

**CSE**

**NEWS LETTER**

**Computer Science  
& Engineering**

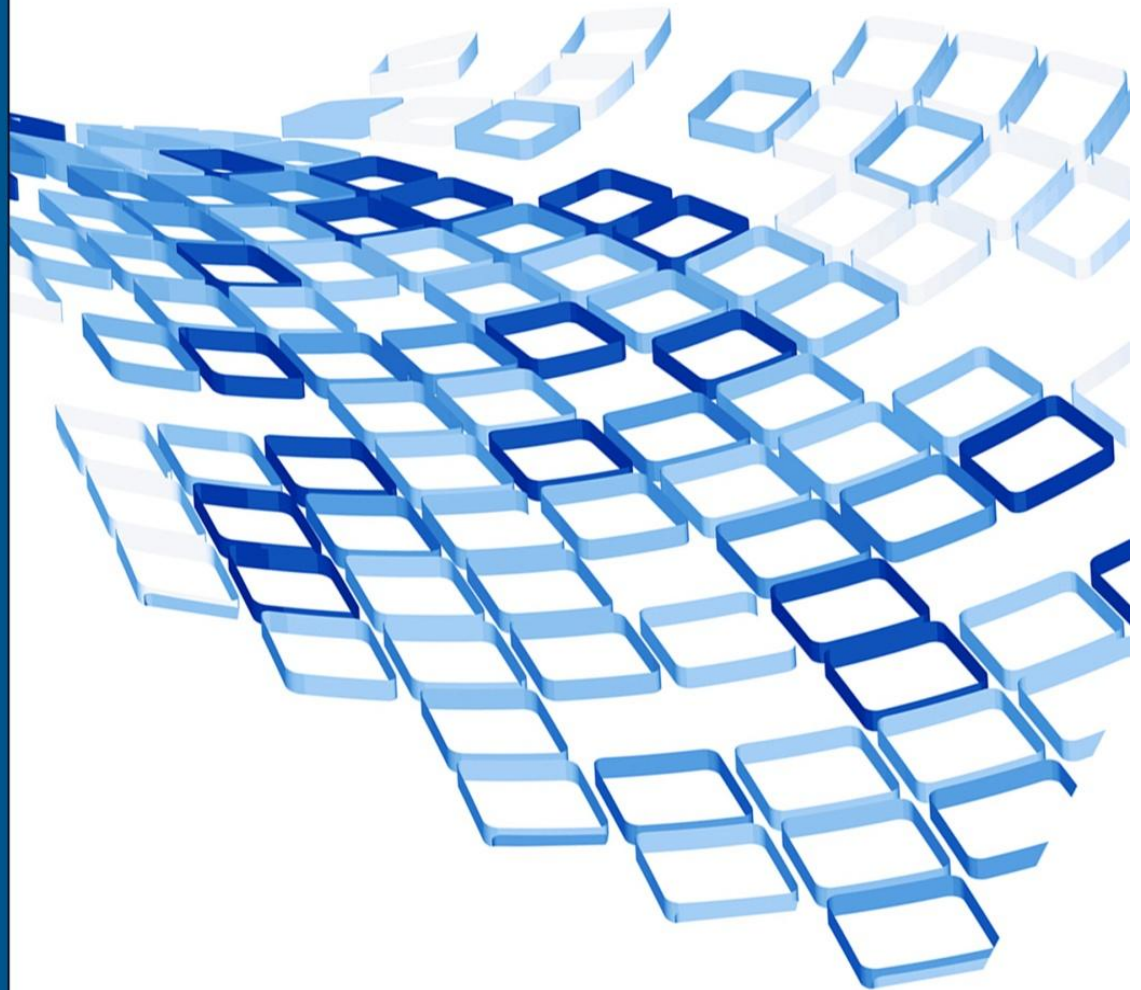


**VISHNU**  
UNIVERSAL LEARNING

A Half-Yearly News Letter

# TECHNOTHON

July 2012



**VISHNU INSTITUTE OF TECHNOLOGY  
BHIMAVARAM**

## Vishnu Institute of Technology



Vishnu Institute of Technology, the scion of Shri Vishnu Educational Society was established in 2008 and is currently the eleventh educational institution to disseminate education under the aegis of this society. Nascent that it is, it combines in its matrix the lofty idealism of its Founder Chairman the Late Padmabhushan Dr. B. V. Raju, a distinguished industrialist, philanthropist and an eminent educationalist; the experience and vigour

provided by the Chairman Sri K.V. Vishnu Raju, a man of holistic vision and his team comprising dexterous administrators, reputed academicians and brilliant line of students. They constantly strive to make the institution join the ranks of prestigious technical institutions.

### **Campus**

The Campus, sprawling over 100 acres, is located in the verdant atmosphere of Vishnupur in Bhimavaram. It is in the very vicinity of the town and is well connected by road. VISHNU also provides hostel facilities to the students who opt for a residential mode of education. The hostels are constantly updated and provide an atmosphere conducive to pursue education.

### **Hands on Experience**

To make the instruction in VISHNU more practical-oriented, special focus is on hands on experience. The Assistive Technologies Lab run in collaboration with the University of U Mass, USA helps students to combine technology with a humanistic outlook. Gadgets for the physically challenged are designed and developed here by the students under the guidance of eminent professors both from the Institute and abroad. VISHNU aims at empowering students with technical skills and can-do entrepreneurial spirit. The IBM Software Centre of Excellence in the campus provides the students with the best of quality technical education there by increasing the skill set of each student and faculty for a great career.

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## Department of Computer Science & Engineering

The mission of the department is to advance and enhance computer science engineering fundamentals to build the intellectual capital of students. The CSE Department endeavours to be an important resource centre for the development of computing systems and applications.

The department was established in the academic year 2008-09 with an annual intake of 66. It offers 4 year B.Tech. This program affiliated to JNTU Kakinada & approved by AICTE. The annual intake of CSE branch was increased to 120 from the academic year 2010-11. The department offers M.Tech in Computer Science & Engineering from the academic year: 2012-13. The department has number of well equipped Laboratories and provides excellent facilities for learning.



## HELM OF AFFAIRS

A small dot ends a big sentence. But a few more dots indicate continuity. Every end therefore marks a new beginning. The end of 2011 marks the beginning for 2012. Dual natured are these moments which call for both a prospective and retrospective view as well. 2011 has been a year of happenings in the campus with symposiums, workshops, project exhibitions, seminars and other intellectual activities complemented by sports and games and cultural activities as well.

The year is significant both for SVCEW and VIT. SVCEW completed 10 years in its contribution to technical education. It has carved a niche for itself in the arena of technical education in general and women's education in particular.

This year is memorable, as it ended with a bang for Vishnu Institute of Technology as Valiant 2K11 a national level technical symposium was hosted successfully. The National Symposium garnered a good response across the country with more than 1000 papers being received. The symposium focused not only on technical ideas, it was coupled with a project exhibition where the students exhibited their projects. Sports and creativity and literary events had their proper place with the symposium providing a platform to the manifold talents of the students. It was not solely for the technical students, the MBA students also had their fair share in all the activities.

As we move forward under the dynamic guidance of our Chairman, our goal is the Tennyson an quest for perfection...

**\*\*\* To strive, to seek, to find, and not to yield \*\*\***

### ***Progressive Strides***

We are proud to announce that IMC Ramakrishna Bajaj National Quality Trophy for excellence has been conferred upon Shri Vishnu Educational Society for outstanding contribution in the field of education for the year 2011. This prestigious award motivates us to perform and

maintain high standards of excellence. Hearty congratulations to our Chairman Sir!

### **Examinations**

As the academic year came to an end, examinations were conducted for II, III and IV BTech from 16-04-12 to 27-04-12, 17-04-12 to 28-04-12 and 16-04-12 to 25-04-12 respectively. Supplementary

exams for II & III B.Tech were conducted from 14-05-12 to 28-05-12.

Classwork of I B Tech ended on May 19. The II MID examinations were held from 21-26 May and the final examinations are scheduled in June.

### **Department Activities**

Vishnu Institute of Technology conducted a Two Day National Level Workshop "Robotryst-2012" on 20th & 21st Jan in collaboration with E-Cell IIT Kharagpur, sponsored by Robosapiens Pvt Ltd, Noida. In this workshop 26 teams from all over India participated and exhibited their models. Different types of Robots performed their roles.

Mr.Vasim Akram Chief Design Engineer from Robosapiens Noida was the Chief guest for the work shop.

For this workshop resource persons have been deputed from Robosapiens Noida, Mr.Vasim Akram and Mr. Prabhas interacted with students and explained the fundamentals of e-Robotics and their functioning process.

Dr. D. Suryanarayana observed the various functions of all Robots and appreciated the student participants.

A two day work shop on "ANDROID" was conducted by ISTE chapter on 26th and 27th Feb 12 and 222

students participated from II & III B. Tech.

Mr.V.Madhu attended a three day National Workshop on Computer Applications in Power Systems (CAPS-2012)

### **Faculty Activities**

Ms. J. Bala Manoja Devi, T. Balaji Gupta and Mrs. Ch. Lakshmi Veenadhari attended the Faculty training programme THE JOY OF TEACHING held at BVRIT Narsapur between 16<sup>th</sup> May to 25th May 2012.

### **Research and Development**

#### **Research Activities**

A Research proposal was submitted by

Mrs. K.Samatha, Asst. Prof of CSE for Women Scientist award on 27-01-12.

### **Placement Activities**

Mr. Pavan Mahankali of IV EEE was placed in ADP and is one of the very few students to be placed there from our state. 3 students have been placed in Syntel, 3 more in Oracle Financials and one in Symantic Space. Two students have been placed in L3 Innovations Ltd. Hearty Congratulations to all of them!

## Industrial Training

The second batch of students were sent to Vizag steel plant as a part of their Industrial Training.

A two day Training program was conducted for Final B.Tech students of VIT by IEG Trainers from Hyderabad on 27 and 28 April to train them for the placements.

Meanwhile Pre placement Training Classes were conducted by Elephos Educational Services for the III B.Tech students from 30 April to 7 May 12

Trainers from Naresh Technologies, Hyderabad gave training on Dot Net & Java from 14-05-12 to 05-06-12 for III CSE & IT.

## Sports

Mr.M. Srinivasa Rao, PD of VIT went to Surampalem along with 20 students for B Zone Tournaments conducted by JNTUK on 6th & 7th Feb'12.

## Articles

### NETWORK SECURITY: HISTORY, IMPORTANCE, AND FUTURE

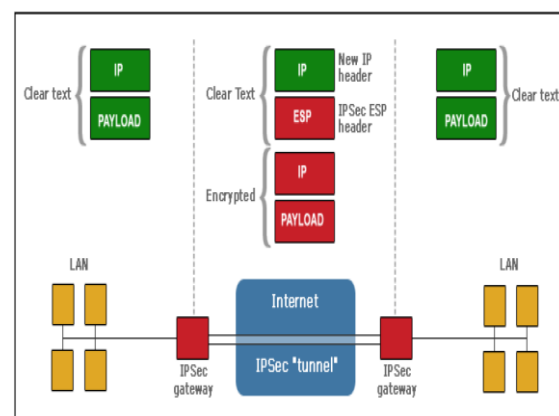
By- **Pranavi durga**  
**III CSE**

Network security has become more important to personal computer users, organizations, and the

military. With the advent of the internet, security became a major concern and the history of security allows a better understanding of the emergence of security technology. The internet structure itself allowed for many security threats to occur. The architecture of the internet, when modified can reduce the possible attacks that can be sent across the network. Knowing the attack methods, allows for the appropriate security to emerge.

Many businesses secure themselves from the internet by means of firewalls and encryption mechanisms.

The businesses create an "intranet" to remain connected to the internet but secured from possible threats.



The entire field of network security is vast and in an evolutionary stage. The range of study encompasses a brief history dating back to internet's beginnings and the current development in network security. In order to

understand the research being performed today, background knowledge of the internet, its vulnerabilities, attack methods through the internet, and security technology is important and therefore they are reviewed.

The world is becoming more interconnected with the advent of the Internet and new networking

technology. There is a large amount of personal, commercial, military, and government information on networking infrastructures worldwide. Network security is becoming of great importance because of intellectual property that can be easily acquired through the internet.

There are currently two fundamentally different networks, data networks and synchronous network comprised of switches. The internet is considered a data network. Since the current data network consists of computer-based routers, information can be obtained by special programs, such as “Trojan horses,” planted in the routers. The synchronous network that consists of switches does not buffer data and therefore are not threatened by attackers. That is why security is emphasized in data networks, such as the internet, and other networks that link to the internet.

The vast topic of network security is analyzed by researching the following:

1. History of security in networks
2. Internet architecture and vulnerable security aspects of the Internet
3. Types of internet attacks and security methods
4. Security for networks with internet access
5. Current development in network security hardware and software

Based on this research, the future of network security is forecasted. New trends that are emerging will also be considered to understand where network security is heading. System and network technology is a key technology for a wide variety of applications. Security is crucial to networks and applications. Although, network security is a critical requirement in emerging networks, there is a significant lack of security methods that can be easily implemented.

There exists a “communication gap” between the developers of security technology and developers of networks. Network design is a well-developed process that is based on the Open Systems Interface (OSI) model.

The OSI model has several advantages when designing

networks. It offers modularity, flexibility, ease-of-use, and standardization of protocols. The protocols of different layers can be easily combined to create stacks which allow modular development. The implementation of individual layers can be changed later without making other adjustments, allowing flexibility in development. In contrast to network design, secure network design is not a welldeveloped process. There isn't a methodology to manage the complexity of security requirements.

Secure network design does not contain the same advantages as network design. When considering network security, it must be emphasized that the whole network is secure. Network security does not only concern the security in the computers at each end of the communication chain. When transmitting data the communication channel should not be vulnerable to attack. A possible hacker could target the communication channel, obtain the data, decrypt it and re-insert a false message. Securing the network is just as important as securing the computers and encrypting the message.

When developing a secure network, the following need to be considered

1. Access – authorized users are provided the means to

communicate to and from a particular network

2. Confidentiality – Information in the network remains private

3. Authentication – Ensure the users of the network are who they say they are

4. Integrity – Ensure the message has not been modified in transit

5. Non-repudiation – Ensure the user does not refute that he used the network An effective network security plan is developed with the understanding of security issues, potential attackers, needed level of security, and factors that make a network vulnerable to attack.

The steps involved in understanding the composition of a secure network, internet or otherwise, is followed throughout this research endeavor. To lessen the vulnerability of the computer to the network there are many products available. These tools are encryption, authentication mechanisms, intrusion-detection, security management and firewalls. Businesses throughout the world are using a combination of some of these tools.

“Intranets” are both connected to the internet and reasonably protected from it. The internet architecture itself leads to vulnerabilities in the network. Understanding the security issues of the internet greatly assists in



developing new security technologies and approaches for networks with internet access and internet security itself.

The types of attacks through the internet need to also be studied to be able to detect and guard against them. Intrusion detection systems are established based on the types of attacks most commonly used. Network intrusions consist of packets that are introduced to cause problems for the following reasons:

- To consume resources uselessly
- To interfere with any system resource's intended function
- To gain system knowledge that can be exploited in later attacks

The last reason for a network intrusion is most commonly guarded against and considered by most as the only intrusion motive. The other reasons mentioned need to be thwarted as well.