GEARS: Evolving Classifier using Genetic Algorithm and Ensemble Learning by Inducing Sequence Data and Preference Associative Rules.

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Abstract:
Indeed machine learning models have played a significant role in bioinformatics to classify protein and DNA sequences. But large number of these models; have been evolved by learning amino acid sequence data. We are developing a new approach to evolve classification model(s) by learning amino acid sequence data and associative classification rules based on amino acid's preference through genetic evolution. Implementation of this approach is a new machine learning simulator called GEARS (Genetic Evolution of Classifiers by Learning Residue Rules and Sequence). We hypothesized that classification model(s); learned by GEARS will reduce the false negative and positive predictions. This study reports the conceptual framework and architecture of GEARS along with its application to post translational modification.

Tool Development for Automatic Mitigation of IT Risks in an Enterprise

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Abstract:
In the recent days, most of the Businesses depend on Information Technology (IT) in the form of Customer Solutions, Electronic Information, Enterprise Recourse Planning (ERP), Linkage, Communication and many other activities. These activities are essential for ongoing business processes. Therefore, risks related to IT are critical for the business and has major impact on goals. Literature review reveals that there exist different organizational standards and various frameworks for risk assessment and mitigation. Such frameworks presented mechanisms to identify the risks and assist the organization to design the mitigation procedures in order to reduce the risk up to acceptable level. The mitigating procedures may require various activities and tests to be performed in IT. In addition, the traditional standards and frameworks lack the information to design automated mitigating procedures and to design tool by embedding the developed automated procedures. This paper proposes two sequential models which incorporate the above- mentioned issues. The proposed model enhances the previously defined standards in terms of its involvement in the form of standard procedures and frameworks. Further more the simulation is carried out on the proposed model for its theoretical validation.

Forensic Analysis: Correlate Event Technique

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Abstract:
IT auditing techniques used for forensic analysis are required by an organization ranging from corporate sector to government agencies. The analysis can vary in nature, purpose and orientation. The study of literature reveals that much emphasis is placed on reducing the risk of fraud at first place, hence limiting the scope to pre-fraud situations. Very little has been reported on how to proceed such scenarios where fraud has occurred and investigative analysis is required to trace the loopholes. Therefore, a generic framework is proposed in this paper to assist a forensic analyst to ensure that s/he covers all the entities in the IT systems involved in the transaction under investigation. The proposed framework highlights different phases of forensic analysis based on the fact that all the heterogeneous logs related to the specified transaction should be scanned. Furthermore, to support the framework a correlate event technique has been devised. Finally, with the help of a scenario the proposed framework is validated.

Security Protocols for Sensor Networks

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Abstract:
Master key schemes are a viable solution to establish pair wise shared secret keys in Wireless Sensor networks. In these schemes, a master key is preconfigured into each sensor node which is then used by each node to generate pair wise shared secret keys. In the literature so far, it is essential for each sensor node to keep master key in its memory during the entire phase of key setup. As soon as key setup completes, each node erases the master key from its memory. Although key setup phase of a node lasts for a small interval of time, it is not impossible for an adversary to compromise a node during this time. In this situation, the presence of master key can be disastrous. So the challenge is to protect a sensor network from the compromise of master key during its key setup phase. We propose ***Secure Authenticated Key Establishment (SAKE)*** protocol that meets the above challenge by introducing an idea that master key need not to be kept by a sensor node for the entire key setup phase thereby shortening the master key compromise window. With the help of our proposed scheme, other attacks during key setup phase can also be avoided.

Formalization of Oil and Gas Seismic Survey using Z-Notation

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Abstract:

This paper presents the formal specifications of locating oil and gas reservoirs using z-notation. Oil and gas are usually found in various types of subsurface traps, the science concerned with the finding oil is called Seismology. Seismology, involves the measurement of sound waves reflected back to the surface from rock layers. This is complex task, so by formalizing this we attain accuracy. Through mathematical analyses, reliability and robustness will increase.

Medical Image Processing in Distributed/ Grid Environment

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Abstract:

High-performance computing platforms are empowered and are progressing rapidly through grid environment. However, some obstacles for the prevalence of grid and the grid application development, especially regarding decisions and diagnosis in medical are still under development. The grid services architectures for service oriented computing and presentation are required to make grid a viable platform for medical diagnosis support system. We have proposed a Decision Support System (DSS) over the grid infrastructure which covers data presentation, processing and archiving. A policy overlay for rights delegation is also proposed for remote consultation and conferencing between researchers and doctors.

Wireless Traffic Management Using Token Bucket-Priority Queue

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Abstract:

Network traffic control is the process of managing, prioritizing, controlling or reducing the network traffic, particularly Internet bandwidth, used by network users, to reduce congestion, latency and loss.

Bandwidth management issues are crucial for both wired and wireless networks. As wireless networks expanding day-by-day and appealing thousands of user's. Its management is going to be of high importance. Wireless traffic Management is serious issue to tackle in near future. Our research interests span several areas of the traffic management. We are particularly interested in the design, analysis, and implementation of protocols and algorithms for both wired and wireless traffic management. The common attribute of our research is developing system that support to solve congestion problems. We proposed a traffic management solution which is enhancement/addition in earlier available system. Already best used Token Bucket and Priority Queue are combined here in this manner that best features of priority queue and token bucket assuring fair and smooth traffic management. Token bucket is it is best understood in the context of network traffic shaping or rate limiting, typically the algorithm is used to control the amount of data that is injected into a network, allowing for "bursts" of data to be sent. And in priority queuing, packets arriving to the output link are classified into one of two or more priority classes at the output queue. We added priority queue in token bucket exactly after traffic queue. Which sends packet/traffic on the base of its priority for token assignment from token bucket and then towards rate limiter and from their concerned client or server. This will favor movement of traffic in smooth and prioritized manner. This paper describes and evaluates a new algorithm/system to reduce the network another advantage is to regulate fairly the bandwidth share among the flows congestion based on priority of traffic/ packet.

Integration between WLAN & MANET

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Abstract:
In recent few years, many efforts has been put into account for solving most of the important challenges of Wireless Local Area Network (WLAN) and Ad-hoc network. WLAN has wireless connection within a network it based on fixed infrastructure and range of WLAN is approximately 100m. In Ad hoc due to mobility of node or the absence of fixed infrastructure, this network can be deployed anywhere any time. One of the emerging forms of Ad-hoc network is Mobile Ad-hoc Networking (MANET) that advocates wireless interconnection between devices which will be self organized and can be extend or operate in recital with the wired networking infrastructure or can grow in Autonomous networks too. Because of intermediate nodes in MANET which have arbitrary and malicious behavior a new security challenge exist in MANET as compared to the wired network which has fixed infrastructure.Mobile ad-hoc networks are also a good alternative in rural areas or third world countries where basic communication infrastructure is not established. Minimal configuration and quick deployment make mobile ad-hoc networks (MANET) suitable for emergency situations like natural disasters or military

conflicts. In this Paper a D-WLAN architecture model is proposed for integration between WLAN and MANET to make them to communicate with each other via a single node which is an intermediate node using feature of both WLAN and MANET.

Key management in MANETs

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Abstract:
Requirements Engineering is an indispensable component of Software Engineering. All software development companies use some form of Requirement Engineering Techniques but most of them lack formal application of this critical activity. This study aims to analyze and understand the degree of awareness, implementation and impact of usage of formal Requirement Engineering Techniques and methodologies in the Pakistani software industry. This study analyzes the software professional's views on using and implementation of requirement engineering techniques. . Here we analyzed the data that has been collected from 25 professionals from different software organizations. A survey through specially prepared questionnaire was conducted for a focused group of Pakistani Software companies and findings are presented in this paper.

Secure VPN Deployment in GPRS Mobile Networks

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Abstract:
We are living in an era in which the technology is changing very rapidly. Countries who recognize the importance of knowledge survive but others only wait and see the developed countries making progress. The growth of the Internet and the success of mobile networks suggest that the next trend will be an increasing demand for mobile access to Internet applications. It is therefore increasingly important that mobile radio networks support these applications in an efficient manner. Moreover, in such a hybrid environment, where clients are connecting to ever growing networks in an ad-hoc fashion, the security requirements of such practices become even more important. Mobile Internet requires enhanced security services available to all mobile subscribers in a dynamic fashion. The proposed security scheme improves the level of protection that is currently supported in GPRS and

facilitates the realization of mobile Internet. It secures data transmission over the entire network route from a mobile user to a remote server by utilizing the default GPRS ciphering over the radio interface, and by deploying an IP VPN over the GPRS core, as well as on the public Internet. Thus, on-demand VPN services are made available for all GPRS network subscribers and roaming users. The VPN functionality, which is based on the IPsec framework, is outsourced to the network infrastructure to eliminate the potential computational overhead on the mobile device. The VPN initialization and key agreement procedures are based on an Internet Key Exchange protocol. An end-to-end Virtual Private Network (VPN) deployment scenario over the GPRS mobile network is presented and analyzed.

Noise Cancellation in WLAN and Bluetooth

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Abstract:
Wireless communication is an ever-developing field and a plethora of innovations is envisioned in the future. It is anticipated that in this field devices will be developed to support communications with higher quality, and data rates. Since WLAN and Bluetooth operate in the same unlicensed ISM band (2.4 GHz), they often cause mutual interference and hence degrade performance. A number of collaborative and non-collaborative mechanisms have been proposed to overcome interference problems. In this paper a new method is proposed for noise and interference cancellation between WLAN and Bluetooth to achieve high-quality voice and data communication. This new concept is based on a common control channel (CCCH), which is used by different radio devices for synchronization.

Study of Mobile Agent Applications and its Security Issues

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Abstract:
Mobile Agent is a chunk of code that travels along a network from one host carrying its state of execution to the another host that provides an execution environment. Mobile agents being programmed with decision making ability can identify its route along a network. Mobile agent applications are today successfully implemented on industrial scale giving boost to mobile agent technology. This attracts the attention of most of the researchers to invest into this field. Mobility of the agent makes it more vulnerable to attacks by different malicious

agents or platforms. There is a broad classification of the security threats faced by a mobile agent. Malicious agent attacks and malicious host attacks are the main security breeches that needs attention. Each of these categories is addressed by the researchers and developers to countermeasure these security issues. An agent attacked by host issue gained healthy volume of focus from developers initially. Therefore, research is today beamed more towards the securing the agent platform or host against attacks from malicious agents or other non trustworthy platforms. This paper is a study of mobile agent technology, its application and security measures taken so far to deal with the malicious host attacks. In the end of this paper an automated railways traffic control system is taken for study. The problems expected in the system are suggested to be solved using mobile agent technology. A proposed framework is presented which is to be validated in formal methods.

Advance Internet Routing Protocols

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Abstract:
Routing updates are exchanged to ensure that the routers that using an internal Gateway Protocol (IGP) within an Autonomous System (AS), or other routers that using an External Gateway Protocol (EGP) so, to interconnect these types of ASes, there is need to have common view of the internal as well as external internetworking topology. Due to incorrect updates within an AS an organization can cause loss of service with its partner and client too or in worse case to the complete internet. In this paper, I study the Interior Gateway Protocols suite and after studying this I compared two protocols IGRP and EIGRP with each other and on the basis of some features, I suggested that EIGRP is the best protocol among Interior Gateway Protocols suite.

Introduction to Software Development Methodologies: Agile, Traditional and Pragmatic Agile

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Abstract:
Agile Software Development Methodologies such as Extreme Programming, Scrum, Crystal, DSDM and others are widely being adopted by software industry. Agile methodologies greatly emphasis on faster development and delivery of software by embracing requirement changes and feedback of customers. Traditional models such as waterfall, RUP and others

divergently rely significantly on comprehensive documentation, plans and procedures as compared to agile methodology. Researchers and practitioners have made efforts to blend advantages attached with both worlds and have proposed various models to balance the agility and discipline. This blended balanced breed of software development methodologies (SDM) is generally termed as Pragmatic Agile Development. On the basis of study of SDM and background experience it is recommended that standard organizations like ISO, PMI, CMMI, IEEE and etc. should review the viability of proposed pragmatic agile models and publish some standard. These standards should be followed and adapted by practitioners according to their own environment for use. Results of case study projects however, shown that agile methodologies are not always effective to meet lately added and changing requirements. These changes can not always be guaranteed to be incorporated in software within given time constraints and software quality attributes have to be compromised if successfully incorporated. These results differ from agile proponents' claims of suitability of agile methods for later requirements additions and changes.

Security Issues in Mobile Ad-Hoc Networks (MANETs)

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Abstract:
Since the popularity of wireless networks extensively enhanced, the mobile ad-hoc networks are becoming an attractive area for research. Still there are a range of issues that are faced in ad-hoc environment due to its special characteristics. In these networks the nodes are communicating in infrastructure less environment like earthquake, disaster recovery, military etc, without support of any central controlling or management authority. Also the places of each node and network topology changed dynamically. Each node is functioning as an end system and as well as a router for all other remaining nodes in this environment. This network used wireless medium to communicate with each other. These unique characteristics open new ways of security challenges and difficulties for the development of this network. The security solutions applied in more traditional ways may not directly be suitable for these kinds of networks. Various new proposals are proposed for secure communication. These proposals discuss specific issue, there does not exist any algorithm which can able to handle all the security problems occurred in ad hoc networks. Also the overall secure architecture has been given lower preference in these proposals. Lot of people is doing a large volume of research activities to identify new threats and to create secure mechanisms to counter those possible attacks. This paper discusses and provides an overview of the principal security issues for mobile ad-hoc networks.

FRAP: Ideal for Small Business

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Abstract:
Risk assessment is the process of identifying possible risks, which are associated with the working of an organization. When information security is added to risk assessment it becomes much more important to select the risk assessment standard/guidelines very carefully because of the various statutory, legal and contractual requirements. This paper shows that all small IT organizations and/or business can use FRAP to conduct qualitative risk analysis, as it is easy, requires less time, skills, expertise and is cost effective.

Key Management Services in MANETs

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Abstract:
Mobile ad hoc networks (MANETs) is a class of wireless networks that can be formed dynamically and randomly without the need for infrastructural setup. It consists of self dependant and dynamic mobile nodes which can detect and establish connection with each other while in the transmission range. The MANETs are vulnerable to attacks because of transmission through wireless, which can be easily misused by the intruder. The routing between the nodes is dependant on the information managed through protocols like OLSR etc. The routing data may be corrupted to cause problems like black hole. Hence the security over the MANETs is critical. We have addressed the issue of Key Management over MANETs. This paper surveys the issues and available solutions of Key management in mobile ad hoc networks (MANETs).

Kerberos implementation for User Authentication in MANETS

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Abstract:
In this paper implementation of Kerberos is proposed for Mobile Ad-hoc Networks (MANETS) for user authentication and authorization. Kerberos uses symmetric cryptography with a trusted server to enable secure authentication and key exchange between client nodes. The Kerberos protocol is designed to provide reliable authentication over open and insecure networks where communications between the hosts belonging to it may be intercepted. So simply "Kerberos is an authentication protocol for trusted hosts on un- trusted networks". Basically there are two approaches used in MANETS such as proactive approach & reactive approach. In proactive approach protocols are also known as traditional distributed shortest-path protocols those are used to maintain the routes at all times based on periodic updates with high routing overhead. We have implemented Kerberos concept with proactive approach using Optimized Link State Routing Protocol (OLSR). This technique will be helpful to implement a secure and authentication trust model for authorized nodes.

A Formal Approach towards Semantic Web using Z / EVES

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Abstract:
Current World Wide Web is mean to simply display pages to end user while the Semantic Web is a vision of a next-generation network that focuses on “Meaning” instead of merely pasting arbitrary text onto a page. Intelligent software agents can then use this information to organize and filter data to meet the user's needs. While in these systems each component should be correct to interact in real time with each other, it is often difficult to predict what the behavior will be when components interact over the internet. DAML+OIL and OWL are the current environments to create Ontology over RDF and XML structures which are used to represent data intelligently among different Ontologies. In this research a formal approach is used to discuss the behavior of Semantic Web using Z/EVES. This paper shows how well Z/EVES can be utilized to design, test, verify and reuse the technology to the semantic web for services i.e. OWL.

Rssi Based Triletration Method for Locating Wireless Devices in Indoor Environment

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Abstract:
With the wide spread growth of mobile computing devices and local area wireless networks, wireless network providers have started to target the users with value-added services based on the users' location information. Thus, location awareness and user tracking in indoor wireless networks has become an increasingly important issue. This paper presents an RSSI based trilateration approach for locating a wireless device from the access points at known locations as finding out the location in a wireless environment is to-date not very easy, cheap and accurate using 802.11b technology. The proposed system provides a solution for location tracking of mobile devices in indoor environment where the configuration of access points like transmit power etc., is not fixed and the movements in environment affecting attenuation of signal is so unpredictable that any mathematical modeling of indoor RF signal propagation is infeasible. Our proposed system is the enhancement of system [13]. In system [13] three servers and only one client is used. Three servers are used to detect the location of a mobile so it is a costly method because with the help of three servers we can detect the location of mobile, but in our proposed system one server and three clients are used. Only one server has to detect the location of a mobile, thus our system is cheap and easy to implement.

ERP: A Software Product Line Application

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Abstract:
Software product lines (SPL) is an industrial approach to software development with an emphasis on reuse. At the heart of SPL is the most fundamental fact that all software products are nothing else but variants of previous software products. Enterprise Resource Planning softwares gained importance in 1990s and since then it has seen an enormous demand. ERP implementations have always been infamous for low reusability and difficulty in its modification according to companies growing business needs. Our research aims at solving these limitations by applying SPL techniques in designing ERP systems. We present a framework that maps essential ERP features to SPL methodologies proving our point.

Formal Methods for Spatial Database specification for GIS Using Z-notations

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Abstract:
Formal methods are mathematical techniques that are used for specification, design, development and verification of software and hardware system. The use of these techniques in different stages of life cycle of software or hardware help revealing ambiguities and inconsistencies that might go unobserved otherwise. Geographic information systems (GIS) are used to collect, analyze and present information of the geographic world. In GIS environment, the database is related with a map and are called spatial database because spatial component is a fundamental part of such database. As GIS systems are usually very complex, therefore specification methods have very important role in their design. In this paper, the focus is on formal specification of spatial databases for GIS systems by using Z notation, which is a mathematical language with a powerful structuring mechanism. Set theory and mathematical logic are the basis of Z notation. By using techniques of mathematical logic, one can prove the correctness of specifications produced by Z notation and also these specifications can be refined and thereby can get a specification that is nearer to executable code. For our purpose, we use an example from the context of GIS and spatial database, and draw Entity Relationship Diagram (ERD). Then we make formal specification with the help of all entities and relationship between entities in Z notation schemas. This approach can be helpful for spatial database designer to design complex database which is unambiguous and whose properties and relationships can be verified.

Information Security Risk Assessment: Embedding MIL–STD–882d in FRAP

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Abstract:
Organizations especially Information Technology driven, today face the biggest security challenges and threats; therefore they must secure their assets from risk arising due to increasing complexity, uncertainty and interconnection brought by total reliance on technology. To mitigate risks they must perform either a qualitative or quantitative risk analysis. Facilitated Risk Analysis Process (FRAP) is one of the newer techniques for conducting fast paced risk analysis. As FRAP is a very flexible process therefore it can be applied to any organization with little or no changes. On the other hand MIL-STD-882 is Department

of Defense standard for Practice of System Safety. This paper shows that the by using the Mishap Risk Assessment Values Matrix we can rank all the risks identified by using FRAP on a scale of one to twenty to properly prioritize their mitigation.

Secure Routing Protocols in Manet

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Abstract:-
A MANET is a collection of wireless nodes that can dynamically form a network to exchange information without using any pre-existing fixed network infrastructure. This is a very important part of communication technology that supports truly pervasive computing, because in many contexts information exchange between mobile units cannot rely on any fixed network infrastructure, but on rapid configuration of a wireless connections on-the-fly. Wireless ad hoc networks themselves are an independent, wide area of research and applications, instead of being only just a complement of the cellular system. We have used these protocols in this paper AODV, DSR and SRP

Inadequate Stakeholders Involvement in Software Requirement Specifications and their impact on IS Projects Success

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Abstract:
This paper highlights and demonstrates the consequences of in-adequate stakeholders' involvement in requirements identification, elaboration and finalization which not only leads to ambiguous requirements, slippage of project schedule but also the risk of project failure. The research is based on the lessons learnt from a large scale commercial information system project in the telecom industry in South Asia. Based on the lessons learnt, a model is proposed. The proposed model further implemented on two other projects with the same client company which shows the improvements and timely completion of the projects.

Intrusion Detection in Wireless Sensor Networks

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Abstract:
Wireless Sensor Networks (WSN) are important areas over the past few years in communication technology. Many potential applications, involving WSNs, requires that they should be safe and secure. This short report will show the major threats that WSNs have to deal with. Moreover, it will inspect present countermeasures, but its focus will be on intrusion detection. It makes use of present IDS approaches and shows the steps to build a safe and sound IDS for WSNs.

A Comparison of VoIP protocols in the light of Security

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Abstract:
Two standards have emerged for the dominance of VoIP: the H.323 protocol suite by ITU-T, and the Session Initiation Protocol (SIP) by IETF. Both of these signaling protocols provide mechanisms for call establishment and teardown, call control and supplementary services, and capability exchange. Clients are dependent on Signaling Protocols. It means only one protocol can implement on clients at a time. And Security could be the decisive factor while selecting the protocol. So we investigate and compare these two protocols in terms of Functionality and Security. For fairness of comparison, we consider similar scenarios for both protocols. In particular, we focus on scenarios that involve a gatekeeper for H.323, and a Proxy/Redirect server for SIP. We consider all 6 versions of H.323. In terms of functionality and services that can be supported, H.323 version 2 and SIP are very similar. Finally, we note that H.323 and SIP are improving themselves by learning from each other, and the differences between them are diminishing with each new version.

Study of Intrusion Detection and Prevention System (IDS/IPS) - Intrusion Detection and Prevention System Using Snort with IP Tables

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Abstract:
A general trend in industry is a shift from Intrusion Detection Systems to Intrusion Prevention Systems. In this project, we investigate the motivations behind this trend. In addition, we survey some of the available IDS/IPS tools. More specifically, we installed SNORT and Linux firewall (IPTables), "the de facto standard for intrusion detection/prevention", and launched several attacks to see how well snort was able to log malicious behavior and block by IPTables. The communication of both tools increases the response capacity of the system, but we need a protocol to communicate them. In this paper we present how is to communicate two security tools: snort and IPTables. The communication is based on the Intrusion Detection Message Exchange Format (IDMEF) proposed by the Intrusion Detection Working Group (IDWG).

QoS (Quality of Service) Implementation Using MPLS in GSM Networks

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Abstract:
As the most common worldwide standard for mobile services, GSM/UMTS networks are at the heart of how people around the globe communicate. Long the basis for digital voice services, GSM has been extended via GPRS and UMTS to allow the same providers to offer non-voice services, such as text messaging, internet browsing, and multimedia images and video Multi Protocol Label Switching (MPLS) is a new technology that offers service integration, layer 2 switching and connection orientedness, that allows traffic engineering control traffic flows in the network. It take into account the specific needs of current and future RANs especially with respect to QoS requirements and flexibility. Multi-Protocol Label Switching (MPLS) is deployed in the Internet backbone to support service differentiation and traffic engineering. In recent years, there has been interest in extending the MPLS capability to wireless access networks for mobility management support.

Government's Information Technology Infrastructure Security Audit Standard

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Abstract:
Today the e-Government is automating almost all the federal Government departments in Pakistan [24]. With the increasing computerization there is a possibility that this IT infrastructure can be compromised or damaged by the internal or external threats [23]. There is no technique/technology in the industry which can guarantee 100 percent security. In this regard the Government has to arrange internal and external security audits in order to understand the current level of security through which the security risks can be reduce to the possible minimum level [1][10][15][22]. In this research paper we propose a standard through which the security audit of the Government's IT Infrastructure can be conducted. In our research we were not able to find a single standard which fully addresses the requirement.

Index Terms—Access control, Restricting and controlling subject and object access attempts. Algorithm, Cryptography, Science of secret writing that enables you to store and transmit data in a form that is available only to the intended individuals. Cryptosystem, Hardware or software implementation of cryptography that transforms a message to ciphertext and back to plaintext. Cryptanalysis, Practice of obtaining plaintext from ciphertext without a key, or of breaking the encryption. Cryptology, The study of both cryptography and cryptanalysis. Ciphertext Data in encrypted or in an unreadable format. Data origin authentication, Proving the source of a message (systembased authentication). Encipher, Act of transforming data into an unreadable format. Entity authentication, Proving the identity of the entity that sent a message. Decipher, Act of transforming data into a readable format. Key Secret, sequence of bits and instructions that governs the act of encryption and decryption. Key clustering, Instance when two different keys generate the same. ciphertext, from the same plaintext. Keyspace, A range of possible values used to construct keys. Plaintext, Data in readable format, also referred to as cleartext. Receipt, Acknowledgement that a message has been received. Work factor, Estimated time, effort, and resources necessary to break a cryptosystem.

QoS (Quality of Service) Implementation using MPLS in GSM Networks

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Abstract:
As the most common worldwide standard for mobile services, GSM/UMTS networks are at the heart of how people around the globe communicate. Long the basis for digital voice services, GSM has been extended via GPRS and UMTS to allow the same providers to offer non-voice services, such as text messaging, internet browsing, and multimedia images and video. Multi Protocol Label Switching (MPLS) is a new technology connection orientedness, that allows traffic engineering control traffic flows in the network. It takes into account the specific needs of current and future RANs especially with respect to QoS requirements and flexibility. Multi-Protocol Label Switching (MPLS) is deployed in the Internet backbone to support service differentiation and traffic engineering. In recent years, there has been interest in extending the MPLS capability to wireless access networks for mobility management support.

Reestablishing SIP Peers on Server Failure using Adhoc Routing Protocol

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Abstract:
Session Initiation Protocol (SIP) based services, such as VoIP, Instant Messaging (IM) and Presence; depend on the Internet and SIP overlay infrastructure, Wireless ad hoc network being devoid of any such services. In this paper, we have proposed an integration of the services with a cluster based ad hoc routing protocol and subsequent enhancements to support them in ad hoc networks.

Performance Comparison of Cosine and Jacquard Similarity Measures in Information Retrieval Process

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Abstract:
In information retrieval it is useful to rank retrieved documents based upon required information they passes and a number of methods re used for the purpose. Different ranking methods affect ranking order of same set of documents. It is interesting to compare the performance of retrieval processes not only when they are complete but also during their progress. There are a number of ranking methods but purpose of this text is to discuss empirical results, in graphical and tabular form, of ordering of documents based on ranking using cosine similarity measure in Vector Space Model and jacquard's similarity measure using different performance measures e.g. recall, precision, e-measure, f-measure and fall-out.

Power Management in Wlan

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Abstract:
In wireless LAN, power saving is critical issue for a node since the node has limited battery. Hence the nodes can use the Power Saving (PS) mode unless transmitting or receiving packet exists for the certain period. The following paper addresses the energy saving issues in 802.11 based Wireless LANs. This paper presents a survey on the various power saving techniques used in wireless networking. In this paper, different approaches are analyzed to minimize the power consumption in WLAN and a comparison among them has been presented. These power management approaches would help in reducing the system power consumption and hence prolong the battery life.