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S*i*CUREZZA'08

CONFERENCE ON SAFETY AND SECURITY TRENDS

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TITLE

RELIANCE
Netconnect

PLATINUM



ISM SSI

ASSOCIATE



RADIO PARTNER

ABSTRACT-SIZ101

OCEAN THERMAL ENERGY CONVERSION

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Ocean Thermal Energy Conversion (OTEC) is an energy technology that converts solar radiation to electric power. OTEC systems use the ocean's natural thermal gradient—the fact that the ocean's layers of water have different temperatures to drive a power-producing cycle. As long as the temperature between the warm surface water and the cold deep water differs by about 20°C (36°F), an OTEC system can produce a significant amount of power, with little impact on the surrounding environment. The distinctive feature of OTEC energy systems is that the end products include not only energy in the form of electricity, but several other synergistic products. The principle design objective was to minimize plan cost by minimizing plant mass, and taking maximum advantage of minimal warm and cold water flows. Power is converted to high voltage DC, and is cabled to shore for conversion to AC and integration into the local power distribution network. The oceans are thus a vast renewable energy resource, with the potential to help us produce billions of watts of electric power.

ABSTRACT-SIZ102

LIFE SAVING EMBEDDED SYSTEM (MIRACLE BUT-TRUTH OF REDUCING DEATH RATE)

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"Thousands of people killed as a cause of earthquake"

The above words aren't the headlines of the newspaper but daily news everyone come across whenever we go through a newspaper or watching a TV news. A person's life is precious and meaningful to his loved ones. We, as responsible engineers felt a part of society to bring a system to avoid these mishaps. With the meteoric Embedded Systems along with microprocessor our designed system in preventing deaths and providing safe guided measures. A new revolutionary microwave life detection system which is used to locate human beings buried under earthquake rubble has been designed. This system operating at certain frequency can remotely detect the breathing and heartbeat signals of human beings buried under earthquake rubble. By proper processing of these signals, the status of the person under trap can be easily judged. The entire process takes place within a few seconds as the system is controlled by the microprocessor (8085) or microcontroller unit. By advent of this system the world death rate may decrease to greater extent as large percentage of death occur due to earthquake?

ABSTRACT-SIZ103

DESIGN AND OPTIMIZATION OF THE AUTOMATED SUGARCANE HARVESTER

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This idea was born after practically witnessing the hardships encountered by rural farmers in planting saplings. Today labor is not available for carrying out basic agricultural operations and that is how tractors, excavators and mechanical tillers have entered the arena. The main objective of this paper is to demonstrate the process of harvesting tall field plants like sugarcane by cutting it and placing it into a box using grippers. It has a linear motion up and down of the arm for plucking and placing. A gripper is used for fixing up and releasing the bunch of sugarcanes. Pneumatic power is given from the compressor at certain required pressure depending upon the uphold and release of the bunch of sugarcanes.

ABSTRACT-SIZ 104

BIOMETRIS IN Secure e-Transactions

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In the present day world, online shopping using WAP enabled mobile phone has widely come into use. Credit cards serve as the currency during e-business and e-shopping. As technology has advanced in the negative side also, hackers and spoolers steal & misuse credit card numbers, even though the network has been made secure. So, in this paper, we have proposed a multi-biometric model (integrating voice, fingerprint and facial scanning) that can be embedded in a mobile phone, making e-transactions more secure. The model is very cost effective, as we have tried to use the hardware already present in the phone. This paper uses for *image processing* for facial recognition and fingerprint. We have also simulated a few graphs for voice recognition using MATLAB 6.0

ABSTRACT-SIZ 104a

GRID COMPUTING

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"Grid " computing has emerged as an important new field ,distinguished from conventional distributed computing by its focus large-scale resource sharing, innovative applications and in some cases, high performance orientation. In this technical paper we presented this new type of computing,it present extensible and open Grid architecture in which protocols, services, application programming interfaces and software development kits are catogorised according

to their roles in enabling recourse sharing. we also described requirement that must satisfy and also protocols to provide interoperability among different Grid systems.

ABSTRACT-SIZ 104b NANOTECHNOLOGY

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Nanotechnology, the short gun marriage of chemistry and engineering in molecular manufacturing or more simply, building things one atom or molecule at a time with programmed nanoscopic robot arms. This technology proposes the construction of novel molecular devices possessing extraordinary devices by manipulating atoms individually and placing them exactly where needed to produce the desired result. In this paper the two fundamental different approaches to nanotechnology are clearly explained including the two main concepts of the technology and differentiated those two concepts. Carbon tubes, which are the heart for this technology, is highlighted which possesses extraordinary physical and chemical properties because of which it is possible to make incredible components. The importance of nanotube transistors in making new class of smaller, faster and lower power consumed computer chips is illustrated. In this text proofs for the existence of nanotechnology in the present world are given. It is clearly described with neat and realistic figures how this technology has been a break through in all fields especially in computers and electronics. This presentation also emphasized on the prominent role played by this elegant technology in making several comfortable, tiny and easily operable components. Finally, the latest developments taken place in the world are exemplified, ending with an interesting conclusion about the performance of this technology in the future.

ABSTRACT – SIZ 108 IMAGE PROCESSING

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This paper deals with the various image processing techniques, which has become an unavoidable issue of the modern world, with the current and future areas of application of this technology. Image processing takes part even in the minute issues such as taking a photo in our camera enabled mobile phone. In this paper, at first we glance on the definition of image processing techniques, leading an end -user to attain enough knowledge on the image processing techniques. Then we see the various fundamental steps in image processing and turn our vision onto the various image processing operations, such as filtering, detection of discontinuities etc. Then we go in depth into one of the mostly used algorithms in image processing, the sobel algorithm, after the analysis of the algorithm, we enter to see the various image compression techniques used in order to save memory, the various techniques involved are – loss less compression technique, lossy compression technique and jpeg compression. Then the discussion is diverted onto the various redundancies of image processing techniques. And finally we conclude knowing that Image processing are especially useful in analyzing images of various types such as geographical images, satellite images, medical images etc and also knowing that its not – THE FUTURE OF IMAGE PROCESSING

Abstract-SIZ 109

SERVICE ORIENTED ARCHITECTURE & MESSAGING PATTERNS

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This paper deals with Service Oriented Architecture (SOA), currently a popular subject with no consensus or standardized reference model to define it. While many believe that Web Services are SOA, they are in fact, specialized implementations of SOA. This paper defines an SOA reference model. For the purposes of this paper, SOA is defined by abstracting the common concepts and elements from architectures and standards that claim to be service oriented. The localized definition of SOA is therefore subject to change in the future. This paper discusses specializations for advanced data exchanges within enterprise service oriented environments and illustrates some of the common architectures of these new platforms. Finally we conclude finding that it isn't, "THE FUTURE OF SOA.." it is, "THE FUTURE IS SOA.. !"

ABSTRACT-SIZ 110

INFORMATION SECURITY

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Computer security is a major issue of global concern, it just doesn't mean the security of the physical computer, the thing that matters to the user more than that of the computer is the information which it has inside. So we are going to summarize in this paper, about one of the booming opportunities of the globe – *Information Security*. Information security means protecting information and information systems from unauthorized access, use, disclosure, disruption, modification, or destruction. This article presents a general overview of information security and its core concepts. In this technical article we first glance on the history of information security, then the basic principles & key concepts along with the authenticity, non-repudiation & risk management factors. The various controls of information security (i.e.) administrative, logical & physical controls also have been analysed deeply. We have also shown specific interest on security classifications for information, the various access controls of information security & also on various cryptographical issues. As the processes involved in *information security* are of great importance, they are given priority (ie) the processes such as security governance, incident response plans, change management & disaster recovery planning are briefly dealt with. Finally we conclude our humble presentation by finding out that

–
it isn't, "THE FUTURE OF INFORMATION SECURITY"..
it is... "THE FUTURE IS INFORMATION SECURITY"..!

ABSTRACT-SIZ 111

OFFSHORE TIDAL TURBINE AS CONSERVATION OF ENERGY

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The advanced Technology searching for a new renewable energy source to generate an unlimited power. A best way to generate an electrical energy is to generate from oceanic energy which is a renewable source of energy in all the time. Tidal power turbines are a new technology that can be used in many tidal areas. They are basically wind turbines that can be located anywhere there is strong tidal flow. Because water is about 800 times denser than air, tidal turbines will have to be much sturdier than wind turbines. They will be heavier and more expensive to build but will be able to capture more energy. Commenting on the future prospects for tidal current energy, Martin Wright added: "We will build on the success to develop a commercial tidal farm, of up to 10MW in UK waters, within the next three years. With the right funding and regulatory framework, we believe we can realistically achieve up to 500MW of tidal capacity by 2015 based on this new technology."

ABSTRACT: SIZ 112

MULTIRESOLUTION WATERMARK BASED ON WAVELET TRANSFORM FOR DIGITAL IMAGES

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The overabundant and easily accessible digital data on the internet, has made it the most vulnerable information-store subject to piracy. Digital watermarking is a tool developed to fight piracy. The rapid expansion of the internet in the recent years has rapidly increased the availability of digital data such as audio, images and videos to the public. As we have witnessed in the past few months, the problem of protecting multimedia information becomes more and more important and a lot of copyright owners are concerned about protecting any illegal duplication of their data or work. Some serious work has to be done to maintain the availability of multimedia information and at the same time protecting the intellectual property of creators, distributors or simple owners of such data. This is an interesting challenge and is probably the reason why so much attention has been drawn toward the development of digital images protection schemes. Of the many approaches available to protect visual data, digital watermarking is probably the one that has received the greatest attention. The idea of robust watermarking of images, is to embed information data within the image with an insensible form for human visual system but in a way that protects from attacks such as common image processing operations. The goal is to produce an image that looks exactly the same to a human eye but still allows its positive identification in comparison with the owner's key if necessary. This paper attempts to first introduce the general idea behind digital watermarking as well as some of its basic notions. It is followed by describing some applications of watermarking techniques and the difficulties faced in this new

technology. The paper ends with an overview on some copyright protection techniques, involving watermarking and it is also seen as to why digimarks have become an important research subject of late.

ABSTRACT-SIZ 113

NEW TOPOLOGY FOR CORRECTING UNBALANCED LOAD IN SINGLE PHASE ELECTRIC TRACTION SYSTEMS

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This paper presents a simplified power supply scheme for single phase electric traction system which makes a balanced flow of current in the three phase lines which feeds the secure power to the Electric Locomotive. This topology eliminates the sectioning arrangement in the overhead traction equipments. Thus the section insulators in neutral sections which are used to separate the zones can be removed, since there is no necessity of separation of zones by using this system. Therefore this kind of topology rectifies the difficulties like Rotor heating in the alternators, Discontinuity in Supply to the Locomotive, Complexity in installation due to neutral sections, Flashover occurrence which can decrease the life of the system, Fluctuations in voltage and frequency. This topology is simulated and results are presented.

ABSTRACT-SIZ 114

Driverless navigation system for cars using RFID and Position protocol ID

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In this paper we describe the system designed by us to fully automate traffic, enabling implementation of strict traffic rules and reducing fatality rate due to accidents. The technology uses Radio waves to transmit an address called as Position protocol containing real time data about the vehicle, The system is also linked with the GPS and Vehicle mechanics, which can be even used to stop vehicle at a signal or can be used to assist police in pursuit.

ABSTRACT: SIZ 115

S3 MOBILITY

(SMART, SWIFT, SECURE MOBILITY)

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In our paper several issues of sustainable transport is brought into the spotlight. In this fast paced world everyone wants everything to happen just in the tick of a second and the wink of

an eye. It is widely acknowledged that traffic congestion threatens economic growth and irritates today's pacing world. With the increasing use of transport worldwide, it is necessary to derive solutions to ease traffic. Moreover transportation now accounts for about 40 per cent of the total use of energy in the world. As a result, there is an increased focus on how best to make it easier and more attractive for people to use public transport. For the last two decades IT has been positioned as the instrument for travel substitution. IT has been successful in all fields it has been applied to. Similarly it would definitely be a great help to the strange challenge that transport poses on environment. There are three main things which we must concentrate on [1] CONGESTION AVOIDANCE, [2] ACCIDENT AVOIDANCE, [3] DRIVER ASSISTANCE AND AUTOMIZE ONLY IN NEEDED SITUATIONS WITH ZONE DETECTION. It is much more important in this present day to derive a METHOD FOR DISABLED PERSONALITIES TO DRIVE WITH EASE. Developing special vehicles discriminate them from the normal man and also it may not be cost feasible. Our project will be a GLOBALISED SOLUTION which will be applicable to mankind of all categories. It may be applied to any nation (developed, developing or under developed). We proudly state that it is LOCATION TRANSPARENT. Every nation has started their development process in ITS. ITS USA has announced that they expect the industry to be fully grown by 2030 and we hope that ours would be a small contribution to the world ITS.

Abstract-SIZ 116

MSPIHT Based Image Compression for Despeckling Medical Ultrasound Images

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A novel technique for despeckling the medical ultrasound images using lossy-less compression is presented. The logarithm of the input image is first transformed to the multiscale wavelet domain. It is then shown that the subband coefficients of the log transformed ultrasound image can be successfully modeled using the generalized Laplacian distribution. Based on this modeling, the uniform threshold quantizer is proposed in order to achieve simultaneous despeckling and quantization. This adaptation is based on: 1) an estimate of the corrupting speckle noise level in the image; 2) the estimated statistics of the noise-free subband coefficients; and 3) the required compression rate. Context-based classification is also applied to the noisy coefficients to enhance the performance of the subband coder. A BFOS algorithm decides the number of levels assigned to each quantizer. An entropy coder, such as the SPIHT coding scheme, provides the final encoded bit-rate for the minimization requirements.

Abstract-SIZ 117

Software Activation Module Using Encrypted Image Authentication

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Generally, the software activation is done by using text keys as in the case of the products sold by Microsoft Corporation or in the form of registry keys as in the case of Kaspersky Antivirus. But these modes of authentication of software can be easily cracked by the use of brute force attack as well as the hash table attack or even by revealing the keys in various

sources of internet. So a remedy is needed to bring a pain in the neck for the software pirates, so that the piracy of software becomes hectic. In this paper, we implement Blowfish algorithm for the activation module of the software installer. Also image fractals are employed in this aspect, so that some authentic data are stored in the fractals in the form of pixels and some fake data in the form of noise in the images. The keys may be up to 448 bits and are used in the particular version of software installer. So in this paper we can see how software's authentication can be protected and thereby reducing the software piracy to a larger extent.

Abstract-SIZ 118

NANOTECHNOLOGY IN PHOTONICS COMMUNICATION

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Nanotechnology deals with the study of nano sized particles. With the study of nano size particles, devices and composites, we will find ways to make stronger materials, detect diseases in the bloodstream, build extremely tiny machines, generate light and energy and purify water. The most fascinating application of Nanotechnology is that we can transmit information at the speed of light more efficiently through Photonics communication using Photons. The main objective of this paper is to implement Nano-technology in optical communication. Photonics communication speeds up telecommunications by replacing Electronics with Nano optics. Even though we have several communicating methods like Electronic communication, the main reason why we have to go for photonics is "Photons are light (mass less) and fast and electrons are heavy and slow and never the twain shall meet". In this Photonics communication photons play the prominent role unlike in Electronics. The wave length of light is of a few hundred nano meters, where as our nano sized particles is of a few nano meters so that we can control the light using nano sized particles which is a very interesting thing in communication. In this communication method we directly pass the message signal through light with out converting into electrical or any other signals that is we are replacing the lazy electrons with more prominent photons. If we can implement nano technology in photonics communication we can transmit information with in a fraction of a second for that matter with in no time. By just using Pico joules of energy, we can switch parts in a few hundred Pico seconds of time. So this is both incredibly fast and also incredibly sparing in terms of energy usage. Nano technology is starting to take a close look at processing visual images to greatly improve the information they can provide us that is Active image processing.

ABSTRACT:SIZ 121

MEDICAL IMAGE PROCESSING- BONE IMAGING

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The normal direction of the bone contour in computed tomography (CT) images provides important anatomical information and can guide segmentation algorithms. Since various bones in CT images have different sizes, and the intensity values of bone pixels are generally nonuniform and noisy, estimation of the normal direction using a single scale is not reliable. We propose a multiscale approach to estimate the normal direction of bone edges. The reliability of the estimation is calculated from the estimated results and, after re-scaling, the reliability is used to further correct the normal direction. The proposed algorithm starts with initial seed search in the input image. Initial seeds can be obtained by thresholding or manual selection. Starting from an initial seed, to find an edge point near the seed or to correct the location of the seed we calculate the normal direction at the seed and construct a 1-D signal

that consists of the intensity of the pixels along the normal direction centered at the seed. We then use an edge filter to find the edge point in the 1-D signal. The deviation of the edge point in the 1-D signal from the center is used to obtain the location of the edge point in the 2-D image. From the edge point, we predict the next edge point along the edge. The predicted point is taken as a seed and the process is repeated until no new edge point can be predicted. We then go to the next initial seed, and the entire process is repeated until all of the initial seeds are used up. Finally, the edge map is postprocessed to produce a better edge map of the bone. Normal-direction estimation is based on the observation that the intensity of pixels near an edge changes more rapidly along the normal direction than along the tangent direction. 2-D symmetrical Gaussian is widely used to obtain the normal direction. A predictor-corrector scheme is used to improve the normal direction estimation. The optimal scale at each point is obtained while estimating the normal direction; this scale is then used in a simple edge detector. The reliability may become more stable from slice to slice when we use 3-D information to estimate the normal direction of bone edges. Thus, it is expected that the 3-D extension will shorten the segmentation time and improve the performance.

ABSTRACT:SIZ 122

ANTIBIOTIC RESISTANT E.coli MTCCno.443 CONTROLLED BY SIDDHA MEDICINE (BIO HAZARD)

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The major problems facing today are that many of the disease causing bacteria have become resistant to the effects of different antibiotics. *E.coli* is one of the most studied bacteria. The *E.coli* MTCCno.443 was revived and cultured in nutrient broth. The antibiotic sensitivity tests were performed to all the antibiotics such as Ofloxacin, Norfloxacin, Ampicloxacillin, Amoxicillin, Penicillin, Metronidazole and Erythromycin.. The *E.coli* was isolated from an infected patient sample and was confirmed by the biochemical tests. By applying the metronidazole there is no zone of inhibition. There is a great concern as certain strains of bacteria have few antibiotics will remaining,so we concluded using siddha medicines to inhibit *E.coli* MTCCno.443 strain. The various siddha medicines are below *Acorus calamus*, *myristica fragrans*, *Zingiber officinale*, *Gallnut*, *omum*, *alpinia officinarum*.

ABSTRACT-SIZ 123

IMPLEMENTATION OF PLASMA GASIFICATION VITRIFICATION WITH MAGNETO HYDRODYNAMIC GENERATOR

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The PGV system converts all organic materials, including biomass and waste products, into clean energy, with net-zero CO₂ emissions and no polluting emissions, through its unique and patented Integrated Plasma Gasification Combined Cycle (IPGCC) process. PGV technology is based on the use of extremely high thermal plasma temperatures to molecularly dissociate and gasify organic or hydrocarbon feed stocks into a synthetic fuel gas ("SynGas") and vitrify inorganic materials into an inert non-leachable slag. The hydrogen-rich syngas can be fed directly into MHD generator and then after fed in to gas turbines for the production of renewable electric energy in place of scarce and expensive natural gas. Alternatively, the

syngas could be used as a feedstock for commercial volumes of high quality hydrogen for use in fuel cells, or to make liquid fuels such as Methanol or Fischer-Tropsch diesel.

The basic principle of MHD generation is based upon the faradays law of electromagnetic induction i.e. the motion of a conductor in a magnetic field induces an e.m.f. in it .In MHD generator electrical energy is directly generated from hot gas (syngas). In MHD generator electrically conducting gas at a very high temperature is passed at high velocity through a strong magnetic field at right angles to the direction of flow, thereby generating electrical energy. The electrical energy then collected from stationary electrodes is then placed on the opposite sides of channel.

Abstract-SIZ 124 MOBILE-IP IN WIRELESS SYSTEMS

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This paper presents the fault tolerance of *Mobile IP* in wireless systems. Mobile IP can support wireless users with continuous network connections while changing locations. It is achieved by allocating a number of *mobility agents* (foreign agents and home agents) in the architecture of a wireless system. If a failure occurs in a mobility agent, the wireless users located in the coverage area of the faulty mobility agent will lose their network connections. To *overcome* the failures of mobility agents, this paper proposes an efficient approach to maintaining the network connections of wireless users without being affected by the failures. Once detecting a failure in a mobility agent, failure-free mobility agents are dynamically selected to be organized as a backup set to take over the faulty mobility agent. *Compared* to the previous approaches, the proposed approach does not take any actions against failures during the failure-free period. Besides, the hardware redundancy technique is also not used in the proposed approach. The overhead of the proposed approach is analyzed using the M/G/c/c queuing model. The results show that the proposed approach can effectively resolve the fault-tolerant problem of Mobile IP in wireless systems

Abstract-SIZ 125 HYBRID ADAPTIVE PERCEPTUAL COLOR- TEXTURE IMAGE SEGMENTATION

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Since large collections of digital images has created the need for efficient and intelligent schemes for image retrieval. Since manual annotation of large image databases is both expensive and time consuming, it is desirable to base such schemes directly on image content. One of the most important and challenging components of many Content Based Image Retrieval System (CBIR) is scene segmentation [1][2]. This paper considers the problem of segmentation of natural images based on color and texture[11]. Separately, the area of combined color and texture segmentation remains open and active. Another challenging aspect of image segmentation is the extraction of perceptually relevant information. Since humans are the ultimate users of most CBIR systems, it is important to obtain segmentations that can be used to organize image contents. A challenging aspect of our work is that we attempt to accomplish both feature extraction and segmentation.

Abstract-SIZ 126 SAFETY IN UNMANNED AIRSYSTEMS

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The success of recent military deployment of Unmanned Aerial Vehicles (UAVs) in Iraq and Afghanistan has both raised public awareness of UAVs and proven their operational viability. This has led to an increasing demand for the ability to operate UAVs for a variety of applications over the United States. However, the current Federal Aviation Regulations did not anticipate the operation of unmanned aircraft in the NAS. Therefore, there are no regulations currently applicable to UAVs. Current UAV operation in the NAS has been limited to flights approved through a lengthy Certificate of Authorization process. The lack of clear regulations has been a barrier to achieving benefits from potential commercial and civil operations. Recognizing this barrier, a significant effort is currently underway to integrate UAV operations into the National Airspace System (NAS). One fundamental requirement for operation in the NAS is to preserve the safety of the general public. Therefore, the implications for different classes of UAV operation should be examined based upon the requirement to operate at an equivalent level of safety. The purpose of this paper is to identify potential design requirements and approaches for integrating different classes of UAVs system safety requirement.

ABSTRACT -SIZ 127 IMAGE PROCESSING

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Image processing is any form of information processing for which both the input and output are images, such as photographs or frames of video. This technology holds the possibility of developing the ultimate machine in the future that would be able to perform the visual functions of human beings. The different applications of image processing are Photography and printing, Satellite image processing, Medical image processing, Face detection, feature detection, face identification, Microscope image processing etc. Image Processing and Computer Graphics are entirely different. A computer graphics system is involved with image synthesis where as image processing is involved with recognition or analysis. A digital computer is used in the process rather than an analogue one, is known as Digital Image Processing. The digital image processing is typically done by special software programs that can manipulate the images in many ways. It allows the use of much more complex algorithms for image processing, and hence can offer more sophisticated performance. In Digital Image Processing and The Recording Of Rock Art (A Case Study), DIP techniques have been used to detect facial features and ignore anything else, such as buildings, trees and bodies. Future capabilities of Image Processing include huge image data base processing, automatic detection of pathologic cases by enhancement of details and recognition of patterns, accurate measurements of the changes and distortions in the processed images, prediction of results to allow planning of treatment, simulation, and training on computerized cases, etc.

Abstract-SIZ 128 "ENSURING SAFETY IN RAILWAYS USING GLOBAL POSITION SYSTEMS"

S.POWNARTHI

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In this paper ,we discuss how GPS(Global Position System) a world wide network radio navigation system formed from a constellation of minimum of the 24 satellites and their ground station. is employed to overcome most of the accidents that occur in railway systems that due to negligence, technical faults nonreliable data and late understanding and slow or no response towards the danger signs considered small. The main principle that is used for the safety of the railways is that whenever a train will move over the track there will be vibrations that will be created on the track which is traced by software in a highly equipped database management system, many times faster than today powerful computer. The communication of error in track in GPS is through microphone and fiber optic sensors which is transmitted through the antennas installed in the control rooms of the station which avoids major accidents. The benefits and advantages of the proposed method outnumber the problems and disadvantages of non-technocratic method that is prevailing now.

“GPS DENIAL FOR SERVICE AND
DENIAL FOR SERVICE PROTECTION”

Abstract-SIZ 129

ENHANCED UNIFYING FRAMEWORK FOR DETECTING OUTLIER AND CHANGEPOINTS IN DISCRETE DOMAIN

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Data is found everywhere in this Digital world. Now it all depends on how we utilize the data. Generally everyone has a misconception that data mining is something related with Auditing and accounting purposes but this is wrong Data mining is nowadays used in fighting Terrorism. For Example consider a data mining system that monitors a passengers manifest finds suspiciously high number of passengers (Outlier) from a particular country say Iraq in a U.S bound plane then the Data mining system may generate an alert. Outlier detection and change point detection are challenging problems in data mining. A constant concern for a system administrator is intrusion detection. The proposed model, develop an enhanced unifying framework for detecting outliers and change points in data streams of discrete domain.

An outlier is a data point that differs significantly from what is expected or predicted which applied in areas related to fraud detection, rare event discovery, discovery of criminal activities in electronic commerce, weather prediction, customer migration and share trading. The dynamics of the data sources could be changing over time. These changes could come about gradually or abruptly. The changes could also be drastic, i.e. there could be significant changes taking place within a short duration of time. Such changes are not uncommon - external events could trigger a change in the behavior. The points at which such changes take Place are called change points or events. Detecting change points has a lot of applications such as event/trend change detection, activity monitoring, etc.

In the previous literature an unifying framework for dealing with outlier detection and change point detection was proposed on the basis of the theory of on-line learning of auto-regression model from time series data. The base paper, had dealt with only continuous variables. In order to deal with time series of categorical variables as well as continuous ones, a time series model over the discrete domain are required.

The proposed model of this thesis enhance the unified framework by combining the hidden mark over model of the discrete domain with the auto regression model and a design of

new algorithm for on-line discounting learning. The Hidden Markov models (HMM) for modeling data streams, switch between metric and event based representations. An additional data semantics variable is introduced, which is conditional on the hidden.

Abstract-SIZ130 Security Systems

BHAVANA.N
SANTOSH SREENIVAS PRASAD.V.K

Security is the condition of being protected against danger or loss. In the general sense, security is a concept similar to safety. The nuance between the two is an added emphasis on being protected from dangers that originate from outside. Individuals or actions that encroach upon the condition of protection are responsible for the breach of security. The word "security" in general usage is synonymous with "safety," but as a technical term "security" means that something not only *is secure* but that it *has been secured*. Safety, continuity, reliability. The key difference between security and reliability is that security must take into account the actions of active malicious agents attempting to cause destruction. There is an immense literature on the analysis and categorisation of security. Part of the reason for this is that, in most security systems, the "weakest link in the chain" is the most important. The situation is asymmetric since the *defender* must cover all points of attack while the attacker need only identify a single weak point upon which to concentrate.

Abstract-SIZ 131 A Web Security Agent to detect SHA-2 Collision Attacks Based on Probability

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Web Intelligence is a direction for scientific research that explores practical applications to the next generation of Web-empowered systems [1]. Also, the messaging systems are attaining importance in the global IT arena. Transporting information securely without obfuscation also has equal importance. SHA-2 algorithms are currently being used aftermath failure of MD5 and SHA-1 algorithms, to create digest and protect against obfuscation and interpolation. But recent cryptanalysis on SHA-2 discovers possible collision attacks with SHA-2 also. Thanks to [2] provides mechanisms to find highly probable collision conditions. In this paper, I present a paradigm for Web-based intelligent agent for secure SHA-2 communication by detecting collision pairs based on probability. The concept takes advantages of highly probable message collision pairs to discover differential paths and take decision on further transmission effectively.

ABSTRACT-SIZ 133 S.O.S (SENSE OF SIGHT) -The audible optics!!!

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This paper talks about a simple and economical solution to satisfy the basic need of visually challenged, by making them more independent. This technology works with the theories of

robotics that helps them access any book and it also translates arbitrary video images from a camera into sound. It also includes GPS that helps them to point out their location at any instance.

Abstract-SIZ 134 < FRAC-TS>-Fractal Traffic Splitting

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Traffic congestion poses to be a well known problem against which significant research has been undertaken but with little avail. This paper focuses specifically on reducing high traffic congestion rates. It must be noted that though the routes between any two places is generally not singular users prefer to take only few of the available options. In this paper this phenomenon has been visualized as the prime area of concern and the work done in it aims at aiding road users by providing them with possible alternative routes (along with congestion levels), thereby creating a scenario wherein it is at the discretion of the user to choose a path that suits him the best. The paper (1) describes the building of an in-car re-routing architecture that, apart from providing data regarding present level of traffic congestion, also predicts the best route from among a set of possible routes. (2) describes the model of an on-board guiding device implemented for the above mentioned system with user interface features. (3) describes the architecture, communication protocols and apparatus that need to be implemented for implementing a node-hub network required to transmit real time traffic congestion levels across various nodes to the remote hub. (4) geographic routing algorithms (Distant Vector Routing algorithm) along with the necessary probabilistic model to determine the route best associated with reduced traffic congestion for a leading time.

ABSTRACT-SIZ 135 FREE TEXT SECURITY

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Keystroke Dynamics is behavioral biometric which may be used to check personal identity. It can be useful to ascertain personal identity even after an authentication phase has been passed, provided that we are able to deal with the typing rhythms of free text, chosen and entered by users without any specific constraint. Unlike other techniques, keystroke sampling does not require any specific tool but just the computer in which the user enters text. Our approach can rely on what is typed by people because of their normal job, and a few lines of text, even collected in different working sessions are sufficient to reach a high level of accuracy, which improves proportionally to the amount of available information. As a consequence, we argue that our method can be useful in computer security as a complementary or alternative way to user authentication and as an aid to intrusion detection.

Abstract-SIZ 136 NETWORK SECURITY

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Today, the computer network is becoming more and more popular than ever. Everyday, we use computer network for exchanging data and files or searching information or shopping.

However, with the increasing popularity of network, the security is becoming the biggest problem in the network. When we transmit message through network, we must ensure that the message can be transmitted safely from the sender to the receiver and ensure that only the intended receiver can access the message. Fortunately, computer scientists have invented many technologies, such as password scheme, encryption and firewall, to ensure the security of network. This paper is just on the encryption and its application in network security.

ABSTRACT-SIZ 140 RED TACTON

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Technology is making many things easier; I can say that our concept is standing example for that. So far we have seen LAN, MAN, WAN, INTERNET & many more but here is new concept of "RED TACTON" which makes the human body as a communication network by name ... HAN (Human Area Network). NTT lab from Japan is currently testing & developing this revolutionary technology. Red Tacton is a new Human Area networking technology that uses the surface of the human body as a safe, high speed network transmission path. Red Tacton uses the minute electric field generated by human body as medium for transmitting the data. The chips which will be embedded in various devices contain transmitter and receiver built to send and accept data in digital format. In this paper we will discuss about red tacton, and its working. States, and applications of red tacton various fields. And we will compare our red tacton with the other technology for data transmission. And know about human area network.

ABSTRACT-SIZ 141

A FLEXIBLE TECHNIQUE TO EVALUATE NETWORK SECURITY USING GRAPHS BASED METHOD

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The earlier approaches to measuring network security are most based on the assumption that the related source data can be known well and truly. But in practice, it is very difficult to obtain all the related accurate source data. In this paper, we propose a flexible technique to evaluate network security of crucial resources in vulnerable network, which could bring out the accurate result of measuring network security with incomplete input data. Another key improvement is presenting the backward iterative algorithm to solve the problem of cyclic attack paths in measuring security using attack graphs based method. At the same time, the simulation experiment demonstrates the algorithm can be applied to the large attack graphs.

ABSTRACT-SIZ 001

SUBSTATIONS AT RISK!!!

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The most precious gift of nature is undoubtedly ELECTRICITY. So utmost care in safety and security is needed in substations. Unlike power plants substations are found in remote places. There are no roving security patrols. Each entity should implement physical security measures at their critical substations to prevent unauthorized access to assets, control systems, equipment. If these are disrupted it would impact regional, national grid reliability and public risk health and safety. We will discuss general guidelines which can be implemented with the use of current technology. The guideline should be used in conjunction with the physical security guideline and the vulnerability and RISK ASSESEMENT GUIDELINE.

Abstract- SIZ 002

SAFETY AT STAKE – FIRE

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Fire disasters have reached a very crucial stage, but are often neglected by people. Its cause may vary from a simple matchstick to electrical heaters and faulty machines. A proper understanding of the basic characteristics of fire and learning the safety practices have become very important. A balanced approach of providing knowledge to public passive fire protection constructional measures to be used and active fire protection measures should be installed. These will be discussed in details in article below.

ABSTRACT- SIZ 003

Lane Departure Warning System

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This paper talks about (LDW) Lane departure warning system that alerts the driver by giving audio, video or tactile feedback (such as vibrations) when the vehicle moves in an unintended path (such as a horizontal drift). Thus the driver can bring back the vehicle back into the lane as soon it drifts. It can be an effective way to avoid major accidents caused due to lane departure on highways which is one of the very significant causes of death occurring on highways of the drivers, driving for long routes who can often feel drowsy. The same is described below in detail.

ABSTRACT-SIZ 004

TRAIN COLLISION PREVENTION SYSTEM

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Safety violations due to 'human errors or limitations' and 'equipment failures' occasionally result in Train collisions. 'Anti-Collision Device (ACD) Network' (also called 'Raksha Kavach' meaning 'A Train Safety Shield') is an on-board train collision prevention system. Designed as a 'non-signal' system, it provides 'non-vital' 'safety enhancement' layer over the existing safety systems of train operations. 'ACD Network' therefore fills up 'safety gaps' left out due to limitations of existing 'signal' based train protection systems. 'ACD Network' is likely to prevent 'head-on' and 'rear-end' collisions in mid-sections, collisions at 'high speed' in 'station area', 'side collisions' with derailed vehicles obstructing adjacent line, collisions due to 'train parting / jumbling' and collisions with 'road vehicles' at level crossing through 'Train Approach' warning and detection of 'Gate Open'. Loco ACDs also give 'Station Approach' warning to drivers. Moreover, using Manual 'SOS' buttons on their ACDs, Drivers, Guards and Station Masters can also 'stop' trains when any unusual is detected.

ABSTRACT-SIZ 005

Comparison of the protective relay systems by using the conventional & the microprocessor based relay

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Protective relays play a vital role in the operation of a power system. In this paper we would discuss on how the microprocessor based protection schemes provide an edge over the conventional protection schemes which use the electromechanical relays. Various factors such as complexity, cost, maintenance, back-up protection would be considered for analysis.

Apart from these the paper would discuss transformer & feeder protection using the microprocessor relays and the algorithm involved in operating the fuse saving scheme in both the conventional type relay & microprocessor based relay.

ABSTRACT-SIZ 006

TSUNAMI WARNING SYSTEM

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Shweta Rani

In this paper an innovative and system on earthquake is described. In particular, the focus is on the Tsunami monitoring systems based on sea levels measures. The ultimate goal of tsunami warning system is forecasting. Seismic Waves can be monitored with the newest offshore technologies, the more advanced electronics and data management and communication solutions and the knowledge of logistic/operational aspects related to the installation of sea surface buoys, underwater systems, control centre and geographical scale alarm systems. Estimating earthquake parameters (namely location, moment, mechanism and depth), and forecasting the expected height of the oncoming wave with the aid of computer models of tsunami generation. It is uses to be prepared in order to reduce the loss of life and property.

ABSTRACT-SIZ 007

Network Security

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Network security is a complicated subject, historically only tackled by well-trained and experienced experts. However, as more and more people become ``wired'', an increasing number of people need to understand the basics of security in a networked world. This document explains the concepts needed to read through the hype in the marketplace and understand risks and how to deal with them. Some history of networking is included, as well as an introduction to risk management, network threats, firewalls, and more special-purpose secure networking devices is included. It is hoped that the reader will have a wider perspective on security in general, and better understand how to reduce and manage risk personally, at home, and in the workplace

ABSTRACT- SIZ 008

ELECTRICAL FENCE SYSTEM

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This presentation is about ELECTRICAL FENCE SYSTEM. It is a detailed description about its requirements, construction and deployment as a safety and security system. The presentation will also throw light on the extent of its application in INDIA.

ABSTRACT-SIZ 009

PHISING –THE CYBER CRIME

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'PHISING' in a broad sense is same as 'Fishing' in which the fisherman hooks the fish by tempting him toward a food piece . Similarly in 'Phasing' the 'fishermen' are the hackers of the cyber crime world, 'fishes' are the ignorant users and the 'hook' is the fake web-pages created by them. It is a cyber crime in which people frequently knows your ID and password and use it later for his benefit. It was first experimented in 1990, when offenders created an AOL account with fake credit card number; it was later prevented when AOL accounts are subsequently brought in measure. It was estimated that US lost \$929 million USD in between May 2004 and May 2005 due to phasing

while UK lost £504 million GBP in March 2005. To identify a phishing web-site is not much difficult e.g. in most of the fake web-site http is written instead of https. To help detect and prevent personal data theft Microsoft has developed a multi-layered defense of dynamic technologies both in e-mail and with their browser technology to combat this challenge. But Microsoft attempt is not enough, both customer and companies should take their respective preventive steps. At the end is an idea that I have developed to tackle the problem of phishing.

ABSTRACT- SIZ 010

FRONTIER OF TERAHERTZ TECHNOLOGY

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Recent events have accelerated the quest for ever more effective security screening to detect an increasing variety of threats. Many techniques employing different parts of the electromagnetic spectrum from radio up to X-ray and gamma ray, are in use. Terahertz radiation, which lies between microwave and infrared, is the last part to be exploited for want, until recently, of suitable sources and detectors. This paper describes practical techniques for Terahertz imaging and spectroscopy which are now being applied to a variety of security and medical applications. Also describe that Terahertz imaging has the ability to use very low levels of this non-ionising radiation to detect hidden objects in clothing and common packing materials and envelopes. Moreover, certain hidden substances such as plastic explosives and other chemical and biological agents may be detected from their characteristic Terahertz spectra. The results of experiments, coupled with availability of practical Terahertz systems, demonstrate the potential for Terahertz technology in security screening and counterterrorism.

ABSTRACT-SIZ011

AIR TRAFFIC CONTROL AND ITS SAFETY

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A number of aircraft and many lives have been lost in accidents involving erroneous air speed, altitude information presented to flight crews on flight deck instruments. In all cases, the aircraft was capable of continued safe flight and landing following the instrument failure. Although the flight crews in most cases are aware that some of the information presented to them was erroneous; they do not use the remaining available information to safely complete the flight. The defenses against accidents due to instrument error include elements of air plane system design and of crew training. Engineers can design systems to detect or to prevent the display of erroneous information. Training programs can help crews correctly and respond to erroneous instrument reading. This paper examines the events sequences for several accidents in an effort to identify common elements. These elements are then described, followed by a discussion of how they have shaped and continued to shape the ongoing technical evolution of

air data an altitude air instrument system .It also include some of the measure that can be taken to avoid air mishaps

ABSTRACT SIZ 012

GREEN BUILDINGS: An Approach Towards Pollution Prevention

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This is the time when a big industrial revolution is going on in the world. All the leading industries are honing their technical capabilities, this gives a side effects pollution, global warming, ozone depletion, etc., and the only solution is a green building, which has a best quality to reduce the flow of energy and material, both.

ABSTRACT-SIZ 013

EARTHQUAKE DETECTION AND SAFETY SYSTEM FOR OIL PIPELINES

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Large pipelines represent huge economic assets. From an ecological point of view, they may be considered as a certain risk. Therefore, pipelines in seismic active zones are designed against earthquakes. However, when an earthquake occurs, the questions are how strong it is compared to the design values and whether the normal operation of the pipeline can continue. These questions are equally important in economic and ecological respects, but the ecological aspect is specifically significant with offshore pipelines. This article focuses on how an earthquake detection system would allow early detection by pipeline operators and how pipeline safety can be improved by the application of the Pressure-Relief Before-Break principle. Pipelines are sensitive to secondary seismic effects, mainly the soil liquefaction with lateral spreading, the landslides and the fault movements. Although only oil pipelines are addressed here, corresponding considerations can be made for gas, water and products pipelines. The Strong Motion Instrumentation is a type of system which is very much suitable for pipelines against earthquakes. Within five seconds, it provides a value of the impact of the earthquakes to the pipeline. The SMI has an accelerometer which plays a key role in detection

ABSTRAC- SIZ 014

The Threat of Data loss and the increasing trend of Ecommerce based internet security breaches

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With the advent of the outsourcing war since the last 3-4 years, the world has seen a huge change or as matter of fact a giant leaps on the e-business community. E-business or what we call e commerce is certainly of no exception. E-commerce has shown its effects in different aspects of the industry. Applications are built from— standard interfaces with "plug and play" components. Any malware or any severe virus has to be prevented from attacking / infecting the system as the re establishment after failure is cumbersome and requires substantial technical support and cost. Secondly, persistent storage facility that the client and— the server will be device with is again something of great concern of safety as, the data is highly confidential and literary priceless. Using the model— with the windows operating system has hacking threats. But the security features that Verizon will be providing the portal will to a great extent negate the hacking situation. Attacks that specifically aim to do harm are known as premeditated or malicious attacks. They can be further broken down into attacks caused by malicious code and those caused by intentional misrepresentation. Misrepresentation is most often seen with regard to on line fraud and identity theft (see below). Malicious code, on the other hand, is at the root of so-called "cracking's" and "hackings" - notable examples of which include computer viruses, data theft, and Denial of Service (DOS) attacks. Equally, in some circumstances, monitoring internet and e-mail use may be an important component in protecting systems processing personal information from damage or unauthorized access (e.g. scanning e-mails for worms and viruses). Securing personal information from loss, damage and unauthorized use and disclosure is an important part of compliance with the Data Protection Act.

ABSTRACT-SIZ 015

BIOHAZARD AND BIOSAFETY MEASURES

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Biohazards are the infectious agents. There are many areas or fields in which biohazard are involved. Mainly biohazard involves in the R& D Labs, Research Institutes, production area of any biological product (vaccines, particular strains, antivenom, etc). Biosafety involvement for each area is much important. Biohazard has some basic types (rDNA, pathogens, oncogenic viruses, cell cultures, venomous invertebrates and vertebrates. rDNA involves mostly the genetically modified organisms for the benefit of the people but they may have a defective future becoming epidemic. Pathogens involve bacteria, fungi, viruses, etc which are harmful.

Oncogenic viruses are those which induce cancer. Cell cultures of various cell line which may be infectious. And finally the venomous invertebrates and vertebrates involves the insects, animals, reptiles which are also considered as the biohazard mainly for the people like biologists, discovery workers, etc. The biosafety level provided for each every use of biohazard agents must be followed according to respective levels. At last the bioterror and biosafety are explained with various examples in the recent trend. Biosafety is very much important in each and every field of Biology.

ABSTRACT SIZ016

Information Security and Safety: Trends Towards 2020

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Safety and security means a work without any danger and in unallowable manner. It includes characteristics such as authentication, authorisation, confidentiality, integrity, privacy, non-repudiation and availability and is concerned with ensuring that the system cannot cause damage irrespective of whether it conforms to its specification. The wireless communication plays a great role in our daily life, without any safety and security we cannot handle these entire electronic world as it is going now. We have a project about this technical platform which will push us to a great generation. All the wireless experiments done in the future will increase our productivity, globalisation. A larger amount of the world's information assets will be digitized and accessible via the Internet. The amount of computer crime and possibly terrorism will decrease significantly

ABSTRACT SIZ 017

HACCP AND ISO DEVELOPMENT OF A FOOD SAFETY

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There is an increase in the customer demand for safe food. This has lead food processing companies to develop food safety management systems, which are based on HACCP. In 2001, ISO has undertaken the development of an auditable standard, which further defines Hiccup's role in a food safety management system. This standard is not intended to define the minimal regulatory requirement; however it is intended to define the requirements for companies that desire to exceed the regulatory requirements for food safety. It is expected that this standard will be published by ISO in 2004.

ABSTRACT-SIZ 018

Data Security

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Enterprise businesses and government agencies around the world face the certainty of losing sensitive data from a lost laptop, removable media or other plug-and-play storage device. This drives the need for a complete **data protection** solution that secures data on all common platforms, deploys easily, scales to any size organization and meets strict compliance requirements related to privacy laws and regulations. This current document discusses the practices that we have identified to maintain data integrity and availability. The associated documents address standards regarding access control; rights management and authorization; sensitive data, de-identification, and confidentiality.

ABSTRACT-SIZ 019

Introduction to Network Security

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Network security is a complicated subject, historically only tackled by well-trained and experienced experts. However, as more and more people become ``wired'', an increasing number of people need to understand the basics of security in a networked world. This document was written with the basic computer user and information systems manager in mind, explaining the concepts needed to read through the hype in the marketplace and understand risks and how to deal with them. Some history of networking is included, as well as an introduction to TCP/IP and internetworking. We go on to consider risk management, network threats, firewalls, and more special-purpose secure networking devices. This is not intended to be a ``frequently asked questions'' reference, nor is it a ``hands-on'' document describing how to accomplish specific functionality.

It is hoped that the reader will have a wider perspective on security in general, and better understand how to reduce and manage risk personally, at home, and in the workplace.

ABSTRACT SIZ 020
DATA SECURITY

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The content below summarizes the latest techniques being implemented in protecting data from external tampering. Conventional protection provided by **passwords** is fast being replaced by **biometric authentication methods**. (E.g. **voice analysis, finger print, facial scan, DNA, digital signature**).

ABSTRACT SIZ 021
ENERGY SECURITY THROUGH ENERGY CONSERVATION

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Energy is the most essential component to drive a country towards development. Some of the countries have enough energy resources but some have to import it. With depletion of the fossil fuel and its increased cost it has become difficult for countries to fulfil their energy demands .this has lead to some alternative sources which are equally efficient and causes less pollution.This paper deals with the energy situation of some of the developing countries like India and some of its neighbouring countries, also the energy situation of countries like US and France and how they are securing there energy .This paper also examines the alternative sources of energy .It focuses on the energy security.

ABSTRACT-SIZ 022
EMBEDDED SYSTEM PROCESSING FOR
AUTOMOBILE INDUSTRY:THE SAFETY AND SECURITY

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In this paper, how Embedded system changes the scenario of automobile industry is described With respect to its security, efficiency, pollution reduction, safety, various controls in the automobile, other various possible alternative source of energy for the automobile industry, a nd finally how hybrid vehicle will change the world of automobile.

ABSTRACT -SIZ 023

Information Security: The open Challenge

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The economics of information security has recently become a thriving and fast-moving discipline. As distributed systems are assembled from machines belonging to principals with divergent interests, we find incentives' becoming as important to dependability as technical design is. The new field provides valuable insights not just into 'security' topics such as privacy, bugs, spam, and phishing, but into more general areas such as system dependability (the design of peer-to-peer systems and the optimal balance of effort by programmers and testers), policy (particularly digital rights management) and more general security questions (such as law-enforcement strategy).

ABSTRACT- SIZ 024

Biometric Identification System -Ensures Security

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A wide variety of systems require reliable personal recognition schemes to either confirm or determine the identity of an individual requesting their services. As a reliable approach to human identification such schemes ensure that only a legitimate user and no one else access the rendered services.

Examples of such applications include secure access to buildings, computer systems, laptops, cellular phones, and ATMs. In the absence of robust personal recognition schemes these systems are vulnerable to the wiles of an imposter. Biometric recognition or simply Biometrics refers to the automated

ABSTRACT-SIZ 025

Road Traffic Safety using Wireless Magnetic Sensors

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Road traffic safety deals exclusively with road traffic crashes – how to reduce their number and their consequences. A *road traffic crash* is an event involving a road vehicle that results in harm. For reasons of clear data collection, only harm involving a road vehicle is included. A person tripping with fatal consequences on a public road is not included as a road-traffic fatality. To be counted a pedestrian fatality, the victim must be struck by a road vehicle. Safety can be improved by reducing the chances of a driver making an error, or by designing vehicles to reduce the severity of crashes that do occur. The paper describes the process and presents experimental results comparing the accuracy of such a wireless sensor network with loop detectors and video. That is improved and modifies the old traffic control system. Wireless magnetic sensor networks offer an attractive, low-cost alternative to inductive loops, video and radar for traffic surveillance on freeways, at intersections and in parking lots. The network comprises diameter sensor nodes (SN) glued on the pavement where vehicles are to be detected. The SNs send their data via radio to the "access point" (AP) on the side of the road.

The AP forwards sensor data to the Traffic Management Centre via GPRS or to the roadside controller. Because such networks can be deployed in a very short time, they can also be used (and reused) for temporary traffic measurement. Vehicles are detected by measuring the change in the Earth's magnetic field caused by the presence of a vehicle near the sensor. Two sensor nodes placed a few feet apart can estimate speed. A vehicle's magnetic image (signature) can be processed for classification and re-identification.

ABSTRACT-SIZ 026

SAFETY FROM ELECTRICITY IN HOUSE

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Safety is the main responsible for the life security. As we all know life is a most precious gift given by nature. it is very necessary for us to save our life. One can lose his lie within fraction of seconds. As electricity plays an important role in our daily life. So it is necessary for us to know how one will be safe from it. It's easy to practice electrical safety. Remember that electricity always takes the shortest way to the ground. It will go through wire, metal, wet objects... or you. It's invisible, but very real, so treat it with respect.

ABSTRACT- SIZ 027

SAFETY IN UNMANNED AIR SYSTEMS

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The skies are a little more crowded now than they were in 1918 when the U.S. Postal Service first contracted airmail delivery and provided the impetus for the airline industry. There are a number of civil and commercial applications that UAVs could potentially perform — law enforcement, wildfire reconnaissance, disaster relief, environmental monitoring and research, tax and zoning databases, precision agriculture, power and gas line patrol, wireless communication relay, natural resource management, and media support.

ABSTRACT- SIZ 028

Safety of Corrosion Protection of Ductile Iron

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Corrosion and **corrosion** protection characteristics of ductile iron pipes are presented in this paper. **Corrosion** rate reduction and corresponding cathodic current criterion and the **corrosion** protection benefits of the traditional, standard asphaltic shop coating. This information was then analyzed in conjunction with an extensive database from 1379 physical inspections of buried iron water lines. The result of the study is a risk based **corrosion** protection design strategy for buried ductile iron pipelines.

ABSTRACT- SIZ 029
NANO SAFETY- Smallest Great Thing
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Nanotechnology is becoming ubiquitous in consumer products. As its use continues to grow, so do concerns about its impact on both humans and the environment. Therefore, products are undergoing increased scrutiny, as in a recent case in which the incorporation of nanoparticles caused a German cleaning product to be removed from the market, or as another example, the concerns about the titanium oxide nanoparticles in sunscreen and the unknown effect on people. Also unknown are the effects of beneficial applications. While the potential benefits of the application of nanomaterials to treat and cure cancer offers hope to many seriously ill people, the long-term impact of nanomaterials on the human body is not completely known. Employing silver nanoparticles in wound dressings, promotes healing while reducing potential infections; but, these same nanoparticles could also destroy helpful bacteria in the environment if the particles are not properly handled.

Concerns like these frequently result in media reports that portray nanotechnology as a future curse rather than the beneficial technology that it has the potential to be. Because insufficient scientific information is not available to the public, reports like those mentioned above become the source of information. Since nanotechnology is relatively new, it is understandable that information is not in an emetic manner and information is that the fundamental properties of nanomaterials are generally unknown. Investigations of the properties need to be accomplished in a systematic manner disseminated to as wide an audience as possible.

However, a problem with determining the material properties is that there is a lack of equipment that can accurately investigate the material properties in the nano realm. Complicating the matter is a lack of standardized procedures for handling and employing the nanomaterials. The approach to developing the understanding of the behaviour of materials in the nano requires a systematic plan to address the various elements of nanotechnology.

This lack of knowledge about nanomaterials inhibits their application. The semiconductor industry at the July 2007 ITRS meeting indicated that one of the issues with future improvements in devices is the lack of knowledge about the properties of nanomaterials. The lack of knowledge also raises the specter of danger to people. The fundamental question is about safety to the people who handle it, to the people who use the products, and to the environment. This issue, NANO-SAFETY, needs to be addressed in a systematic approach to provide information needed to develop advanced applications employing nanomaterials in a safe and sure manner.

This paper addresses four key areas for developing a NANO-SAFETY effort and identifies the key areas as: 1) Nanomaterials properties; 2) the effect on humans and the environment; 3) the means of handling the materials correctly; and, 4) the procedures that must be in place to minimize risk in applications. The scope of this effort is larger than any one organization is capable of handling. Therefore, the approach presented herein employs a collaborative effort that includes universities, medical facilities, and industry.

ABSTRACT-SIZ 030

FIRE SAFETY AND SECURITY

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Safety is the main responsible for the life security. As we all know life is a most precious gift given by nature. It is very necessary for us to save our life. One can lose his lie within fraction of seconds. So it is necessary for us to know how one will be safe from it. It's easy to practice fire safety.

ABSTRACT-SIZ 031

ENVIRONMENTAL SAFETY

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It comprises of environmental management system. Our main aim is to protect public health, the environment safety of human beings. It also puts emphasis on reduction of use of gas, electricity, paper and other resources and to increase the recycling of the goods and purchase of green products. It can be done by continuous improvement of recycling of products like plastics, paper etc. We should have an Environmental Management System (EMS) to reduce our environmental footprints. The basic facts about global warming are fairly simply stated. High concentrations of so called 'greenhouse gases' in the atmosphere create a 'heat-absorbing blanket' that raises the temperature at the surface of the earth above what it would otherwise be. The Framework Convention on Climate Change (FCCC) defines greenhouse gases as 'those gaseous constituents of the atmosphere, both natural and anthropogenic, that absorb and re-emit infrared radiation'. The relevant gases include carbon dioxide (CO₂), methane (CH₄), and nitrous oxide (N₂O), hydro fluorocarbons, per fluoro carbons and sulphur hexafluoride. The most important greenhouse gas is water vapour this paper compares and clarifies differences revealed in proposals from different regions on a future multilateral climate regime, after the year 2012.

ABSTRACT-SIZ 033
NETWORK SECURITY
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For the first few decades of their existence, computer networks were primarily used by university researchers for sending e-mail and by corporate employees for sharing printers. Under these conditions, security did not get a lot of attention. But now, as millions of ordinary citizens are using networks for banking, shopping and filling their tax returns, network security is looming on the horizon as a potentially massive problem. In this section, we will discuss network security from several angles, point out numerous pitfalls and discuss many algorithms and protocols for making networks more secure.

This document was written with the basic computer user and information systems manager in mind, explaining the concepts needed to read through the hype in the marketplace and understand risks and how to deal with them.

Some history of networking is included, as well as an introduction to firewalls and internetworking. We go on to consider risk management, network threats, firewalls, and more special-purpose secure networking devices.