly detection, Association rule learning, Clustering, Classification, Regression, Summarization. This paper is mainly concerned about clustering which is the procedure of organising the objects in groups whose members contains some kind of similarity. In the present review work, the author will make an attempt for identifying the major issues and challenges associated with different clustering algorithms and to select optimal clustering algorithm for the prediction of future.

Keywords: Clustering Algorithms, Data Mining

NEURAL NETWORK BASED FACE DETECTION USING LINEAR CLASSIFIER

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Face detection has been an interesting issue for both neuroscientists and computer engineers dealing with artificial intelligence (AI). This method proposes a linear classification based face detection method using Feedforward Neural Network (Multilayer Perceptron) using Gabor filter wavelet transform for feature Extraction. The proposed work deals with two problems, namely facial expression and illumination. Gabor Filter using HAAR wavelet transform to normalize the image enhances the contrast as well as edges of the face images and works efficiently in wide range of illumination changes. The Feed Forward Neural Network is used to classify face and non-face patterns. Our experiments have been conducted on the FERET database to obtain the optimum learning rate which comes out to be 0.5 in this case considering the final goal and the success rate. Selecting 1 neuron in input layer and 100 neurons in hidden layer, the average

detection rate obtained is 92.70% where Gabor wavelet transform of a face image takes 1.1 seconds, feature extraction step of a single face in an image takes 0.2 seconds on a Pentium IV processor.

Keywords: Wavelet transform, Gabor filter, feed forward neural network Classifier, Multilayer perceptron.

DATA COMPRESSION ON DOMAIN SPECIFIC DATAWAREHOUSE

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Domain Specific Compression Algorithms are useful when there is specific data/image to be compressed, that should be lossless. Compressing and storing an image is a difficult task as it would be applied to some specific and important areas such as Medical Diagnosis, where the image is used for treatment, Automated Fingerprints Identification System, where the image is used for criminal jurisdiction, skull measurement, etc. The domain specific compression algorithms require exactness and high compression ratio. In this paper comparisons are made between several currently used compression techniques like PPM, BPM, JPEG, GIF, TIF and JPEG2000 by considering numerous medical images of X-rays, Ultrasound etc, and a conclusion is made that JPEG200 is lossless and highly compressed technique which can be used in domain specific data like medical images where requirement of these two features is most important. To fulfill the above requirement a compressor and decompressor for JPEG2000 is implemented using JAVA. It has been observed that it is the best technique among several compressing techniques which are used currently on the basis of high compression ratio and lossless.

Keywords: JPEG2000, JPEG, BPM, PPM, Compression Ratio.

STUDY OF ANNEALED SELECTION AND REPLACEMENT ON PERFORMANCE OF GENETIC ALGORITHMS

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Genetic Algorithms are biologically inspired optimisation algorithms. Performance of genetic algorithms largely depends on type of genetic operators – Selection, Crossover, Mutation and Replacement used in it. The paper focuses on different selection and replacement operators. Selection operator is used to select the individuals from a population to create a mating pool which will participate in reproduction process. Replacement operator decides which individuals stay in a population and which are replaced by removing or replacing some offspring or parent individuals. The paper focuses on three selection operators – Roulette Wheel Selection, Rank Selection and Annealed Selection. Annealed selection is the new approach which blends the exploitative nature of roulette wheel and exploratory nature of rank selection. Generational and $\mu+\lambda$ replacement operators are implemented in this paper. Implementation is carried out using MATLAB code on two test problems – Benchmark TSP Eil51 problem and Benchmark DeJong's Sphere Function (F1). The paper compares the performance of genetic algorithm using these three selection approaches with generational replacement and $\mu+\lambda$ replacement. The results are optimistic and clearly demonstrate that the genetic algorithm with $\mu+\lambda$ replacement is better than the one with generational replacement. Out of the three selection operators, annealed selection outperforms the other two.

Keywords: Genetic Algorithm, Replacement, Selection

CASE STUDY: HYBRID CLOUD

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The notation of cloud engineering in the context of cloud computing had been widely used in discussions, presentations and seminars in various occasions in the middle of 2000s. The term cloud engineering was formally coined around 2007 and the concept of cloud engineering was officially introduced in April 2009. Cloud engineering- which is the application of several engineering disciplines to the concept of cloud computing. It is a systematic and scientific approach to the top level concerns of commercialization, standardization, and governance of cloud computing applications. This concept adopts and uses the tools and methods of engineering in conceiving, developing, operating and maintaining cloud computing systems. Cloud engineering is a field of interdisciplinary engineering that focuses on providing certain cloud services, such as "SaaS- software as a service", "PaaS- platform as a service", and

"IaaS- infrastructure as a service". Today, more and more businesses are making use of cloud architecture nowadays. Many IT industry experts are predicting that hybrid cloud environment will become a great demand by people in the near future. Many enterprises are becoming aware of the benefits of blending in-house and outsourced computing and networking resources. The industry is now ready to experience the major cloud vendors preparing platforms to suit the hybrid model. This paper presents a concept of hybrid computing.

ENTERPRISE ARCHITECTURE: OPTIMUM UTILISATION OF INFORMATION TECHNOLOGY IN BUSINESS

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While simulating the working mechanism of business organizations it has been seen that there is a rapid change in last few years with the increasing involvement of computer and IT. With the use of new technologies companies are trying to speed up their development cycles. Now days all over the world most of the big businesses are in distributed form, so to make the overall progress quicker, there is need of better understanding, sharing of resources and deep knowledge of system structure among these distributed sub units. More important is the overall objectives of the organization, to meet which some common knowledge base in the form of enterprise architecture is required to all.

Enterprise architecture is the overall view which provides the detailed study related to composition of constituent architecture (core business functions) with information technology, which should be effectively mixed to optimize the strategies of the organizations. At first sight it seems to be very difficult for the organizations to adopt and implement the concept of EA, because its implementation require very disciplined and planned engineering under IT environment. Without planning investment on IT environment will not provide the optimum results, for it there is need of some standard EA guidelines on the basis of which it will be easy for the organization people to understand architecture of the organization.

This paper stressed on the study of effective utilization of EA in the Business. There are few important concepts namely design, development, implementation and maintenance of EA which are directly related to the success of the any business.

Keywords: Business Organizations, Strategies Measures, Architecture, competitive, Control Policies, Functional capabilities.

A CONCEPT OF DISTRIBUTED DATABASE SYSTEM

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A database that consists of two or more data files located at different sites on a computer network. Because the database is distributed, different users can access it without interfering with one another. However, the *DBMS* must periodically synchronize the scattered databases to make sure that they all have consistent data. To ensure that the distributive databases are up to date and current, there are two processes: replication and duplication. Replication involves using specialized software that looks for changes in the distributive database. This process can also require a lot of time and computer resources. Duplication It basically identifies one database as a master and then duplicates that database. A distributed database system allows applications to access data from local and remote databases. Besides distributed database replication and fragmentation, there are many other distributed database design technologies. For example, local autonomy, synchronous and asynchronous distributed database technologies. In this paper we will discuss about database architecture, design etc. & how these technologies implementation and depend on the needs of the business and the sensitivity/confidentiality of the data to be stored in the database.

CLOUD COMPUTING & THEIR BENEFITS TO FUTURE APPLICATIONS

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The concept of cloud computing provides a brand new opportunity for the development of user applications since it allows the devices to maintain a very thin layer for user applications and shift the computation and processing overhead to the virtual environment. Cloud computing reaches anywhere, everywhere, and effectively to everyone, as it enables a fundamentally new and simple way to access and deliver services across the globe. It is defined as an emerging computer paradigm where data and services reside in massively scalable data centers in the cloud and can be accessed from any connected devices over the internet. Thus, it developed into a

major trend in IT. In this paper we would like to test the feasibility of extrapolating concepts from cloud computing in the domain of large-scale computers & also provide a comprehensive review of the academic research done in cloud computing.

Keywords: Cloud architecture, Self Healing, Multi-tenancy, Scalable, Gadgets.

PERFORMANCE IMPROVEMENT THROUGH LOAD BALANCING IN GRID COMPUTING ENVIRONMENT

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Grid computing is a term referring to the combination of computer resources from multiple administrative domains to reach common goal. What distinguishes grid computing from conventional high performance computing systems such as cluster computing is that grids tend to be more loosely coupled, heterogeneous, and geographically dispersed. Grid computing is the next generation IT infrastructure that promises to transform the way organizations and individuals compute, communicate and collaborate. The goal of Grid computing is to create the illusion of a simple but large and powerful self-managing virtual computer out of a large collection of connected heterogeneous systems sharing various combinations of resources. Thus with this multitude of heterogeneous resources, a proper scheduling and efficient load balancing across the Grid is required for improving performance of the system. The load balancing is done by migrating jobs to the buddy processors, a set of processors to which a processor is directly connected. In this paper, we introduce a cluster priority mechanism, which allots priority and an assignment factor to each node of the cluster based on its computing power. The basic idea is to use this priority and assignment factor in allocating processors the tasks proportional to their performance. The major advantage of this technique is that all processors finish their tasks almost at same time and the technique proves to be cost-effective as the communication overheads are substantially reduced.

Keywords: Dynamic, Load Balancing, Assignment Factor, Response Time, Job Migration.

IMPORTANCE OF SIMULATION IN TODAY'S LIFE

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The purpose of the paper is to take a comprehensive look at Simulation, which is a popular term for the reoptimization of organizational processes and structures after the implementation of new information technologies into an organization. We have stirred beyond the Industrial Age and into the Information Age, but manufacturing remains an essential part of the global economy. Numerous efforts have been made to use modeling and simulation tools and techniques to improve manufacturing efficiency over the last three decades. While much development has been made and an increasing number of manufacturing system decisions are being made based on the use of models, their use is still sporadic in many manufacturing environments. We believe that there is a need for pervasive use of modeling and simulation for decision support in current and future manufacturing systems. There are several problems that need to be addressed by the simulation community to realize this dream. The main goal of the paper is to present and discuss the level of information system modeling and simulation modeling. The paper also stressed the necessity for integrating simulation modeling and information system modeling.

COMPARATIVE PERFORMANCE OF DSDV, AODV, DSR ROUTING PROTOCOLS IN MANET

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Mobile Ad Hoc Network (MANET) is a collection of communication devices or nodes that wish to communicate without any fixed infrastructure and pre-determined organization of available links. The nodes in MANET themselves are responsible for dynamically discovering other nodes to communicate. It is a self-configuring network of mobile nodes connected by wireless links the union of which forms an arbitrary topology. The nodes are free to move randomly and organize themselves arbitrarily; thus, the network's wireless topology may change rapidly and unpredictably. Routing is a core problem in networks for sending data from one node to another. Wireless Ad Hoc networks are also called Mobile Ad Hoc multi-hop wireless

networks is a collection of wireless mobile hosts forming a temporary network without the aid of any established infrastructure or centralized administration. Routing protocols of mobile ad-hoc network tend to need different approaches from existing Internet protocols because of dynamic topology, mobile host, distributed environment, less bandwidth, less battery power. In this paper we present a number of ways of classification or categorization of these routing protocols and did the performance comparison of DSDV, AODV, DSR routing protocols.

Keywords : Manet, Dsdv, Aodv, Dsr, WLAN

A DYNAMIC TEST CASE UPDATION APPROACH TO REDUCE TEST CASES

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Once the software is delivered there is still requirement of software change because of customer requirement or the involvement of the new functionality like new version etc. As some changes are performed in ready software it is also the required to test the software again. But it is not feasible in terms of time and cost to perform the whole testing cycle again. The process to perform the selective testing is called Regression Testing. In a traditional regression testing approach we need to test all the codes where the new code or component is interlinked. In regression testing two main questions arises, one to select the code or components that are required to be tested and other is the sequence in which these test cases will be performed. The proposed approach is providing the solution of test cases sequencing as well as reduction by using an intelligent dynamic approach. The proposed system will assign the priorities to the different kind of test cases and on the basis of this prioritization a set test sequence will be generated. Some intelligent operations will be performed to generate an optimized test sequence.

Keywords: Regression Testing, Intelligent, Crossover, Mutation, Prioritization

PERFORMANCE EVALUATION OF IEEE 802.11B WIRELESS LOCAL AREA NETWORKS FOR E-LEARNING CLASSROOM NETWORK

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This paper presents the modeling and implementation of a wireless LAN (WLAN) applied in E-learning classroom based on OPNET. Further, this paper presents a simulation study to estimate the appropriate number of E-learning clients that can be supported in the WLAN as well as the user-perceived Web response time as a function of network load. The simulation results show that an IEEE 802.11b WLAN can support up to 50 clients with modest E-learning and Web browsing activities. The Web server is located on a 100 Mbps Ethernet LAN segment. The mobile client accesses content from the E-learning and Web server via the AP1, using the IEEE 802.11b protocol.

Keywords: WLAN Throughput, HTTP (Hyper Text Transfer Protocol) Page Response Time, E-Learning.

ANALYZING SENTIMENTS IN PRODUCT REVIEWS

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With the vast increase in the utilization of internet in today's era a similar increase has been seen in the use of blog's, reviews etc. The person who actually uses these reviews or blog's is mostly a consumer or a manufacturer. As most of the customers of the world are buying & selling product on line so it becomes company's responsibility to make their product updated. In the current scenario companies are taking product reviews from the customers and on the basis of product reviews they are able to know in which they are lacking or strong this can be accomplished with the help of sentiment analysis. As Opinions Play important role in the process of knowledge discovery or information retrieval and can be considered as a sub discipline of Data Mining .In this research effort we demonstrate a technique which is based on rules where product reviews are extracted from review containing sites and analyze them so that a person may know whether a particular product review is positive or negative or neutral. The system will utilize a existing knowledge base for calculate positive and negative scores and on the basis of that decide whether a product is recommended or not.

Keywords: Opinion Mining, Sentiment Analysis, Sentiment Orientation, Opinion Analysis

HBRO: HYBRID BRO SYSTEM FOR INTRUSION DETECTION IN WIRELESS ENVIRONMENT

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In this paper a hybrid BRO system is proposed for network security in wireless environment. Intrusion detection system architecture we followed mechanism to build a four level hierarchical network which enhances network scalability and use both anomaly and signature detection techniques for intrusion detection. There is a brief overview of ids, its type and bro system is given. Wireless Sensor Networks (WSNs) are a new technology foreseen to be used increasingly in the near future due to their data acquisition and data processing abilities. Security for WSNs is an area that needs to be considered in order to protect the functionality of these networks, the data they convey and the location of their members. The purpose of this paper is to describe some new ideas in intrusion detection.

Keywords: IDS, HBRO, Anomaly detection.

AN ENHANCED APPROACH TO OPTIMIZE WEB SEARCH BASED ON PROVENANCE USING FUZZY EQUIVALENCE RELATION BY LEMMATIZATION

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In this paper, the focus is on one of the pre-processing technique i.e. stemming, instead of this, 'lemmatization' can be used which is more robust than stemming as it often involves usage of vocabulary and morphological analysis, as opposed to simply removing the suffix of the word. As, World Wide Web users use search engines for retrieving information in web. But, the problem is that performance of a web search is greatly affected by flooding of search results with information that is redundant in nature i.e., existence of near-duplicates. Such near-duplicates holdup the other promising results to the users. Many of these near-duplicates are from distrusted websites and/or authors who host information on web. Such near-duplicates may be eliminated

by means of Provenance, and this web search technique has been optimized by fuzzy clustering method which is based upon fuzzy equivalence relation called fuzzy equivalence clustering method.

Keywords: Near-duplicates, Lemmatization , Provenance, Fuzzy Clustering , Fuzzy Equivalence Relation.

ROLE OF GRID COMPUTING IN BUSINESS GROWTH

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Grids are very large-scale virtualized, distributed computing systems. These allow users to access the computing resources of heterogeneous computer systems distributed around the world as a single unified system. Grid computing enables enterprises to make full utilization of their existing computer power as well as to maximize productivity by combining the resources of different computers and utilizing them to achieve a common objective. This will change the way business is done. It will make businesses more competitive by improving their productivity and efficiency; and will reduce business cost by saving time and resources. Although the grid computing provides a lot of potential in business growth, yet its use is quite limited at present. Only a small number of businesses are deploying Grid-related technologies and none of the small scale businesses consider using the Grid at the moment. Therefore in order to encourage more businesses to adopt grid computing, it is necessary for them to understand the benefits they could gain from using the grid. This paper discusses briefly the benefits of grid computing and some of its applications in various business sectors.

Keywords: Grid computing, computing resources, resource sharing, business growth

E-GOVERNANCE FRAMEWORK FOR EFFECTIVE IMPLEMENTATION OF SUWIDHA IN THE STATE OF PUNJAB

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Responsiveness, transparency and accountability in Government Operations, needs the effective implementation of e-Governance. For that active participation of citizens is essential in the design and implementation of e-Governance framework. This will enhance the interaction between Government and citizens. This will also enable Government to achieve the best satisfaction level among the citizen. A range of earlier studies and collection of citizen's view have been critically explored, examined and analyzed by the researchers in-order to suggest suitable e-Governance framework for effective implementation of SUWIDHA in the state of Punjab. Suwidha has been conceived to facilitate citizens by capturing the input at a single point, and provide the specified delivery date depending upon the type of service. In this paper a proposed effective e-Governance framework is presented. It is expected that the performance of existing E-Governance system will be enhanced via the proposed framework after its successful implementation.

Keywords: e-Governance, Suwidha, framework

MOVING FROM TRADITIONAL GOVERNANCE TOWARDS E-GOVERNANCE

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A paradigm that has brought a new revolution in the quality of government services and information to the public using electronic means is e-Governance. The motivation behind research is to decrease the administrative size and costs and to increase the functionality of government body. The need for transformation of traditional governance to e-Governance is discussed in this paper. We also try to highlight the implementation of e-governance in the state of Punjab, Haryana and Chandigarh to make these states as smart states. The various e-governance projects initiated by the states will be discussed. This paper also includes models for implementation of e-Governance and the framework required for it. It will focus on proper road map, future plans & policies to make e-Government successful.

HUMAN-COMPUTER INTERACTION: THE MEDIATING ROLE OF CUSTOMER SATISFACTION

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Human-computer interaction is a discipline concerned with the design, evaluation and implementation of interactive computing systems for human use and with the study of major phenomena surrounding them. This paper analyzes the mediating role of customer satisfaction by studying the relationship between IT-enabled customer service and content management efforts and online sales performance. Using data on the top performing Web retailers in the U.S. based on their online annual sales, we show that the extent of retailers' efforts in online customer service and content management is positively linked to customer satisfaction, which in turn is positively related to the retailers' online sales performance. In addition to directly increasing the revenue, our results indicate that customer service and content management features can also indirectly improve the retailers' financial performance. Specifically, customer service management impacts the sales performance via the average ticket amount, while content management affects the sales via the repeat visit. The growth in Human-Computer Interaction (HCI) field has not only been in quality of interaction, it has also experienced different branching in its history. Instead of designing regular interfaces, the different research branches have had different focus on the concepts of multimodality rather than unimodality, intelligent adaptive interfaces rather than command/action based ones, and finally active rather than passive interfaces. In addition, many Web retailers implement online features such as live chats, online forums, and social networking as part of a customer service management (CSM) system to enhance the shopping experience of customers and to strengthen their long-term customer relationships. According to existing literature, customer service is often identified as one of the key criteria for measuring the quality of websites. Academic research on website quality has also identified content and customer service as important dimensions in defining a service quality scale for online retailers. Similar results were confirmed in their empirical study of electronic marketplaces. A mediation where customer satisfaction is hypothesized as a key mediator of the relationships between perceived service quality and repurchase intentions, and between

perceived value and repurchase intentions is developed and tested using a substantial dataset with a time span of nine consecutive years, available from a well-established regional consumer satisfaction survey. While previous literature suggests that quality perception imposes a direct effect on customers' repurchase intentions, this study shows that such impact is fully mediated by customer satisfaction. The mediating role of satisfaction is further supported by examining the direct/indirect effects of perceived value on customers' repurchase intentions.

Keywords: Online retailing, electronic commerce, web site design, computer users, design theory, computer-human interaction (CHI), human factors, service quality, perceived value, satisfaction, repurchase intentions.

STUDY OF PROBABILISTIC APPROACH TO SOLVE 0/1 KNAPSACK PROBLEM

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The purpose of this paper is to study and analyze algorithm design paradigms applied to single problem – 0/1 Knapsack Problem. We consider situations in which a decision maker with a fixed budget faces a sequence of options, each with a cost and a value, and must select a subset of them so as to maximize the total value. The Knapsack Problem is a NP-complete problem and uses deterministic and probabilistic techniques to get solved.

Our objective is to analyze that how the probabilistic technique - Genetic Algorithm affect the performance of Knapsack Problem. Genetic Algorithm (GA) emulates biological evolution to solve a complex problem. GAs relies heavily on randomness. These algorithms basically search through a space of potential solutions using randomness as a major factor to make decisions. Instead of trying to solve the problem directly, they create random solutions and randomly mix them up until a good solution is found. Our experimental results show that the genetic algorithm is the promising approach as it gives result in optimal time.

Keywords: Knapsack Problem, Probabilistic technique, Genetic Algorithm

MOBILE PHONE: A POTENT ICT TOOL IN AGRICULTURE

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The Indian agriculture related industry is betting big on rural connectivity and the mobile revolution to make farmer initiatives a success. Taking cue of the ubiquitous role of the simple mobile technology, its high penetration rate in India's hinterland, its extensive use by the Indian farmer and the increasing trend of India's rural folk taking to m-banking, the farmer is directly able to book orders for his input requirements with the company/ its distributors, as a result of the elimination of middlemen there can be significant cost reduction. The willingness of companies to take to this technology can be borne by the fact that some existing internet portals which provide such services are a big hit and are raking in a moolah, The above facilities are sought to be provided on a mobile platform using intelligent hardware, pre programmed micro controllers and wireless application protocols (WAP) and /or GPRS technologies. The aspects discussed above may be made possible by writing the programming code such that the menus designed using the graphical user interface (GUI). The availability of the above features in the form of an application software would be a turning point in the history of Indian agriculture and would liberate the Indian farmer from the viles and clutches of the middleman, thriving at the expense of the poor farmer.

Keywords: Mobile, Agriculture, WAP, GPRS

CLOUD COMPUTING: THE VIRTUAL COMPUTING

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Cloud computing is a computing service paradigm which attracts increasing attention from academia and industry. The basic principles of cloud computing is to make the computing be assigned in a great number of distributed computers, rather than local computer or remote server.

Realization of the cloud computing infrastructure requires access to data anywhere, anytime at any device at a sufficient perceived quality of service. The running of the enterprise's data center is just like Internet. This makes the enterprise use the resource in the application that is needed, and access computer and storage system according to the requirement. Cloud computing emerges as a paradigm of Internet computing in which dynamical, scalable and often virtualized resources are provided as services. This article introduces the background and principle of cloud computing, the character, style and actuality. Cloud computing enables the externalization of software resources at a very large scale for residential users; The fields of application of Cloud computing seems almost unlimited, all the sectors of our economy being concerned. Applications are ranging from distant medical diagnostic, collaborative image processing, scientific computation, financial operations, and industrial processes to radio astronomy already financially benefiting from advantages of Clouds.

Keywords: Cloud, Virtualization, SAAS, PAAS.

CLOUD COMPUTING

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This Internet era, Cloud Computing is gaining great popularity. The Cloud can be called as web or the virtualization place of resources which is used to manage the resources and the workload. When the computer hardware and software is used as well as improved that is called Computing. The Cloud Computing is the technology that is based on the internet and used to provide software services, platform services, and Infrastructure services to the user with help of various types of clouds. In Cloud Computing technology there is no need of installing any application software on each of the computer only one of the applications can be installed. Servers can be used to store and maintain the data. The cloud computing can be utility computing as low initial cost is required. This paper discusses the evolution of Cloud computing, architecture of Cloud Computing, Types of cloud like public, private, hybrid. This paper will also discuss the

Services provided by Cloud Computing and the advantages and the disadvantages of cloud computing. The scope of Cloud Computing is also introduced in this paper

Keywords: Cloud Computing, Services of Cloud Computing, Architecture of Cloud Computing

EXPLORATION OF WEBMINER SYSTEM

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The World Wide Web is an immense source of data. It provides abundance of information for the Internet users. Users' accesses are recorded in web logs. Because of the tremendous usage of web, the web log files are growing at a faster rate and the size is becoming huge. Web usage mining is the area of data mining which deals with the discovery and analysis of usage patterns from Web data, specifically web logs, in order to improve web based applications. Web usage mining includes three process, namely, preprocessing, pattern discovery and pattern analysis. This paper reviews existing work done in the preprocessing stage. Web log data is usually noisy and ambiguous and preprocessing is an important process before mining. This paper presents several data preparation techniques in order to identify unique users and user sessions. Finally an overview of various applications of web usage mining is also presented.

Keywords: World Wide Web ,data mining, web usage mining, information retrieval, information extraction.

SEMANTIC WEB MINING

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Semantic Web Mining aims at combining the two fast-developing research areas Semantic Web and Web Mining. The Semantic Web is the second-generation WWW, enriched by machine-

processable information which supports the user in his tasks i.e. Semantic Web offers to add structure to the Web , while Web Mining can learn implicit structures In this paper we propose research on how semantic web technologies can be used to mine the web, for information extraction.The Semantic Web adds structure to the meaningful content of Web pages; hence information is given a welldefined meaning; which is both human readable as well as machine-processable. This enables the development of automated intelligent systems, allowing machines to comprehend the semantics of documents and data. Here we propose techniques for automating the process of search, analysis and categorization of semantic data, further we examine how these techniques can aid in improving the efficiency of already existing information retrieval technologies by implementing reporting functionalities, which is highlighted in the future work and challenges.

MADAM ID FOR INTRUSION DETECTION USING DATA MINING

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Data Mining for IDS is the technique which can be used mainly to identify unknown attacks and to reduce false alarm rates in anomaly detection technique. Various Research Projects using Data Mining techniques for Intrusion Detection are proposed one of which is MADAM ID (Mining Audit Data for Automated Models for Intrusion Detection) used to detect both Misuse detection (used to identify known attacks) and Anomaly detection (used to predict unknown behavior of attacks). It uses data mining technique on different data sets captured by continuous auditing of data on network.

This paper focus on MADAM ID which includes types of intrusion it detect like DDOS attack, various types of alarm ratesit generated, C4.5 algorithm which is used to classify the data as normal and abnormal and how it is better than ID3 algorithm, types of result it generated with example, total cost it includes, drawback of MADAM ID, future scope of data mining in intrusion detection.

We use Wireshark tool for auditing packets on network and WEKA tool for pre-processing on the given data set, classify them by J48 tree which is an implementation of C4.5 algorithm and detect various alarm rates.

Keywords: MADAM ID, C4.5 algorithm, J48, DOS attack, Cost estimation

CLOUD COMPUTING CHALLENGES: SECURITY MEASURES IN REAL TIME WEB APPLICATION

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Cloud Computing are multi tier application that provide the facility to end user without installing any software, server and database for using any web based application except live internet connection and any compatible browser. Cloud computing provides web based solution to end user, business user or any organization globally solution and access from anywhere as per their rights. This may take the form of web-based tools or applications that users can access and use through a web browser as if the programs were installed locally on their own computer. In some cases, legacy applications are delivered via a screen-sharing technology, while the computing resources are consolidated at a remote data centre location. In other cases, entire business applications have been coded using web-based technologies such as AJAX For the advancement of the end user facility all the business logic and data are stored at one place either it is form of private, public or hybrid cloud. So there are some security aspect of challenges like virus attacking from end user, Data Protection, Identify Management, physical security and etc.

Keywords: Cloud Technologies, AJAX, Cloud Computing Security.

CLOUD COMPUTING PHYSICAL SAFETY MEASURES IN CLOUD ARCHITECTURE

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Cloud Computing are multi tier application that provide the facility to end user without installing any software, server and database for using any web based application except live internet connection and any compatible browser. Cloud computing provides web based solution to end user, business user or any organization globally solution and access from anywhere as per their rights. This may take the form of web-based tools or applications that users can access and use through a web browser. A part from cloud environments or architecture based web solution there are used different types of hardware with high configuration for application server, database server, load balancer, cloud data centre, networking devices and many more. For the advancement of the end user facility all the business logic and data are stored at one place either it is form of private, public or hybrid cloud. So there are some physical safety aspect of challenges like short circuit, building collapse, theft of hardware, espionage, hardware failure, backup, fire and etc.

Keywords: Cloud technologies, Cloud computing architecture, Cloud Computing Security.

MODEL TO CODE TRANSFORMATION APPROACH FOR ANDROID

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At present, many developers are accessing android to build up their mobile application which can have massive features and functions. The primary advantage of Android is it is an open source. The Android platform includes a set of managed APIs, a set of native APIs, and a body of so-called "soft" APIs such as the Intent system and web-application APIs.

In this paper, we have discussed about the MVC architecture used in Android, and also we are going to present how MVC architecture will be implemented in this Operating System. We will also define several areas which should focus during the time of MVC implementation.

Keywords: MVC, Linux, JNI.

M-COMMERCE: ITS CHALLENGES AND ISSUES

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In this era of globalization everyone wants to be a racing horse. It is the urge of every individual to be connected with the world 24*7. Mobile commerce is the easiest way to do so. In this paper we shall discuss the need of m-commerce, the way it is used and its importance in every field. M-commerce has built up a strong and long lasting relationship not only between businesses and consumers but also between different businesses. This paper also brings building blocks of m-commerce under the spotlight. Along with the older technologies like GSM and GPRS, new technologies like UMTS/3G, EDGE should be used to create flexible infrastructure for m-commerce. Moreover, issues related to bandwidth and securities are also discussed for more reliable wireless commerce.

Keywords: M-Commerce, GSM, GPRS, UMTS/3G, EDGE, PDA

A REVIEW ON PWLAN IN CONTEXT OF WI-FI

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This Paper is about PWLAN and as we know Mobile devices with integrated wireless local area network (WLAN) technology is becoming increasingly popular. Not only laptop computers are Wi-Fi (Wireless Fidelity) enabled, also mobile phones, gaming consoles and digital cameras are being equipped with wireless communication modules. Mobile Internet, mobile applications and services depend on connectivity to online platforms thus requiring instant Internet connection. While handsets can make use of third generation (3G) communication technology, most other devices cannot access these networks. Although there has been lately also a trend towards 3G,

resp. Universal Mobile Telecommunication System (UMTS) communication interfaces being integrated into laptop computers and net books, 802.11, or Wireless LAN (WLAN) for short, has become fast and cheap enough to be integrated into everyday' things. While at home these devices are easily integrated into our home networks, they are almost useless when travelling, since open and free WLAN access points are rarely available. On the other hand, public WLAN hotspots and open network communities are also increasing in number and already cover large areas in the cities. Most train stations, airports, restaurants and hotels offer wireless access to the Internet through public hotspots. Unfortunately, public hotspots are not as secure as they could be. For home and enterprise wireless networks strong cryptographic mechanisms do exist, providing confidentiality, data integrity and mutual authentication, hence respecting the user's privacy. Wi-Fi Protected Access (WPA and WPA2), also known as 802.11i and Robust Secure Network (RSN), provide network access control based on shared secrets between the client and the network. WPA-PSK, the private mode of WPA and WPA2 restricts access to users knowing a common passphrase (the so called Pre-Shared Key, hence PSK), and the enterprise mode of WPA and WPA2 relies on 802.1X port based access control and the Extensible Authentication Protocol (EAP) for authentication.

Now that we have seen the basic concepts, protocols and standards of wireless LAN security and authentication, we concentrate on public hotspot environments. We identify the different requirements for home-, enterprise and public WLANs. We look at the current approach to authentication in public hotspot environments. The most widespread mechanism today is the Universal Access Method (UAM) in combination with Captive Portal Pages (also known as WISPr). While this solution provides great flexibility for the different business models, it does not sufficiently protect the customer's privacy and is not the most usable solution.

Keywords: PWLAN, WLAN, Wi-Fi ,3G,UMTS,RSN,EAP,UAM,WISPr.

SECURITY ASPECTS: TETRA AND GSM

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The Terrestrial Trunked Radio (TETRA) is a digital trunked mobile radio standard developed by the European Telecommunications Standards Institute (ETSI). The purpose of the TETRA

standard was to meet the needs of traditional Professional Mobile Radio (PMR). There is one more recognized Mobile communication standard called GSM which is a cellular telephony standard and all calls are full duplex one to one. TETRA is principally used as trunked PMR and offers Group calls (one to many half duplex) as well as individual calls (one to one full or half duplex) and telephony (full duplex). TETRA has a much faster call set up (less than 300 ms) and has stronger encryption. It also has the option of end to end encryption (i.e. encrypted through the fixed infrastructure as well as on the radio interface). They both use TDMA, but TETRA uses 4 timeslots per frame and GSM uses 8. This paper describes the comparison between the Tetra radio networks and GSM by the focus study on the functionality of group calls, which is one of the most important requirements for public safety and security (PSS) networks. This paper discusses the air edge specification & supported functionality further based on a typical user profile & country wide network for Germany, capacity requirements & economic factors have been described.

Keywords: GSM, TETRA

SOFTWARE SOLUTIONS FOR HANDLING CONCURRENT PROCESSES

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Interprocess synchronization is necessary to prevent timing errors due to concurrent accessing of shared resources, such as data structures or I/O devices, by contending processes. Without adequate interprocess synchronization, updating of shared variables can induce concurrency-related timing errors that are often difficult to debug. This paper is offered as a guide to the principles and practice of concurrent processes in operating system design. It introduces various software solutions to handle concurrent programming in a mutually exclusive manner which can be accomplished by allowing at most at a time to enter the critical section of code within which a particular shared variable or a data structure is updated. Special attention is paid to the Dutch mathematician Dekker's and Dijkstra's solutions. The paper concludes with an analysis of programmed solutions. It is assumed that the reader is familiar with the basic principles of

computer architecture and data structures and is conversant with programming in a high level language.

Keywords: Interprocess Synchronization, Concurrent process, Dekker's solution, Semaphore, Operating system.

AN ONTOLOGY: A SHARED CONCEPTUALISATION OF KNOWLEDGE

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In this paper I discussed the ontologies. An ontology can be defined as a shared conceptualisation of knowledge. Ontologies are used across a number of domains. Ontologies often contain a model of a domain, its taxonomy the relationships between its entities. Some ontologies are detailed enough to allow some level of reasoning. Ontologies are usually built by domain experts, who have a high degree of knowledge about their specific domain. A researcher suggests that one way to overcome knowledge sparseness is to enrich dictionaries (such as WordNet) and thesauruses. This research has taken the opposite path, taking a large training set and reducing it into a subject based classification system. The aim of this research was to quickly, cheaply and simply build an ontology which has both a wide range of knowledge and capabilities across many different domains. Examples of large ontologies are Cyc , ConceptNet , and ThoughtTreasure . These contain a large number of rules which are intended to allow some form of reasoning. The term "ontology" has a number of conceptions. For the purposes of this research, an ontology is defined to be a hierarchical structure, whereby the nodes correspond to subjects. This study makes use of world knowledge stored in an ontology and applies it to collection selection. Two strengths of using an ontology in Information Retrieval (IR) . Firstly, an Information Retrieval system using an ontology may improve its precision performance. The concepts embodied in the given query and documents can be identified and extracted along with their relationships from the ontology, which helps an IR system to restrict the search scope so that the retrieval precision can be improved. Secondly, an IR system using an ontology may improve its recall performance. The synonymous terms with the same concepts as the query terms can be extracted from the ontology. The IR system can use the synonymous terms to

search instead of the original terms in the given query. As a result, the IR system does not have to rely on the exact terms occurred in both of the query and documents. Although some documents do not contain the query terms, as long as they discuss the same concepts as the given query, they may be identified and extracted. However, while the recall is improved by searching using the synonymous term, the precision may be hurt as the synonymous terms normally refer to a broader concept area than the original terms. This concept is similar to “query expansion”, which has been researched for many years with little success. Ontologies will allow computers to understand and reason about the meaning of information, and software programs known as “agents” will be able to reason about the information in ontologies. Ontologies will provide the reasoning framework, allowing the sharing of knowledge and a formal definition of relationships between entities. Semantic Web ontologies commonly consist of a set of inference rules and taxonomy. The taxonomy defines relationship between entities. The taxonomy is often hierarchal, allowing “children” to inherit attributes of the “parents”. The inference rules allow computers to reason about the entities in the ontology, deducing information from a set of logical relationships. Before this happens, much development must occur to bring about the ontology based understanding of text. One emerging standard is the Web Ontology Language (OWL), which allows ontologies to be created, standardized, and shared using a XML language. It is also designed to allow a level of ontology reasoning. Ontologies are frequently subject specific, covering only a small number of subjects. This causes a problem when working with multiple distributed ontologies because a concept may be defined and formulated in many different ways between the different ontologies, or there may be many different concepts with the same definition or formulation. The merging of overlapping ontologies is still a difficult research problem because different entities often have different meanings both in definition and use. Current generation semantic web tools either use one well defined domain ontology, or are ontology independent but are limited to using one ontology at a time. This research makes use of a large centralized ontology with a standardized taxonomy in order to give a computer program access to a large amount of world knowledge created by human experts.

Human experts are currently better at identifying relevant documents than the most advanced information retrieval methods. Human experts are also currently better at classifying documents than the most advanced automatic classification methods. One factor that makes human experts superior to computer programs is ‘*world knowledge*’. Ontologies can be used to give computer

programs access to the world knowledge and experience of human experts. This research generates a large ontology which is then mined to extract classification rules. This paper gives a description of how the ontology used in this paper was built and mined.

Keywords: Ontology, OWL, IR, domain.

ROUTING ANALYSIS BASED ON PERFORMANCE COMPARISON OF AODV, DSR, DYMO, OLSR AND ZRP IN MOBILE AD-HOC NETWORKS

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A Mobile ad hoc network is characterized as a network containing nodes that are self organizing and not bound to any centralized control like a base station. Currently, all the on-demand MANET routing protocols employ a simple form of broadcasting called flooding to discover the routes. Whenever a source node has data to send to a destination node, but does not have the route to the same, it will initiate a broadcast route-query process. This paper place emphasis on the performance costing of five MANET routing protocols: on demand routing protocols AODV, DSR and DYMO based on IEEE 802.11, reactive protocol like OLSR and hybrid protocol ZRP . The implementation was achieved over a real-world considering some vital metrics with MAC and physical layer model to define the performance effectiveness of routing protocols. Performance is analyzed and compared on performance measuring metrics like Packet Delivery Ratio (PDR), Throughput, End to End Delay, Average Jitter, Broadcast Received, Broadcast Received Clearly, Average Queue Length and Average Waiting Time of Packets etc in varying mobility with constant CBR traffic load, and network design.

Keywords: Aodv, Dymo, Dsr, Olsr, Zrp, Cbr, Manets

SOFTWARE PERFORMANCE ENGINEERING

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Software performance engineering (SPE) is a systematic, quantitative approach to the cost-effective development of software systems to meet performance requirements .SPE, a software

oriented approach, focuses on architecture, design and implementation choices. It helps as to build software that meets performance requirement on time and within budget. There are two important dimensions to software performance timeliness i.e. responsiveness and scalability. SPE is the process of predicting and evaluating whether the software system satisfies performance goals defined by the user. Predicting the performances of a software system requires the availability of a suitable abstract model of the final software. Such model has to provide a suitable description of the run-time behavior of the software system, so that performance can be estimated. One of the key activities in performance testing is to decide what type of load (operational load and background load) or loads to place on the system application. A successful software performance test plan starts with knowing what you want to accomplish. Software performance key testing types includes load, reliability, scalability, failover, recovery and stress testing.

CLOUD COMPUTING IS HEADING INTO STRATOSPHERE

(A BEGINNING OF NEW ERA...)

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This paper describes cloud computing, a computing platform. Cloud computing minimizes or eliminates the ongoing cost of traditional on – premises applications such as software maintenance and upgrades. This paper defines, business benefits, cloud computing risk assessment and critical cloud services. We will go over a wide range of security parameters like reach ability, throughput, QOS or e2e availability. Cloud computing is internet based development and use of computer technology. There are some security issues which are managed through SLA such that the service contracts can be set up and monitored in such a way that the information security is optimized. A survey is conducted on how security parameters are used currently in SLA. It describes an abstract view of services that simplifies and ignores much of the details and inner working a provider’s offering of abstracted internet services is often called “THE CLOUD”. Cloud computing incorporates infrastructure as a service (IaaS), platform as a service(PaaS) and software as a service (SaaS).

Keywords: QOS, e2e, critical cloud, security risk, SLA

IMPROVING FAST AND SMOOTH HANDOFF IN IEEE 802.11 WIRELESS NETWORKS

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IEEE 802.11 Wireless LANs are increasingly being used in real environments for broad-band access. Such large scale IEEE 802.11 WLAN implies the need for client station support from one Access Point to another. The client stations (STA) can move freely, but because of the short range of their Access Points (APs), they usually need to reassociate with different APs and communicate through them. When changing APs, a client station starts a process known as a *handoff* that can take up to few seconds, which is too long for real-time applications such as Voice over IP (VoIP). Various solutions have been proposed to change or improve the client behavior when doing a handoff. The delay incurred in scanning for APs across channels contributes to 90% of the total handoff delay. In this paper, the Fast Scan scheme is proposed which reduces the scanning delay by using a client-based database. The net handoff delay is reduced for IEEE 802.11b networks. The proposed schemes do not need any changes in the infrastructure (access points) and require only a single radio and a small cache memory at the client side.

Keywords: Wireless Local Area Networks (WLAN), IEEE802.11, Access Points, VoIP.

AN OPTIMIZED AND ENERGY EFFICIENT MULTICAST ROUTING BASED ON GENETIC ALGORITHM FOR WIRELESS MOBILE AD HOC NETWORKS

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In Wireless Mobile Ad hoc networks, mobile node battery energy is limited and represents one of the important constraints for designing multicast routing protocols. In regards to the battery lifetime limitation in supporting multicast routing, some studies have given a Genetic algorithm solution for saving power. These proposed methods have always considered several techniques considering only a static scenario. We propose an energy-efficient genetic algorithm that is tested in a dynamic scenario. The simulation results are taken by considering a dynamic scenario which is appropriate for wireless Mobile Ad hoc networks.

WEB DESIGN CHALLENGES: ISSUES WITH DIFFERENT BROWSER COMPATIBILITY

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Web design is the process of planning and creating a website. Text, images, digital media and interactive elements are used by web designers to produce the page seen on the web browser. Web designers utilize markup language, most notably HTML for structure and CSS for presentation as well as JavaScript to add interactivity to develop pages that can be read by web browsers.

Now a day's different communication hardware is available like laptops with low resolution in size, tablet pc, mobile devices and computer itself. For this reason and availability of net services on different devices there are compatibility issues like not supported scripting languages, ActiveX controls, images, html pages resolution, not supported html tags, different browsers compatibility and so on.

Keywords: Browser, HTML, CSS, Java Script, ActiveX, Mobile Devices.

WEB MINING IN ELECTRONIC LEARNING

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After an introduction to Web mining and e-learning and a brief review of Web mining applications in business and education, this paper presents an experiment with pattern classification for student performance prediction in a WebCT learning environment. The results

illustrate that recognition for a certain class (with good grades) on a large data set can be obtained by a classifier built from a small size data set. The paper concludes that Web mining can be an approach to build knowledge about E-learning and has potential to help improve learning performance.

Keywords: e-learning, Web mining, Course Management Systems (CMS), Data mining, WebCT.

THE ROLE AND USE OF DATA MINING TECHNIQUES FOR INTRUSION DETECTION SYSTEMS

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Information access through Internet provides intruders various ways of attacking a computer system. More and more organizations have become vulnerable due to intrusion of cyber attackers which compromise the security of their network [1]. Establishment of a safe and strong network system for the secure information transmission has already become focus of research. One of the many ways used for this purpose is the use of firewalls. A firewall might prevent from many kinds of attacks such as using the protocol weakness, the source route, the address counterfeited, and so on, and provide safe data channel. But it could do nothing about the back door in application layer, the attack or stealing caused by authority exceeding of internal user and the information damaging. Moreover, because the firewall was at the network boundary, its own design flaws are inevitably exposed to attackers; firewall only is hard to resist the variety of attacks [2]. Thus in orders to ensure network security, data mining techniques are adopted for detecting abnormal or unauthorized behavior in the Intrusion Detection System (IDS.) These data mining techniques are an offline environment to add more depth to the network defense in order to determine the various attacks or threats to the network.

COMPARATIVE STUDY OF HUMAN IDENTIFICATION METHODS

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The purpose of this paper is to study about the various methods, which are mainly used in the authentication area. Information technology (IT) systems, their stored data and the processes are valuable resources, which need to be protected from outer world. First step toward securing an IT system is the ability to verify the identity of its users. The process of verifying a user's identity is typically referred to as user identification and authentication. Passwords are the methods that were used most often for authenticating computer users, but this approach has often proven inadequate in preventing unauthorized access to computer resources when used as the sole means of authentication. Because of above discussed problem, a new technique was emerged by researchers that can significantly improve the protection afforded by password-only authentication i.e. Biometrics Recognition.

Keywords: Identification, Authentication, Biometric Recognition, Security, Passwords.

SECURITY IN GRID COMPUTING ENVIRONMENT

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Security is addressed by sophisticated encryption techniques during data transmission and also during their representation. Security is one of the major impediments in widespread grid adoption. In grid computing, heterogeneous resources distributed geographically are virtualized as a unified whole. Grid computing, as a result, provides enormous opportunities in terms of resource sharing, maximization of resource utilization and virtualization of resources. Because of its immense potential, not only the scientific community, but also the IT enterprise communities are excited about its prospect. A comprehensive set of Grid usage scenarios is presented and analyzed with regard to security requirements such as authentication, authorization, integrity, and confidentiality. This paper provides an insight classification of the different mechanisms and methods of security in grid computing environment.

Keywords: Grid Computing, Grid Security, Computing Resources

A REFLEXIVE ARCHITECTURE FOR OBJECT ORIENTED SOFTWARE TESTING

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This paper presents a testing mechanism that facilitates creation of difficult-to-achieve states, for execution of state specific tests, during object-oriented software testing. Provisions are made in the software during the design phase and coded during the coding phase of software development. Testing object-oriented systems is more important than testing procedural software, as it promotes reuse. The object oriented software has various features like encapsulation, abstraction, polymorphism, inheritance, dynamic binding etc., which make the testing of object oriented programs difficult and different from the conventional testing methods. A lot of research has been done in the field of object oriented testing and various techniques have been developed for testing of object oriented programs. This paper discusses the different levels of testing object-oriented systems; the object oriented testing problems, various testing techniques and the future directions for testing object oriented systems. This paper presents a scenario-based object-oriented test framework (SOOTF) for adaptive and rapid testing.

Keywords: Scenario-based Testing, Fault-based Testing, Unit Testing, Integration Testing, System Testing, object, class

HILL CLIMBING ALGORITHM FOR DATA DISTRIBUTION IN SECURE DATABASE SERVICES

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Recent trends of outsourcing databases to the third party database service providers have led to great interest in enabling secure database services. Previous approaches to enabling such a service have been based on data encryption, causing a large overhead in query processing. We propose an architecture which allows an organization to outsource its data management to two

servers while preserving data privacy. Distributed architecture provides good privacy and fault tolerance to the client. The proposed framework integrates (1) The heuristic module which defines a set of heuristics to drive the fragmentation of object databases and incorporates them in a methodology that includes an analysis algorithm, horizontal and vertical class fragmentation algorithms. (2) The query at the client to queries for the servers is done by a bottom up state based algorithm. Finally the results at the servers are integrated to obtain the answer at the client.

Keywords: Data Confidentiality; Distributed database, Hill Climbing Algorithm

DATA MINING TYPES AND TECHNIQUES: A SURVEY

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The quantity of data kept in computer files and databases is growing at an exceptional rate. More refine information from these data is expected. Simple structured or query language queries are no more sufficient to support the increasing demands for information. Due to this increase in the amount of data and requirement of extracting more sophisticated information from that data, mining comes into effect. There are mainly three types of mining: data mining, web mining, and text mining. This paper is a survey paper which will focus on the fundamentals of web mining and describe in detail the process and techniques of web-mining.

Web mining is an emerging research topic which combines two of the activated research areas: Data Mining and World Wide Web. As data mining aims at discovering valuable information that is hidden in conventional databases, the Web mining aims at finding and extracting relevant information that is hidden in Web-related data. Web mining is categorized into three areas: Web content mining, Web structure mining, and Web usage mining. Web content mining focuses on the discovery of the useful information from the Web contents. The Web structure mining emphasizes on the discovery of how to model the underlying link structures of the Web. Web usage mining discovers the user's usage pattern and tries to predict the user's behaviours. Web data can be categorized as content, structure, usage, user profile.

POWER CONTROL AND PERFORMANCE IMPROVEMENT IN WIRELESS MESH NETWORK THROUGH MULTIPATH AODV

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Wireless Ad Hoc Network is a self-organized, decentralized and infrastructure-less mobile network. Wireless Mesh Networks is self-configurable, self-healing, and low cost Ad Hoc network organized in mesh topology. Ad-hoc On-demand Distance Vector (AODV), in MANETs is an on-demand variation of the distance vector routing protocol. This protocol initiate route discovery only when a route is needed and maintain active routes only when they are in use. Unused routes are deleted. We proposed an approach to control power and improve the performance in Wireless mesh multipath network in AODV. The proposed approach in the paper that may improve the packet delivery percentage, Throughput, and the Average latency of the network etc and also provide reliable gratuitous routes.

Keywords: Power Control, Ad Hoc Networks, Wireless Mesh Network, AODV, Throughput.

DEVELOPING RELIABILITY MODEL IN CONTRACT NET PROTOCOL

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Contract Net Protocol (CNP) is a task sharing/interaction protocol consisting of a collection of nodes called software agents purposely used for communication necessitated in a distributed multi agent environment. The conventional FIPA CNP allows the initiator agent to allocate task to contractor agents but does not allow the evaluation of reliability of contractors. In this paper we concentrate on the reliability of contractor agents that facilitates the initiator agent for awarding the task to optimal/best contractor. In this work we proposed a Reliability Model (RM) in the conventional CNP. Development of Reliability Model (RM) in conventional CNP will ensure the reliability of agents which is more decisive for open, dynamic and heterogeneous multi agent systems.

Keywords: Agent communication, Multi-Agent Systems, Reliability, Interaction Protocols, Negotiations.

PROPOSED SOLUTION TO PREVENT BLACK HOLE ATTACK IN MANET

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Mobile ad hoc network is a kind of wireless network. It is dynamic in nature and vulnerable for several attacks to be arising in it. Mobile nodes frequently disconnect and join the network, they can arbitrarily moves from one place to another. The node presents itself in such a way to the node that it can attack other nodes and networks knowing that it has the shortest path, this kind of nodes are known as malicious node. One of the attack is Black hole attack, it is a kind of active attack, it drops all the incoming packet between one source and destination. Black Hole nodes actually send a fake RREP packet and advertise itself as the shortest route is found and sender starts transmitting packets. But packet do not reach the destination node on account of this attack and data loss is also caused.

In our work we tried to secure the AODV protocol, so that it can withstand the attack by adding new secure Reply function to AODV protocol, we have seen that packet drop ratio is decreased by desirable amount. This will help to improve the performance of Mobile Ad hoc network and decrease the Packet loss ratio, which increased due to the attack.

Keywords: MANET, AODV, ns2, Black hole attack, Malicious Node, Secure Reply function

AN INTELLIGENT FRAMEWORK FOR IDENTICAL SERVICE EXTRACTION

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The wide adoption of web services raises the challenging problem of service discovery. In this paper, we propose an agent based framework that discovers similar services based on user's

interest. The major challenge in service discovery is to develop a mechanism that finds the service that best suits the user's interest. Due to increase in the number of services available, the search space is so large that to find a service is time consuming. So, we are going to deploy agents, which will act on behalf of the user. Agents possess datastore which are used to perform the discovery process and store the result in its datastore, which reduces the time consumed. Since agents are implemented, there is no need for the client to search for the services each time from the UDDI registry; all the similar services are stored in the datastore.

Keywords: Service discovery; Web Service Agent; UDDI registry; datastore.

HYBRID SPREAD SPECTRUM TECHNIQUES FOR CELLULAR MOBILE COMMUNICATION SYSTEM

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In addition to the frequency hopped and direct sequence, spread spectrum multiple access technique, there are certain other hybrid combinations that provide the advantage in the area of cellular mobile communication system. The available wideband spectrum is divided in to a number of subspectras with smaller bandwidth. Frequency Hopped Multiple Access Technique (FHMAT) consists of a direct sequence modulated signal whose center frequency is made to hop periodically in a pseudorandom fashion. In this paper we provide a Hybrid Spread Spectrum Techniques using Time Division Code Division Multiple Access (TDCDMA) system in which different spreading codes are assigned to different cell within each cell, only one user per cell is allotted a particular time slot. Time Division Frequency Hopping Multiple Access (TDFHMA) Technique has an advantage in severe multipath or when severe co-channel interference occurs. The subscriber can hop to new frequency to new frequency at the start of a new time division multiple access frames. These different areas covered by the antenna beam may be served by the same frequency or difference frequency.

Keywords: Frequency Hopped Multiple Access, Time Division Code Division Multiple Access, Time Division Frequency Hopping, Space Division Multiple Access.

A COMPARATIVE ANALYSIS: ROUTING PROTOCOLS FOR WIRELESS SENSOR NETWORKS

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Recent advances in wireless sensor networks introduce many protocols specially designed for sensor networks. These protocols aim at lower energy consumption. Wireless Sensor Networks (WSNs) consist of small nodes with sensing, computation and wireless communications capabilities. Wireless Sensor Networks have the limitations such as energy source, memory size and processing power. Therefore, developing an energy efficient routing protocol is an interested research work in this field. The usefulness/ effectiveness of any protocol depend on how well its parameters are set for a particular application. The routing protocols in sensor networks could be classified into three categories: flat based, hierarchical based and location based routing. In this paper we present a comparative study of routing protocol that come under this classification for wireless sensor networks. The paper also highlights the advantages and disadvantage of each routing protocol.

Keywords: Routing Protocol, Wireless Sensor Networks, flat based, hierarchical based, location based, Optimization Techniques, Flooding and Gossiping.

ANGLE OF ARRIVAL BASED ON DISTRIBUTED LOCALIZATION SCHEME FOR MWSN WITH DIRECTIONAL ANTENNA

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Due to wide use of wireless network, the workload of network is increased day by day to a great extent. The increased workload leads to packet loss, life time of network is decreased and network congestion is increased. We approach to enhance the distributed load balancing in wireless sensor network with congestion control algorithm to minimize the packet loss and to increase the lifetime of network by reducing the workload with dynamic and adaptive strategies

of load sharing and load balancing without any crept in discrepancy to avoid network failure. The distributed load balancing approaches to share the load on neighbour nodes instead of central node.

Keywords: Wireless Sensor Networks (WLAN), Load balancing, Shortest path algorithm.

WEB MINING TASKS AND TYPES: A SURVEY

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In recent years the growth of the World Wide Web has exceeded all expectations. Today there are several billions of HTML documents, pictures and other multimedia files available via internet and the number is still rising. As a large and dynamic information source that is structurally complex and ever growing, the World Wide Web is fertile ground for data-mining principles, or Web mining. In 1996 it's Etzioni who first coined the term web mining. Etzioni starts by making a hypothesis that information on web is sufficiently structured and outlines the subtasks of web mining. Web mining is a very hot research topic which combines two of the activated research areas: Data Mining and World Wide Web. The Web mining research relates to several research communities such as Database, Information Retrieval and Artificial Intelligence. Web mining basically can be divided into three categories: web content mining, web structure mining and web usage mining, these three categories deal with different features of a web page, web content mining deals with discovering useful information or knowledge from web page contents, web structure mining deals with discovering and modelling the link structure of web, web usage mining is used to discover interesting usage patterns from web data. This paper is a survey paper which explains in detail the concepts of web mining focusing on tasks and types of web mining.

A REVIEW ON QOS FOR WIRELESS NETWORK USING WIMAX IEEE 802.16 STANDARD

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The WiMAX (Worldwide interoperability for Microwave Access) is an IEEE 802.16 standard and to develop standard for broadband Wireless Metropolitan Area Network(WMAN). WiMAX Network supports QoS classes and also QoS have parameters like bandwidth, delay, packet loss, traffic behavior, latency and jitter etc.. In this paper, we are introducing above parameters and classes; we propose a standard algorithm for downlink and uplink direction among BS and SS in WiMAX system which supports QoS guarantees.

CLOUD RISK MANAGEMENT

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Cloud computing is a highly automated efficient data center providing service-based access of IT resources such as computing, storage, network, platform, application and its related security. Cost cut and scalability of the cloud are the main reasons that attract the IT managers of any organization towards the cloud scenario while data sensitivity is the other reason that prevents them from migrating to the cloud scenario. The expectations for the consumer from cloud computing are availability of data irrespective of the consumer location, data security, high reliability and cost effectiveness. Any organization opting for cloud should have features like network dependency, IT skills, data import / export and handling risk from multi-tenancy. Cloud computing will undoubtedly benefit the organization if its providers are chosen with care. Cloud providers still have to prove that they can protect the data. To have a successful deployment or the migration to the cloud the main points to be considered are licensing, processing requirements and memory locks, bandwidth requirements, communication protocol and data security. This paper deals with the different risks involved in the cloud implementation. The

solutions for data security, intrusion detection in the cloud, cloud auditing and cloud disaster recovery techniques are also discussed.

Keywords: Virtualization, Hypervisor, Cloud Security Alliance (CSA), Cloud Control Matrix (CCM), potential risks, Service Level Agreement (SLA)

ADVANCED SECURITY CONCERNS TOWARDS CLOUD COMPUTING

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The Cloud Computing in its initial designing phase, the reason behind it is prompted by technical advancement and it is highly resource dependent that researches in academic Institutions, analysis and experiments are still made. Currently, a comprehensive and general understanding of Cloud Computing refers to the following concepts: - Grid Computing, Utility Computing, software as a service, storage in the cloud and virtualization. These are termed as a client using a provider's service remotely, known as cloud. This paper includes the various types of advanced computing environment like – cloud, grid and utility. The paper gives the brief introduction of grid and utility computing. This paper also cover the advantages and disadvantages in the way of cloud computing. This paper also tackles the important aspect of security concerned challenges which the researchers and authors are facing in the security of cloud computing.

Keywords: Grid Computing, Utility Computing, IaaS, PaaS, SaaS, Security.

E-GOVERNANCE & CLOUD COMPUTING: TECHNOLOGY ORIENTED GOVERNMENT POLICIES

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The advancement and the progress in ICT and user- friendliness of communication technology and its concerned IT-enabled services to the society at very nominal cost has elaborated the use

of web-based and related functions for the several e-governance departmental works to make their work more transparent and coordinated. From the last few years, the functioning of the government has totally depended on the work culture as well as the working environment using IT based smart system where everyday life has become computerized and the manual help is only that much to upgrade the system. The government is totally aware of the strength of the IT sector for the benefit for the implementation of its functioning; bring smart and advanced system which provides ease of access of information and all the related services to its citizens. Looking into the consideration of all the collection of the facts, it is very necessary to judge the projects accordingly and these projects must be big in real world and require large communication at various positions, which are very costly and for that good IT management is compulsory. For that cost factors we require Cloud Computing which is economical feasible to rise above the conventional methods for the successful implementation as well as execution of e – governance and its related projects. This paper deals with the main features of Cloud Computing which are very essential for playing an important responsibility in the Indian e – governance intentional futuristic planning. This paper also deals with the ideas that how an effective government policy is going to be executed if proper Cloud Computing measures are going to be undertaken.

Keywords: e-governance, G2G, G2B, G2C, G2E, IaaS, PaaS, SaaS.

KCMS WORKFLOW AND SEARCH ENGINE

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In today's organizational lexicon Task is a very critical entity. There are several tasks allocated to several employees in any particular organization. Keeping track of these entire tasks is very important for an organization. Workflow technology is a prime method to manage processes and resources. In our workflow managementsystem we can easily build the workflow for an organization to manage several tasks. Our paper implements CONTENT MANAGEMENT WORK FLOW AND MONITORING SYSTEM. The paper involves information about different tasks in particular organization and how they will be scheduled and to whom they will be

allocated. Also, LUCENE search engine library is used for creating search engine which is based on keywords and indexes. The system is implemented using .NET platform. The main goal of our paper is to provide an efficient way of managing tasks in an organization. It can not only contribute the communication of nested components but also settle the conflicts between the application and execution. It improves the efficiency and applicability of the system.

Keywords: Task, Workflow management and monitoring system, .NET platform, Lucene library

WEB USAGE MINING - PREDICTING AND MOUNTING CUSTOMER PURCHASE IN AN ONLINE RETAIL BUSINESS

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Identifying segments of customers and their behavioral patterns over different time intervals, is an important application for businesses, especially in case of the last tier of the online retail chain which is concerned with “electronic Business-to-Customer relationship” (B2C)[7]. This is particularly important in dynamic and ever-changing markets for CRM, where customers are driven by ever changing market competition and demands. This could lead to the prediction of ‘CHURN’, or which customers are leaving the company’s loyalty. So, there is always a trade-off between customer benefits and transaction costs, which has to be optimized by the managers. The purpose of this paper is to study, implement and analyze various Data-mining and Web usage tools and techniques and then do an analysis of the sample / raw data to obtain a meaningful interpretation using some of the data mining algorithms like a vector quantization based clustering and then an ‘Apriori’ based Association rule mining algorithm[12, 13]. The first one is aimed at a meaningful segregation of the various customers based on their RFM values, while the later algorithm tries to find out relationships and patterns among the purchases made by the customer, over several transactions.

Keywords : B2C, CRM, CHURN, Web Usage, Data Mining, RFM

FOURTH GENERATION OF MOBILE COMMUNICATION NETWORK: EVOLUTION, PROSPECTS, OBJECTIVES, CHALLENGES AND SECURITY

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Analyzing the attractive evolution of wireless communication, the much anticipated 4G standard promises wonders. This paper explores the trends in the evolution of wireless communication and its security. It outlines the requirements that are to be met by the 4G standard and also attempts to analyze the technical challenges that demand solutions during the course of the development and implementation of the next generation of wireless communication. Further, It presents the possible application areas of the 4G standard and the research areas that have been identified for development and stabilization of the 4G standard. The 4G work started in 2005 and 4G wireless network full complete development approx in mid 2015 in all country Research and industry communities are racing against time to find solutions for open issues in 4G networks.

Keywords: Evolution of Mobile Communication, Requirements of 4G networks, Technical Challenges, Potential Application Areas of 4G network, Standardization Activities, Security requirements of 4G networks, Security Architecture, Security issues of 4G network, Security Analysis.

SOFTWARE TESTING- TOOLS AND TECHNIQUES

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Software testing is any activity aimed at evaluating an attribute or capability of a program or system and determining that it meets its required results. Although crucial to software quality and widely deployed by programmers and testers, software testing still remains an art, due to limited understanding of the principles of software. The difficulty in software testing stems from

the complexity of software: we cannot completely test a program with moderate complexity. Testing is more than just debugging. The purpose of testing can be quality assurance, verification and validation, or reliability estimation. Testing can be used as a generic metric as well. Correctness testing and reliability testing are two major areas of testing. Software testing is a trade-off between budget, time and quality. In this paper we study different testing techniques and comparative analysis of these techniques.

SOFTWARE REENGINEERING PIRACY ISSUES OF CODE TRANSLATION BY END USER

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The reengineering of software was described by Chikofsky and Cross in their 1990 paper as "The examination and alteration of a system to reconstitute it in a new form". Less formally, reengineering is the modification of a software system that takes place after it has been reverse engineered, generally to add new functionality, or to correct errors. There are different reengineering techniques are available such as Source code translation, Reverse engineering, Program structure improvement, Program modularization, Data re-engineering. The problems of code translation techniques are converting binary code to original source code without knowing the owner of that software, redistribute software, and make pirated copy of that software.

Keywords: Software Reengineering, Software Piracy, Reverse Engineering, Code Translation.

MODELING OF PROCESSES PARAMETERS BY EVOLUTIONARY TECHNIQUES USING MICRO-GENETIC ALGORITHM FOR INVESTIGATING SURFACE ROUGHNESS AND MACHINING TIME IN HARD TURNING

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In this paper we focus on describing the Multi-Objective Optimization Problem considering a case study from real-world production processes, investigation of surface roughness generated in hard turning and machining time. A drawing of experiments has been made in order to determine the empirical non-linear relationship between the selected parameters from the process, the surface roughness and machining time, which are mutually dependent objectives needs to be optimized simultaneously by varying the machining parameters to control the force output to be constant. Micro-Genetic Algorithm procedures have been applied to solve the problem, which are characterized as one of the Evolutionary Algorithm conceptual tools. Further the relationships have been applied to develop the evolution simulation model for adapting the cutting parameters.

Keywords: Multi-objective Optimization, Evolutionary Algorithms, Micro-Genetic Algorithms surface roughness, machining time.

A NOVEL PRIORITY BASED CHANNEL ACCESS METHOD IN 802.11S WIRELESS NETWORK

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IEEE 802.11s defines a new mesh data frame format and an extensibility framework for routing. The present 802.11 interconnections rely on wired networks to carry out bridging functions. For a number of reasons, this dependency on wired infrastructure must be eliminated. WMNs rely on the IP layer to enable multihop communication and do not provide an inherently wireless solution. Since wireless links are less reliable than wired links, a multihop routing protocol operating in a wireless environment must take this into account. It defines the Hybrid Wireless Mesh Protocol (HWMP) based on Ad hoc On-demand Distance Vector Routing (AODV) using MAC addresses for layer 2 routing and Radio-Aware routing metric. 802.11s differentiates four traffic categories with different priority in medium access and they allow for limited support of QoS. EDCA uses priority for traffic that do not support MCCA. To overcome the problem of MCCA channel access method we

propose a novel access method that support both relative proportional throughput allocation and absolute priority in 802.11 wireless network. It is built on the idea of the Idle sense method that provide the optimal throughput and fairness.

Keywords: Ad-hoc network, Routing Protocol: AODV, HWMP.

RISK MANAGEMENT IN FEASIBILITY STUDY PHASE

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Software Engineering is one of the major disciplines in modern computing. Starting from the birth of Computing, Software Development and Engineering methodologies has also reached to new heights and now has become a matter of great learning and research. With the increase in customer demands and requirements, there aroused need for faster development so that society may be served faster. This quickness in software development has lead to the development in programming environments. But, the pace also lead to major problems due to which, hard worked projects generally gets dumped or fails completely. We have recovered from Software Crisis but still, a large number of projects are getting failed now-a-days. The reason is not only the source code which runs the program. It is not the fault of programmer that softwares are getting failed. Rather, te actual reason is Lack of Proper Risk Management. In recent years, industry has been working in this matter, but, still a lot of development if needed for finding best solutions. In this paper, risk factors at the initial stages of Software Development Process, possible causes and preventive measures will be proposed.

SMIS: A WEB-BASED STATE MANAGEMENT INFORMATION SYSTEM

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Web-based information displays many benefits of multimedia technology. Using today's fast broadband connections, it is possible to stream sophisticated content to a computer anywhere in the world. This is an advantage for many people as the information can be received and read wherever and whenever it is convenient for them, which can be a crucial factor for busy executives. A significant amount of interactive multimedia content is now delivered via the internet. There is an abundance of information on the graphical and user interface aspects of WBIS site design. The WBIS is a technologically dynamic environment, and presents new challenges for developers. Consequently, the aim of this research was to investigate how organizations are currently developing WBIS-based information systems, and the advantages those systems are providing.

Web applications are popular due to the ubiquity of the browser as a client, sometimes called a thin client. The ability to update and maintain web applications without distributing and installing software on potentially thousands of client computers is a key reason for their popularity. This paper presents a Web Based State management information system (WBSMIS) designed for tourists coming from different states and countries. The primary goal of this application is to offer a suitable interface to its users in order to simplify and reduce the time needed for information and procedure management.

Keywords: SMIS, SMS, Web-Based Application, WBIS

EVALUATION OF ROUTING METRICS IN WIRELESS MESH NETWORKING

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In wireless networks, users expect to get access to the network securely and seamlessly to share the data flow of access points anytime and anywhere. However, either point-to-point or point-to-multipoint methods in traditional wireless networks make the network bandwidth decrease rapidly, which cannot meet the requirements of users. Recently, a new wireless broadband access network, wireless mesh networks (WMNs), has emerged as one of the key technologies. Wireless routing protocols plays an important role in performance optimization of WMNs. Most

multimedia communication focus on efficient provisioning of multimedia services but show lack of quality of service due to the reason that communication is affected by node mobility as well as wireless communication environment, such as channel fading effects. The capacity of WMNs is very limited. Two problems affect the capacity of mesh networks; i.e. load balancing and interference. One important direction for improving the capacity of WMNs is to use multiple radio interfaces and multiple channels simultaneously. In this paper we are evaluating the performances of metrics available for wireless mesh networking. The load balancing routing algorithm method provides the load balance for multi-radio mesh networks by using a good routing metric LARM (Load Aware Routing Metric), which captures the differences in transmission rates, packet loss ratio, traffic load and intra / inter flow interferences.

Keywords: WMN, QoS, Load Balance, Interference.

NANO-TECHNOLOGY: NEW NANOMATERIALS FOR RADIOACTIVE WASTE CLEAN-UP IN WATER

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Nanotechnology is the science and technology of precisely manipulating the structure of matter at the molecular level. The term nanotechnology embraces many different fields and specialties, including engineering, chemistry, electronics, and medicine, among others, but all are concerned with bringing existing technologies down to a very small scale, measured in nanometers. A nanometer a billionth of a meter is about the size of six carbon atoms in a row. Today, as in the past, most industrial products are created by pushing piles of millions of atoms together by mixing, grinding, heating a very imprecise process. However, scientists can now pick up individual atoms to assemble them into simple structures or cause specific chemical reactions. In the future, nanotechnology may be able to harness the forces that operate at the scale of the nanometer, such as the Vander Waals force, as well as changes in the quantum states of particles, for new engineering purposes.

Keywords: Nanotechnology, Radioactive waste, Nanotubes.

ERP SYSTEMS: PROBLEMS AND SOLUTIONS WITH REFERENCE TO SMALL & MEDIUM ENTERPRISES

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Enterprise Resource Planning (ERP) systems have become a basic business information processing requirement for organizations, seeking growth. Successful implementations of ERP have been proven to be beneficial for large as well as small organizations. Factors affecting ERP adoption in small scale organizations are different than their larger counterparts. There are some issues before small scale enterprises in implementing on – premises ERP solutions. The paper discusses issues before small and medium enterprises in implementing on – premises enterprise resource planning systems. The paper also gives a brief introduction to the cloud computing and cloud based ERP systems as an alternative solution to the on – premises ERP systems for small scale organizations. The data for the study has been collected from small industries in the industrial area near Haridwar, Uttarakhand.

CUSTOMER PROFILING, STORE IMAGE ANALYSIS AND PREDICTING STORE LOYALTY USING DATA MINING TECHNIQUES

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This article is an attempt to bring the fields of management and IT much closer. This article is an empirical research on the application of descriptive and predictive data mining models in the field of grocery retail stores. The authors discuss the use of various data mining techniques like cluster analysis, chi-square analysis, factor analysis and multiple regression to a survey based data for segmenting and profiling the customers and then further for assessing the importance

customers give to various store attributes and finally giving a predictive model for store loyalty. This research is highly application oriented and adds to the negligible research conducted in India in the area.

MANIFESTATION OF AGILE METHODOLOGIES FOR PROMPT SOFTWARE DEVELOPMENT: A REVIEW

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Nowadays agility has become the most powerful feature of software development. In the era of rapidly changing requirements of the user, the developers require the new methodologies with higher degree of flexibility. Agile Methodologies were thus introduced to meet the new requirements of the user or the software development companies. Agile methodologies enable companies to deliver a flexible, scalable and adaptive software in less time. It helps in delivering the quickly create working software, in frequent iterations, building the highest priority features first. This paper presents a review of three agile approaches including SCRUM, Extreme Programming and FDD, describes the differences between them and recommends when to use them.

Keywords: Agile Methodology, SCRUM, Extreme Programming, FDD

COMPARATIVE ANALYSIS OF IEEE 802.11 DCF

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Performance of IEEE 802.11 distributed coordination function (DCF) has been studied by several authors under saturation condition as well as finite load conditions separately. This paper outlines a comparative analysis of performance for IEEE 802.11 DCF using both saturation conditions and finite load conditions in terms of condition collision probability, packet processing rate, probability of successful transmission, channel throughput. In this paper, we present a mathematical model for IEEE 802.11 DCF to capture its behavior under saturation conditions and finite load conditions. Model has been validated by subsequently comparing analytical results with simulation results.

BEHAVIOURAL STUDY OF VANET PROTOCOLS

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VANETS is the most popular network which is called Vehicular Ad Hoc Network. The researchers make a lot of work in this network. Several unexpected disastrous situations are encountered on road networks daily, many of which may lead to congestion and safety hazards. If vehicles can be provided with information about such incidents or traffic conditions in advance, the quality of driving can be improved significantly in terms of time, distance, and safety. One of the main challenges in Vehicular adhoc network is of searching and maintaining an effective route for transporting data information. In this paper, the author will make an attempt for identifying major issues and challenges associated with different vanet protocols and to select the optimal vanet protocol for the prediction of future.

Keywords: VANET, Efficient Routing, Congestion.

TO STUDY THE IMPLICATIONS OF SECURE CLOUD COMPUTING THROUGH IT AUDITING

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Cloud computing is a collection of net-centric, service oriented concepts, methodologies, best practices and technologies. It promises scaled economic benefits by provisioning computing resources and applications as services to customers while customers base their needs to subscribe related services. The services can be computing infrastructure, storage, development and deployment platform, software services, desktop services, etc.

In this paper the author discuss the evolvment of cloud computing paradigm and present a framework for secure cloud computing through auditing. The approach of the research study is to establish a general framework using checklists by following data flow and its lifecycle. The checklists are made based on the cloud deployment models and cloud

services models. The contribution of the paper is to understand the implication of cloud computing and what is meant secure cloud computing via IT auditing rather than propose a new methodology and new technology to secure cloud computing.

DISASTER RECOVERY IN CLOUDS

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Cloud computing has been a new buzzword of today's most enticing technology areas due to its cost-efficiency and flexibility. It offers mainframe or better infrastructure through a small set of services delivered globally over the Internet. As per one of the estimates from Gartner, by year 2012, 20% of enterprise market e-mail seats will be delivered via Cloud.

Many businesses rely on Disaster Recovery (DR) services to prevent either manmade or natural disasters from causing expensive service disruptions. Unfortunately, current DR services come either at very high cost, or with only weak guarantees about the amount of data lost or time required to restart operation after a failure. Cloud computing platforms are well suited for offering DR as a service due to their pay-as-you-go pricing model that can lower costs, and their use of automated virtual platforms that can minimize the recovery time after a failure.

In this paper, I focus on cloud data storage security and describe what challenges remain in order to minimize cost, data loss, and recovery time in cloud based DR services. I had performed a pricing analysis to estimate the cost of running a public cloud based DR Service and show cost reductions compared to using privately owned resources.

Keywords: Cloud computing, security, privacy, recovery.