A NEWSLETTER FROM DEPARTMENT OF IT OF I.T.S, GHAZIABAD

Editorial Committee
Prof. Puja Dhar- Faculty Coordinator

Student Members
Sachin Singh(MCA-IV)
Deepa Goel(MCA-IV)
Zoya Siddiqui(MCA-II)
Prateek Sharma(MCA-II)

Institute of Technology & Science
Mohan Nagar, Ghaziabad-201007
☎ 0120 – 4174900, 6458473, 6458474
www.itsgzb.ac.in
Contents

- Biometric Authentication  
  Rashrita Gupta  
  4

- Ambient Intelligence and Smart Environment  
  Zoya Siddiqui  
  6

- Fourth Generation Mobile Communication Technology  
  Ravinder Kumar & Aditya Kumar Sharma  
  8

- The Success Story of Software development in India  
  Devesh Yadav  
  11

- Network Security  
  Avinash Singh & Saurabh Srivastava  
  13

- Microsoft launches New body -Motion Gaming technology  
  Kiran Chauhan  
  15

- Top 3 students on the basis of U.P T.U Examinations  
  17

- Activities Corner  
  18

- National Seminar on CICTE-2010  
  21

- Game Section  
  24

- Our Ambassador’s Speak  
  25
Message from the Director – IT

The scenario around the globe is changing rapidly and we have just sailed through the phase of economic slowdown and now again market is full of opportunities, especially, for IT graduates. We have commonwealth games round the corner, therefore, market is looking forward to personnels who can work under pressure, can update skills, have got best of interpersonal and technical skills. VIBRANCE has provided our students excellent platform where they can express themselves and share information with others.

It gives me immense pleasure to pendown my message for the Issue-3 Vol 1 of VIBRANCE, Newsletter of IT department of I.T.S. I am sure that VIBRANCE will keep you abreast of our latest I.T.S happenings so that you can cherish every moment of I.T.S and become part and parcel of its ever growing fraternity.

I wish all the best to the editorial committee of this newsletter in their consistently sincere efforts and to all the contributors for their valuable submissions.

Vineet Kansal
(PhD. IIT, Delhi)

From Editorial Team

India has always been a hesitatnt traveller on the path of globalization. As we know things are changed now and we are also a part of that change. Globalization is also driven by Science and Technology, it has broken many barriers and boundaries. Now the competition is tougher for the younger generatoins, as they have to compete with the best in the globe.

In continuation to our Issues we are highly indebited to our readers who have appreciated our efforts and enriched their intelligence through varrious articles contributed by various MCA students. So we are here with the Issue 3 Volume 1 of the VIBRANCE e-magazine of IT Department of ITS Mohan Nagar Ghaziabad.

We are looking forward to the participation of each student of MCA in future as well. Enjoy Reading and suggestions are welcome.

Editorial Committee
itsit@itsgzb.ac.in
Biometric Authentication
Rashrita Gupta
MCA-4th Semester

Historically, usernames and passwords are the most common form of authenticating computer users. They are also both the worst management headache for IT staff and the biggest network security hole in existence. Many help desks handle more password related calls than any other category. Users routinely share their passwords with one another.

Security industry observers frequently predict the use of biometric authentication systems to solve problems. These predictions are only beginning to come to fruition. Recent advances in technology coupled with a significant price drop make biometric authentication systems a viable alternative. As with most security solutions, proper implementation is critical. Deciding on the right type of biometric system requires an understanding of the underlying technologies. The process for a given user will usually begin with an enrollment process. Here, the system captures one or more (typically three) samples of the biometric. These samples are stored in a “biometric template” and used for future comparison during authentication.

Types of biometric systems

**Fingerprint Verification** – It is perhaps the best-known type of biometric measurement. Fingerprint scanning products are the most common type on the market today. Properly implemented, fingerprints offer potential for high accuracy. In addition, the readers tend to be small (easily incorporated into a keyboard for example), have a relatively low cost, and integration is usually easy. Some potential problems can arise however. Cuts or dirt on the finger can cause some systems not to recognize a valid fingerprint. Some scanners require precise placement.

**Hand Geometry** measures the physical characteristics of the user's hand and fingers. Hand geometry is one of the most established methods and typically offers a good balance of performance and ease of use. Hand geometry is most widely used in physical access control and time/attendance systems. It is not currently in wide deployment for computer security applications primarily because it requires a large scanner.

**Retinal Scanning** is well established and can provide high accuracy. User acceptance may be a problem however “You're not shooting a laser into my eye!” In reality, retinal scanners do not employ a laser, but scan using low intensity light and are considered quite safe. One drawback is that the user must look directly into the retinal reader. This is inconvenient for eyeglass wearers. In public applications, there may also be concerns with the spread of germs because of the need for physical contact with the retinal scanner. Another problem is that the user must focus on a given point for the scan. Failure to focus correctly causes a significant impact on accuracy.

**Signature Verification** enjoys a synergy that other technologies do not, since people are used to signing for things. There is a greater feeling of normalcy. While signature verification has proved to be relatively accurate, very few products available implement the technology.

**Facial Recognition** is one of the newest biometric methods. The technology has attracted a lot of attention. Unfortunately, extravagant claims that proved difficult to substantiate cooled much of the enthusiasm. It is not overly difficult to match two static
images. Picking an individual out of a group as some systems claim to be able to do is another matter entirely. Progress continues to be made with this young technology, but to date facial recognition systems have had limited success in practical application.

**Voice Recognition** is perhaps the method most desirable to users since everyone seems to want to talk to computers. In practice, implementation is extremely difficult. While recent advances in voice recognition have greatly improved the technology, it is still subject to problems. Local acoustics, background noise, microphone quality, the common cold, anxiety, being in a hurry, and anger can all alter the human voice enough to make voice recognition difficult or impossible.

**Iris Scanning** overcomes most of the problems of retinal scanners. Because the iris (the colored part of the eye) is visible from a distance, direct contact with the scanner is not required nor is it necessary to remove eyeglasses. The technology works by scanning the unique random patterns of the iris. Interestingly, the method does not rely on the iris color (the camera used is black-and-white).

**Measuring Accuracy:** Two measurements are commonly used. The likelihood that the system will incorrectly accept someone into the system is the False Accept Rates (FAR) or “False Positives”. How likely rejection of a valid user is falls under False Reject Rates (FRR) or “False Negatives”. Most biometric products allow administrators to adjust settings to lower the FRR number and make the system more user-friendly.

**Conclusion**
There is a good chance that biometric authentication will become more common. While the technology for biometrics use E-commerce, the products will probably not become ubiquitous enough for that type of wide spread use in the near future. Enterprise implementations and specialized applications such as ATM machines are more likely.
Ambient Intelligence (AmI) is emerging technology that brings intelligence to our common physical environments. The term AmI is used in Europe, similar developments on USA & Canada are usually referred to as Smart Environments (SmE) or Intelligent Environments. ITU-T (International Telecom Union-Technology) uses term “Ubiquitous Sensor Networks” (USN) to describe a network of intelligent sensors that could, one day, become ubiquitous.

**Background**

The future wireless world will be filled by a multitude of user devices, and wireless technologies with simple to use, anytime-anywhere network access affordable for everyone. The Ambient Networks addressed these challenges by developing innovative mobile network solutions in an environment with a multitude of access technologies, network operators and business actors. Such intelligent environments rely on the use of a large variety of sensors and sensor networks, smart objects and devices, artificial intelligence technologies, etc.

The resulting environments are systems capable of knowing and understanding the physical and virtual context of users and objects and responding intelligently to such knowledge. Potential applications extends to education, health and social care, entertainment, sports, and transportation, to name a few. Ambient intelligence is able to automate a platform embedding the required devices for context aware, personalized, adaptive and anticipatory services.

**Main Components of AmI/ USN**

The main components of AmI/USN are Sensor Network comprising sensors & power source (e.g., battery, solar power); USN Access Network comprising “sink nodes” collecting information from sensors & communicating with a control centre; Next-generation network (NGN); USN Middleware for the collection and processing of data; and USN Applications Platform to enable the effective use of a USN in a particular industrial sector or application.

**Technical & Standards**

Key technologies includes Unobtrusive hardware (Miniaturization, Nanotechnology, smart devices, sensors etc.), Mobile/fixed communication and computing infrastructure (including service-oriented architecture, semantic web etc.), Dynamic and distributed device networks (e.g. service discovery, auto-configuration, end-user programmable devices etc.), Human-computer interfaces (intelligent agents, context awareness etc.), Secure systems & devices (privacy
ensuring technology etc.), Radio-Frequency Identification (RFID) technology etc.

The IPv6 over IEEE 802.15.4 standard provides for a communications network with limited power requirements suitable for wireless sensors. ZigBee, is suitable especially for near-field communications with speed response & low power requirements. Alternative technologies include UltraWideBand (UWB), Bluetooth, and WiBree, etc. IEEE 1451 standard is used to provide low-cost transducer interfaces. ITU is standardizing Next-General Networks (NGN), which may be required for inter-working of sensors with backbone network infrastructures.

**AmI/USN Applications**

Sensor nodes and network infrastructure have potential applications in a diverse range of domains. Domains in which AmI/USN are used include civil engineering, education, healthcare, agriculture, environmental monitoring, military, transport, disaster response etc. Ubiquitous Sensor Networks provide potentially endless opportunities in a diverse number of different applications, which include Intelligent Transportation Systems (ITS), Robotic landmine detection, Water catchment and eco-system monitoring, Real-time health monitoring, Bushfire response, Remote Sensing in Disaster Management etc.

**Challenges and Issues**

Its immersive, personalized, context-aware and anticipatory characteristics bring up concerns about the loss of consumer privacy. New thinking on Ambient Intelligence distances itself from adaptive and anticipatory behaviour and emphasizes empowerment and participation to place control in the hands of people instead of organizations. Developers need to do more than just bring new technologies to users to ask them what they think. Users should be part of the innovation process, a source of ideas, and not just a resource to evaluate ideas generated by professionals. Users should be involved in all stages of R&D and the product development lifecycle, not just at the end phases as, for example, in more classical field trials or user testing of products.

**Conclusion**

The Ambient Intelligence area has attracted significant attention and is forcing computing to make an effort to reach and serve humans. The technological infrastructure seems to be continuously evolving in that direction, and there is a fruitful atmosphere on all sides involved: users of technology, technology generators, technology providers and governmental institutions, that this paradigm shift is needed and feasible. Countries like India with IT base are likely to benefit from contracts for development of USN middleware. India may also be major beneficiaries, especially in the field of environmental monitoring e.g., drought, floods, storms etc & Agricultural management.
Introduction

The approaching 4G (fourth generation) mobile communication systems are projected to solve still-remaining problems of 3G (third generation) systems and to provide a wide variety of new services, from high-quality voice to high-definition video to high-data-rate wireless channels. The term 4G is used broadly to include several types of broadband wireless access communication systems, not only cellular telephone systems. One of the terms used to describe 4G is MAGIC—Mobile multimedia, Anytime anywhere, Global mobility support, Integrated wireless solution, and Customized personal service.

As a promise for the future, 4G systems, that is, cellular broadband wireless access systems, have been attracting much interest in the mobile communication arena. The 4G systems not only will support the next generation of mobile service, but also will support the fixed wireless networks.

This paper presents an overall vision of the 4G features, framework, and integration of mobile communication. The features of 4G systems might be summarized with one word—integration. The 4G systems are about seamlessly integrating terminals, networks, and applications to satisfy increasing user demands. The continuous expansion of mobile communication and wireless networks shows evidence of exceptional growth in the areas of mobile subscriber, wireless network access, mobile services, and applications. An estimate of 1 billion users by the end of 2003 justifies the study and research for 4G systems.

History

The history and evolution of mobile service from the 1G (first generation) to fourth generation are discussed in this section. This process began with the designs in the 1970s that have become known as 1G. The earliest systems were implemented based on analog technology and the basic cellular structure of mobile communication. Many fundamental problems were solved by these early systems. Numerous incompatible analog systems were placed in service around the world during the 1980s.

The 2G (second generation) systems designed in the 1980s were still used mainly for voice applications but were based on digital technology, including digital signal processing techniques. These 2G systems provided circuit-switched data communication services at a low speed.

The competitive rush to design and implement digital systems led again to a variety of different and incompatible standards such as GSM (global system mobile), mainly in Europe; TDMA (time division multiple access) (IS-54/IS-136) in the U.S.; PDC (personal digital cellular) in Japan; and CDMA (code division multiple access) (IS-95), another U.S. system. These systems operate nationwide or internationally and are today's mainstream systems, although the data rate for users in these systems is very limited.

During the 1990s, two organizations worked to define the next, or 3G, mobile system, which would eliminate previous incompatibilities and become a truly global system. The 3G system would have higher
quality voice channels, as well as broadband data capabilities, up to 2 Mbps. Unfortunately, the two groups could not reconcile their differences, and this decade will see the introduction of two mobile standards for 3G. In addition, China is on the verge of implementing a third 3G systems.

An interim step is being taken between 2G and 3G, the 2.5G. It is basically an enhancement of the two major 2G technologies to provide increased capacity on the 2G RF (radio frequency) channels and to introduce higher throughput for data service, up to 384 kbps. A very important aspect of 2.5G is that the data channels are optimized for packet data, which introduces access to the Internet from mobile devices, whether telephone, PDA (personal digital assistant), or laptop.

4G

This new generation of wireless is intended to complement and replace the 3G systems, perhaps in 5 to 10 years. Accessing information anywhere, anytime, with a seamless connection to a wide range of information and services, and receiving a large volume of information, data, pictures, video, and so on, are the keys of the 4G infrastructures. The future 4G infrastructures will consist of a set of various networks using IP (Internet protocol) as a common protocol so that users are in control because they will be able to choose every application and environment.

These features mean services can be delivered and be available to the personal preference of different users and support the users' traffic, air interfaces, radio environment, and quality of service. Connection with the network applications can be transferred into various forms and levels correctly and efficiently. The dominant methods of access to this pool of information will be the mobile telephone, PDA, and laptop to seamlessly access the voice communication, high-speed information services, and entertainment broadcast services. Figure 1 illustrates elements and techniques to support the adaptability of the 4G domain.

This all-encompassing integrated perspective shows the broad range of systems that the fourth generation intends to integrate, from satellite broadband to high altitude platform to cellular 3G and 3G systems to WLL (wireless local loop) and FWA (fixed wireless access) to WLAN (wireless local area network) and PAN (personal area network), all with IP as the integrating mechanism.

With 4G, a range of new services and models will be available. These services and models need to be further examined for their interface with the design of 4G systems. Figures 2 and 3 demonstrate the key elements and the seamless connectivity of the networks.
Conclusion
As the history of mobile communications shows, attempts have been made to reduce a number of technologies to a single global standard. Projected 4G systems offer this promise of a standard that can be embraced worldwide through its key concept of integration. Future wireless networks will need to support diverse IP multimedia applications to allow sharing of resources among multiple users. There must be a low complexity of implementation and an efficient means of negotiation between the end users and the wireless infrastructure. The fourth generation promises to fulfill the goal of PCC (personal computing and communication)—a vision that affordably provides high data rates everywhere over a wireless network.
The Success Story of Software Development in India  
Devesh Yadav  
MCA 2nd Semester

The main factors contributing to the success of Software Development in India are as follows:

1. Policy & Support of Government of India,
2. Strict Quality Aspects followed by the Software Development Centres,
3. NASSCOM the main forum for Software Industries,
4. Emerging Infrastructure in communication Technologies,
5. Adaptation to Emerging Technologies in IT,
6. Education in formal and non-formal educational institutions,
7. Training Schemes and Policies adopted in Human Resource Development,
8. Roles played by Professional Societies like Computer society of India
9. Support by Financial Institutions and entry of Venture Capitalists and above all
10. The enthusiasm and dedication of young Engineers and Managers ably supported and guided by efficient Top Management.

Efforts by Government of India

The main points stressed upon are the IT action plan, setting up of the IT Task Force by the Prime Minister, Government's IT policy (particularly the customs and import duty related issues leading to liberalization in many aspects of import and export of software and hardware), etc. with a vision of making India a Global IT Super Power.

Regarding the Quality policies followed by the IT industries in India, it is gratifying to note that every one of them, particularly those involved in Software export, give the greatest importance to the quality of the software in terms of reliability, stability and maintainability. This is being achieved by adhering to and adopting the processes and procedures under either ISO 9001 or SEI/CMM or both. Nearly 80% of the Software Industries who have SEI/CMM Level 5 in the world are from India.

In order to have close interaction with each other and also with the external world to get projects and product development, to express their needs and support from the Government with respect several policies in Import and Export, to work with other organizations which are similar in nature, nationally and internationally, a cohesive body of Association is a must and this is being provided by NASSCOM, the National Association of Software Services Companies.

Era of Internet Age

The most important requisite is the high bandwidth communication medium as the backbone for every software industry and this is being provided by the Department of Telecommunication (DOT) and Videsh Sanchar Nigam Limited (VSNL) of the Government of India, with the nodes of Software Technology Parks of India (STPI) providing the gateway for the Software Industries to the external world.
In order to achieve the targets in the ever challenging areas in Software development the important commodity is the Human Resource. It is projected by NASSCOM that to realize India as the IT Super Power, we need nearly 1.8 million IT professionals by that time. This is a real challenge that is being met with by the formal educational sector and ably being complemented by the non-formal ones. Specialized training in emerging technologies is an important aspect for the successful development of products that are expected to be down the line next year or in the next couple of years.

Financial Backing

No industry can survive in the long run unless it had perfect financial backing in the initial stages. However best the intellectual capacity of the professionals in the organization, finance is the backbone to forge ahead. This is where the Financial Institutions, following the Government regulations, play a vital role in supporting the software industries and so also the Venture Capitalists from India and abroad.

The days of Technology Obsolescence

These are the days of technology obsolescence. People, not only the software professionals but also the users, the business development managers, the top executives etc, of the organizations must be continuously made aware of the technology trends that lead towards the future development of products and services. Professional Societies, like Computer Society of India, take this as onus on them to conduct seminars, conferences and workshops on state-of-the art technology and the technology of the future. For example through the Computer Society of India, with its 62 odd Chapters spread over the country, at any point of time in a month there will be some seminar or conference going on in some part of our country either through its main chapters or through its student branches.

The most important benefit that has accrued through the establishment of Software Industries and their success in India as the leading software exporter from Asia is the tremendous amount of job opportunities that has created in supporting areas like third party security people in three shifts, generic caterers of food and beverages, courier service for inland and overseas destinations, company rented taxi cabs, car drivers provided for the senior executives and managers, house keeping personnel, jobs for the printing and photocopying agencies, travel agents, and many more.

In addition to the above, there are many groups and companies working in Computer Enabled Services like Medical Transcription, Back office preparations, Healthcare, ISD/STD telephone booths, etc. So in a developing country like India where it was feared earlier that Computers will remove jobs from human beings, the fear has been erased and complete computerization is being greeted in all facets of day-to-day life and this is a lesson for those sectors other than Software Industry.

Conclusion

India has shown the way to the world as to how to emerge as the nation of excellent software developers and managers, by adopting to the emerging technologies and trends and this would not have been possible but for the combined efforts of the Government, Educational Institutions, Support Services, Professional Societies and above all the relentless and enthusiastic young engineers who are prepared to slog to achieve the goal of delivering
Network Security
Avinash Singh and Saurabh Srivastava
MCA 4th Semester

Introduction

In this age of widespread electronic connectivity it is essential to offer protection to the organizations and to keep the unauthorized users such as black hat hackers, script kiddies etc away from them. The term network security consists of the policies adopted by the network administrator to protect the data during their transmission and the other network-accessible resources from several network threats. With the introduction of distributed systems and the use of networks, the concept of network security has become indispensable for preventing, detecting and correcting the security violations.

Types of Network Threat

A network threat is any network associated activity having negative security implications. Threats can come through the internet connections, dial-up modems or physical access. Security attacks are classified as passive attacks (e.g. unauthorized access) and active attacks (e.g. denial of service).

- Unauthorized Access: This is a common type of attack. The target of the attacker is to access some data packets or resources of a system without having any authentication. With help of this attack an intruder may be able to gain the access of your computer or to modify, reorder or delay your message.

This can be classified into several categories:

- Account Compromise: It provides the unauthorized access of a computer account by a person other than the owner. It may cause to data loss, data stealing or stealing of services. But it has no rights on the system.
- Malicious Code: Malicious codes (e.g. worms, viruses, Trojan horses) are the programs that would cause unwanted and harmful effects on a system while executed. This type of code may cause data loss, downtime, system damage and other types of threats.

Security Services

Security services can be divided into five categories:

- Authentication: This service provides the assurance to the recipient that the message it has received is from the source that it claims.
- Data Integrity: This service is concerned with the exact order of the content of the message that has been sent by the authorized sender.
- Data Confidentiality: This service provides protection to the transmitted data from unauthorized passive attacks.
- Access Control: It prevents the unauthorized access to a resource.
- No repudiation: This service provides protection against the refusal by one of the host involved in communication. It gives the proof that the message is sent or received by the particular sender or the receiver respectively.
Security Technology

There are lots of security technologies that have been developed to provide protection to the systems and information against network threats.

- **Username and Password**- The concept of username and password is at the heart of the network security. When any user tries to access any resource the password associated with the account is required. Thus it helps to prevent the unauthorized access.

- **Firewall**- Firewall is a combination of software and hardware that allows two networks to communicate in a restricted way. It monitors the network traffic and allows those packets to enter in the boundary of the network which are able to satisfy the security criteria.

- **Cryptography**- This technique offers the secrecy of information by protecting its confidentiality and prevents intruder to use the information that they capture. The original form of data (plaintext) is converted into an encoded form (cipher text) by encryption process. The cipher text is translated back into the plaintext by decryption process.

**Conclusion**

In this age of widespread digital connectivity, network security has become a very essential topic. Research and advance efforts are ongoing to achieve more secure network environment in future than exists today.
Microsoft Launches New Body-Motion Gaming Technology
Kiran Chauhan
MCA 4th Semester

Introduction
Microsoft has revealed a new gaming technology at a conference in Los Angeles that allows users to control on-screen action with full body movement. A prototype of the ‘Natal’ project was launched at the E3 conference, showing off software that combines cameras, voice and facial recognition capabilities. The technology allows users to control the action on a videogame without using a traditional handheld controller. Users can drive cars on-screen by turning their hands, while skateboard, soccer and boxing games are controlled by having users mimic similar movements to real athletes. No release date has been announced for the technology, though software developers have been given access to kits that can help design games, taking advantage of Natal's features.

Description
Sony Corp has unveiled its new motion-controlled video game system, pitching it to both casual and hard-core gamers alike, as the company looks to ride one of the hottest trends in gaming. The new system will help Sony keep pace with rivals Nintendo Co Ltd, which pioneered gesture-based gaming, and Microsoft Corp, which is launching its system later this year. Sony's new PlayStation "Move" controller is used with its Eye gaming webcam, translating users' motions into actions within games on the PlayStation 3 (PS3) console. Move, which resembles a TV remote with a colorful ball stuck on the end, will be available as part of a package this fall for less than $100, Sony said at a media event on Wednesday. The company said 36 third-party developers and publishers are supporting the Move platform.

Camera
The PlayStation Eye is capable of capturing standard video with frame rates of 60 hertz at a 640x480 pixel resolution, and 120 hertz at 320x240 pixels, which is "four times the resolution" and "two times the frame-rate" of the EyeToy, according to Sony. The PlayStation Eye also has "two times the sensitivity" of the EyeToy, with Sony collaborating with sensor chip partner OmniVision Technologies on a sensor chip design using larger sensor pixels, allowing for more effective low-light operation. Selected manually by rotating the lens barrel, the PlayStation Eye can be set to a 56-degree field of view similar to that of the EyeToy, for close-up framing in chat applications, or a 75-degree field of view for long shot framing in interactive physical gaming applications.

Microphone
The PlayStation Eye features a built-in four-capsule microphone array, with which the PlayStation 3 can employ technologies for multi-directional voice location tracking, echo cancellation, and background noise suppression. This allows the peripheral to be used for speech recognition and audio chat in noisy environments without the use of a headset. The PlayStation Eye
microphone array operates with each channel processing 16-bit samples at a sampling rate of 48 kilohertz, and a signal-to-noise ratio of 90 decibels.

**EyeCreate**
The PlayStation Eye features free EyeCreate video editing software, which enables users to capture pictures, video, and audio clips directly to the memory unit of the PlayStation 3 console. EyeCreate features a variety of different capturing modes, including stop motion and time-lapse. Through the software, users can edit, save, and share their own custom images, movies, and audio content. Video and audio files produced on the PlayStation 3 with the PlayStation Eye are written in a proprietary format which is currently user-accessible only through EyeCreate.

**PlayStation Move**
On June 2, 2009, Sony revealed an engineering prototype for a motion-sensing controller for the PlayStation 3. Consisting of a wand unit; the controller uses the PlayStation Eye to track its position in three dimensions through a special illuminated orb at the end. In development by Sony, the controller is targeted for release in autumn 2010.

The Motion Controller + PlayStation Eye tracks movement of the controller perfectly 1:1 and there is NO lag from real movement to on screen. They were able to put items and weapons in the player’s hands on screen which then completely interacted with the environment they were placed in. Even though the movement was very impressive, Microsoft’s Natal is a more powerful piece of technology when it comes to the camera. This is something Sony is going to have to work on to compete with Microsoft.
Top 3 Students on the basis of UP Technical University, Lucknow Examination

**MCA-I Semester- Toppers**

First Topper  
Ajeet Singh & Mayank Gupta

Second Topper  
Uzma Idrees

Third Topper  
Darshan

**MCA-III Semester- Toppers**

First Topper  
Rahul Shukla

Second Topper  
Amit Kr. Garg

Third Topper  
Neha Agarwal

**MCA-V Semester- Toppers**

First Topper  
Durg Vijay Singh

Second Topper  
Shruti Srivastava

Third Topper  
Pritika Agarwal
Activities Corner

**Online Quiz Competitions**

I. Prof. Abhay Bansal organized Online Quiz Competition for MCA-IInd semester students at I.T.S. Mohan Nagar, Ghaziabad on 1st Dec, 2009. The winners of Online Quiz Competition were as follows:

1st Position: Mr. Awdesh Chauhan
2nd Position: Mr. Anmol Gupta
3rd Position: Ms. Rashmi and Mr. Pankaj Kr. Negi.

II. Prof. Drishti Singhal organized Online Quiz Competition for MCA-II semester students on 5th March 2010. The winners of this competition were:

1st Position: Pratik Jaiswal & Vaibhav Gupta
2nd Position: Bibhuti Misra & Sumit Kumar
3rd Position: Ishan Gupta & Vipin Kumar.

**Guest Lecture for MCA-IV Semester Students**

Department of I.T. organized a Guest Lecture for MCA-IVth semester students on

“Managing Information and Infrastructure: NIC-A Case Study” by Mr. Shayam Sunder, Technical Director-NIC, Govt. of India, Ministry of Communications & Information-Technology on 20th Feb 2010. During his lecture he has emphasized on how NIC is working for providing e-Government / e-Governance Solutions adopting best practices, integrated services and global solutions in Government Sector. He also briefed the students about Data Centre setup Operations and Management in NIC.
IT Department organized a Guest Lecture for MCA-IVth semester students on the topic “Advances in Database Systems” by Dr. T.V.Vijay Kumar from JNU-New Delhi on 6th March 2010.

Guest Lecture for MCA II semester students
A Guest Lecture by Prof. (Dr.) Navin Rajpal, G.G.S.I.P University, New Delhi on “Data Structure” was organized for the students of MCA II Semester on 3rd April 2010. During his lecture he touched upon various issues related to data structure including Application of Data Structure, Array, Linked List, Trees, B-Tree, Hashing, Recursion, Heap Sort, etc.

Workshop on C Language
Prof. Abhay Bansal has organized Workshop on C for the students of MCA II Semester on 22nd Feb, 2010. Following topics were taken up for the discussion and providing additional inputs in this Workshop:
1. Detailed discussion on Arrays and various operations that can be performed on it. It included insertion and deletion operations.
2. Strings and its various operations.
3. Link List and various operations on link list.
4. Various Interview Questions in the form of Quiz were also discussed with its solution.

Workshop on Advanced Java for MCA-IV semester students
A workshop on advance java for MCA 4th semester students was conducted by Prof. Gaurav Midha and Prof. Abhay Ray on 22-02-2010. Advance java topics were covered with context to database handling. Following were the major topics.
1. Introduction to servlet
2. Servlet API’s
3. Servlet Life Cycle
4. Tomcat configuration
5. servlet program examples for Insert, update and delete operations
6. Deployment of servlet in tomcat
7. Introduction to JSP
8. JSP advantages over servlet
9. JSP important tags and objects
10. use of beans in JSP

MCA Student’s Achievement
11 teams of MCA program were qualified for MSP-Next Round in Imagine Cup 2010 organized by Microsoft Corporation.

MCA Student’s Participation
Miss Neha Aggarwal, Miss Lavee Jain, Miss Swati Tyagi, Mr. Ankur Jain and Miss Aradhana Pandey of MCA IIInd Year have participated in National Conference on
A Paper presentation contest, SPARDHA -2010 was organized on 12-3-2010 for the students of MCA II Semester. MR. Sandeep Solanki ,Managing Director -Sunasa S/W Pvt. Ltd. was the external judge. Winners were distributed Trophies and Certificates. There were three winners of the Paper Presentation Contest:

**1st Winner**- Utilities in C (Pradeep Kumar, Prateek Sharma, Pratik Jaiswal, Puja Teotia)

**2nd Winner**- Object Oriented Programming (Umesh Kumar, Vaibhav Sharma, Vipin - Kumar, Zoya Siddiqui)

**3rd Winner**- Data Security (Manish Jaudan, Manesh Kumar pandey, Mayank, Mayank goel)
National Seminar on Convergence of Information, Communication, Technology & Education

A National Seminar on “Convergence of Information, Communication, and Technology & Education” was organized at I.T.S, Mohan Nagar, and Ghaziabad on 17th April, 2010. Dr. Ajoy Kumar Ray, Vice Chancellor, Bengal Engineering & Science University, Howrah was present as the Chief Guest and Key Note Speaker and said that objective of such events is to create a forum where experts from Academia, Research Centers, Industry and Practitioners can be called for deliberations and outcomes may be used by the delegates in identifying new avenues of research.

In his address, Chief Guest, Dr. Ray emphasized on the need of understanding the underlying mechanism of exploiting the technology in proper information processing which is useful for human beings and transmits it to all concern and make people aware about these happenings. Without this even if all such good thing exists we cannot ensure their proper utilization and thus leaving potential under-utilized. Dr. Ray specifically talked about the applications of such synergized framework in Health Sciences, Green Computing and touch upon various aspects related to security. He also talked about other potential research areas which people may further explore and exploit.

In his Key Note Address, Dr. Manish Gupta spoke about the development taking place in the industry to cope up with the dynamically changing requirements particularly High Performance Computing and its application in current computing environment. Dr. Gupta also talked about the ongoing researches in IBM Research Labs.

While welcoming the Chief Guest and Key Note Speaker, Director General In his welcome Key Note Speaker, Prof. S.K. Gupta said that in this ever fast changing world it is the need of the hour that we understand the underlying principles and technologies which are acting as the driving force in the current scenario.

Dr. Vineet Kansal, in this concluding address of the inaugural session thanked to the Chief Guest and Key Note Speaker and said that objective of such events is to create a forum where experts from Academia, Research Centers, Industry and Practitioners can be called for deliberations and outcomes may be used by the delegates in identifying new avenues of research.

In his address, Chief Guest, Dr. Ray emphasized on the need of understanding the underlying mechanism of exploiting the technology in proper information processing which is useful for human beings and transmits it to all concern and make people aware about these happenings. Without this even if all such good thing exists we cannot ensure their proper utilization and thus leaving potential under-utilized. Dr. Ray specifically talked about the applications of such synergized framework in Health Sciences, Green Computing and touch upon various aspects related to security. He also talked about other potential research areas which people may further explore and exploit. In his Key Note Address, Dr. Manish Gupta spoke about the development taking place in the industry to cope up with the dynamically changing requirements particularly High Performance Computing and its application in current computing environment. Dr. Gupta also talked about the ongoing researches in IBM Research Labs.
After the inaugural session, the Seminar was divided in two sessions. In the first session

Mr. V.K. Jaitly – President Astrowix India, Mr. Raghu Raman – Director PunyaTech Pvt Ltd., Mr. Niraj Prakash – Head, Public Rajdeep Sahrawat – Head, Initiative – TCS shared their views and experiences.

In the second session

Dr. M.M. Pant – Former Pro-Vice Chancellor of IGNOU and renowned academician, Mr. Neeraj Aggarwal – Sr. Vice President NIIT Ltd, Dr. B.K. Murthy – Director, Min. of Communication and IT and Mr. Aniruddha Sen were among the speakers. Dr. Pant spoke on the need of improving the quality of education and creation of efficient and effective learning technology which can ensure the employability of the upcoming generation. Dr. B.K. Murthy talked about the initiatives taken by the Government in the area of education and promotion of research activities by establishing and connecting research centers with the universities through National Knowledge Network plan. Mr. Neeraj Aggarwal, in his address talked about the need of paradigm shift in the current education system and shift the focus from teachers-centric approach to the learner-centric approach. Mr. Aggarwal also talked about the initiatives taken by NIIT in this direction. Mr. Aniruddha Sen, in his address, spoke about the process of education and emphasized on the need of inculcating creative and innovative thinking in the education process. He further said that one need to understand ones strength and transform it into the core competency.

In the Valedictory Session, Dr. K. Subramanian, IT Advisor to CAG of India and former Dy. Director General-NIC was the Chief Guest. In his address Dr. Subramanian, talked about the impact of convergence of information, communication, technology and education. Dr. Subramanian said that we are living in an era where there is no place for isolated technologies or domain but this is the time of collaborations and whether it is technology or education systems or ICT everything has to synergize to give a way for newer framework which can be better utilized for human beings.
He praised the efforts of the I.T.S, Ghaziabad and said that such initiatives should always be encouraged and appreciated as these contribute to societal development for creating awareness about the happenings and their uses for a common man.

In the end Dr. Vineet Kansal, Director – IT delivered the vote of thanks. Dr. Kansal thanked to all the speakers who spared their valuable time to take part in the deliberations in the seminar. He also thanked to the Delegates and Media persons as well.

In the Seminar Secretary, I.T.S Group of Institutions Mr. B.K. Arora and Chief Administrator – I.T.S Group of Institutions Mr. Surinder Sood were also present.

E-gov & digital learning were the media partners for this event.
GAME SECTION -Crossword: 01

Across
4. Electronic device that allows electricity to flow in one direction
5. The _____ is an 8-bit header inside each ATM cell that indicates where the cell should be routed.
7. The act of managing system resources so that more than one application can use it at the same time.
8. When a variable has no value, it considered to be __________
9. Measure of potential difference in an electrical circuit.

Down
1. ___ is a video sharing website owned by Google that allows users to watch other people’s videos and publish their own.
2. Stores an electric charge. Used to smooth of the flow of electrical current.
3. A _____ is an input device commonly used to control video games.
6. A _____ is a software program that travels the web, locating and indexing websites for search engines.
7. __________ is a virtual classroom that allows teachers and students to communicate with each other online.
Our Ambassador’s Speak

Name
Mr. Vivek Sharma

Qualification
MCA

Batch
2000-2003

Present Organization
IL&FS (Technologies Ltd.)

Designation
Manager

Area of Interest
ERP, Finance

Hobbies
Cricket, Traveling, Trekking

Experiences in I.T.S
I.T.S is a largest epitome & center of excellence for all Professional Programmes. I.T.S has a strong tradition of looking after its students and is able to deliver much of this support through its academic, guidance and support sections. I.T.S has concentrated on strong viable departments and teaching of the highest quality. It has latest hardware and software support in computer labs. Professors are the most techsavvy & connoisseur veterans. ITS offers a wide series of Professional Programmes in specialized areas of education like management & computers.

Most Cherished Moment in I.T.S
As member of MCA Team I won the Interdisciplinary GK Quiz held in my college. PGDBM Team was the Toughest and strongest opponent in Quiz. It was a tie between our teams. We won the Quiz by defeating PGDBM Team in tie break. I was also the Class Representative, so it was one of the proud and cherished moments for me.

Message to juniors
BE OPTIMISTIC & COME OUT AS A LEADER! Never give-up as there is no shortcuts to success. Work hard to reach the Pinnacle of success. Always update your knowledge to sustain your Self in day 2 day cut throat competition scenarios.

E-mail ID
axapta.vivek@gmail.com