

NWWN-2010: National Workshop on Wireless Networks



Dr. Dharm Singh, Dr. Pratap Singh, Dr. SL Mehta, Dr. H.R. Vishwakarma, Mr. K.S. Sardali, Mrs. Ridhima Khamesra

National Workshop on Wireless Networks (NWWN-2010)”, organized by Special Interest Group- Wireless Networks, Computer Society of India (SIG-WNs, CSI), Udaipur Chapter and Geetanjali Institute of Technical Studies (GITS), Udaipur during 17th to 18th September 2010 at GITS Campus. More than 100 IT professionals, researchers, students from various organizations across the country are participated in the conference. They held deliberations on such sub-themes as wireless standards, wireless infrastructure and topologies, budgeting and planning, wireless security, etc.

Inaugural Session

The Workshop was launched on 17 September 2010 at 2 PM with inaugural function of tutorial by Dr. S L Mehta, Former Vice Chancellor, Maharana Pratap University Agriculture and Technology (MPUAT), Udaipur, former DDG (Edu.), ICAR and former National Director, NATP, ICAR, Chief Guest on this occasion and other dignitaries Special Guest, Prof. H.R. Vishwakarma, Sr. Professor, VIT, Vellore and Honorary Secretary, CSI, Guest of Honor, Mr. K.S. Sardalia, Hindustan Zink Ltd.

During the inaugural session, Dr. Pratap Singh welcomed the Chief Guest, Dr. Dharm Singh welcomed the Special Guest Prof. H.R. Vishwakarma and Mrs. Ridhima Khamesra welcomed the Guest of Honor Mr. K.S. Sardalia. Dr. Pratap Singh, Principal GITS, Former Dean, College of Technology and Engineering, Udaipur, Former Directro Research, MPUAT, Udaipur delivered the welcome address and gave a brief introduction about the workshop. He welcomed all participants and highlighted the activities of the GITS.

Subsequently, Prof. H.R. Vishkarma, Honorary Secretary, CSI addressed the gathering. He gave a detailed account of the research activities sponsored and encouraged under Research and Development Programme of CSI in the areas of Computer sciences and technology. Mr. K.S. Sardalia , in his speech, described the importance of wireless devices in daily life.

Dr. S L Mehta, was the Chief Guest on the occasion. He, in his inaugural address, emphasized that research and educational activities of research and educational bodies revolve around their Intranet and Intranat Incharges have to play a very important role in knowledge management and its dissemination. He urged upon the delegates to undertake more and more research activities in the wireless networks to develop state of the art techniques and use latest technologies to provide efficient ICTs applications and information services to patrons. He suggested to organize the International Conference on the theme of “*ICT in lively hood and Natural Security*”. Ms. Ridhima Khamesra, OS, proposed a Vote of Thanks.



Participant view

The workshop consisted various tracks like design, device configuration and installation, planning and security.

Wireless Infrastructure and Standards

Mr. Harsh Shah and Mr. Ankit Arora , Business Executives from Siemens Enterprise Communications Pvt. Ltd., Ahmedabad (Gujarat) delivered an expert talk on Wireless Network Set-up and Configuration modalities. They discussed various wireless configuration standards along with the available network set-up devices for a small to large campuses. They also discussed various recovery & upholding procedures in connection stoppage scenarios.

Wireless Devices: Installation and Troubleshooting

Mr. Naveen Malkani, Director Microsystem, Udaipur demonstrated about the (i) Access point configuration: How to configure wireless access points and routers based on general principles and clear motivations and (ii) Wireless client installation: An introduction for selecting hardware, installing and configuring a wireless device on client computer (laptop,desktop).

Emerging trends of Wireless Networks

Mr. Chirag S Thaker, Lecturer - LD College of Engineering, Ahmedabad (Gujarat) delivered an Expert Lecture on Wireless Networks & Wi-Fi. In this lecture he discussed wireless technologies and wireless network topologies with related functionalities. In the second half of his lecture he discussed different IEEE Wi-Fi standards along with the Wi-Fi network topologies and protocols associated with it. He finally discussed various Wi-Fi security threats and modern safekeeping resolutions.

Amit Sanghi, Bikaner Engineering College, delivered the invited talk on Emerging technologies of Wireless Networks like WiMax, 3G, 4G and 5G. The second day was

unfolded with the invited talk by Ridhima Khamesra on Budgeting and planning for a wireless network. Dr. Dharm Singh gave the presentation on Wireless Infrastructure and Wireless standards: This topic gives an introduction to standards in general and IEEE 802.11 in specific and challenges of Video Transmission over Wireless Networks. Mrs. Ridhima Khamesra, Organizing Secretary of the Workshop proposed a Vote of Thanks to the Chief Guest, Guest of Honour, Key Note Speaker, Delegates and all others who were present and not present, but provided support to the Workshop Organizers.

Valedictory Function

Prof. Virendra Kumar Shrivastava, Director PM, MPUAT, Udaipur graced the occasion as the Chief Guest. The Valedictory function started with welcome address by Prof. Pratap Singh, Principal GITS. He welcomed the Chief Guest, dignitaries present on the dais, the participants and others present on this occasion. The Chief Guest brought home the importance of the wireless networks and importance their role in agriculture, medicine, education and research. He congratulated the organizers of the Conference for the successful completion of the conference. Dr. Dharm Singh, Organizing Chair of the workshop presented the report of the Conference and importance of SIG WNs, CSI.



(L to R : Dr. Dharm Singh, Dr. Pratap Singh, Dr. Virendra Kumar, Mr.K.G. Gupta, Mrs. Ridhima Khamesra)

Guest of Honor, Mr.K.G. Gupta, Vice President, Lipi Data suggested to the participants and students to do hardworking. The function concluded with a 'Vote of Thanks' proposed by Mrs. Ridhima Khamesra, OC.

Recommendations:

The rise in wireless technologies for both local and wide-area networking, such as ZigBee, WI-Fi, WiMAX, 3G and LTE, means that the Internet is increasingly wireless. To better understand the nature of these changes, it is important to evaluate these technologies in real-world environments via empirical measurement. While analytical and simulation-based approaches are useful, they are often limited by the simplistic modeling of the wireless protocols and the varying and error-prone wireless channel. As a response to these limitations, the need for experimental wireless network measurements has gained wide recognition in the networking research community. The objective of this workshop was to

develop a strong theoretical background involving the future of wireless communication systems. It also developed a detailed technical knowledge of current practice in wireless systems and networks. The participants can now set up a wireless LAN on the standalone systems /laptops/ workstations in addition to finding the access points and IP addresses and then enabling an internet connection. Troubleshooting and health related aspects were also covered.

However following recommendations are made on the basis of open conducive discussions between the session experts and participants:

1. Scalable and widespread authentication, authorization, and accounting (AAA) services are critical to the deployment of commercial services based on (wireless) mobile IP. Some work is progressing on definition of these standards for IP mobility. However, due to the pivotal role of these protocols on the ability to deploy commercial services, it was recommended to make finalization of these AAA standards and investigation of AAA scalability as high priorities.
2. Wireless link bandwidth is often scarce (e.g., cellular) and/or shared (e.g., IEEE 802.11 WLAN). Meeting application QoS needs requires accommodating these link characteristic, in addition to the roaming nature of mobile host. Specialized support may be required from the network layer to meet both link and end-to-end performance constraints.
3. Considering the very low exposure levels and research results collected to date, there is no convincing scientific evidence that the weak RF signals from base stations and wireless networks cause adverse health effects.

NWWN-2010: National Workshop on Wireless Networks

A Report prepared by: Dr. Dharm Singh,
Convener SIG WNs and Hon. Secretary CSI, Udaipur



Inaugural Session: (L to R) Dr. Dharm Singh, Dr. Pooja Singh,
Dr. S. J. Akhata, Prof. H. B. Vishwakarma, Mr. K. S. Sonalki,
Mr. Rishma Khanna

National Workshop on Wireless Networks (NWWN-2010) was organized by Special Interest Group-Wireless Networks, Computer Society of India (CSI-WNs, CSI), Udaipur Chapter and Geetanjali Institute of Technical Studies (GITIS), Udaipur during 17th to 18th September 2010 at GITIS Campus. More than 100 IT professionals, researchers, students from various organizations across the country participated in the conference.

Emerging trends of Wireless Networks

Mr. Harsh Shah and Mr. Arvind Aora, Business Executives from Siemens Enterprise Communications Pvt. Ltd., Ahmedabad, delivered an expert talk on Wireless Network Set-up and Configuration modalities. Mr. Pooja Mahani, Director Microsystem, Udaipur, gave talk on security issues on Wireless Networks. Mr. Chitrag S. Thaker, Lecturer-IT College of Engineering, Ahmedabad (Gopent), delivered an Expert Lecture on Wimax & Wi-Fi networks.

The second day was unfolded with the invited talk by Rishma Khanna on budgeting and planning for a wireless network. Dr. Dharm Singh gave the presentation on Wireless Infrastructure, Wireless standards and protocols.

Honorary Chief Editor's Choice:

No matter how you look at it, there's an inevitable age of OFDM and MIMO will help transport us to a future where other bandwidth-intensive applications at speeds four to six G. The result is an amazing ability for users to interact and for providers to get more out from their networks at

National Advisors

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Mr. M.D. Agrawal, Vice President, CSI
Prof. H.R. Vishisarma, Honorary Secretary, CSI
Mr. H.R. Mohan, Divisional Chairman, div-IV CSI
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Dr. Rajesh Bhatia, Thapar University, HOD CSE
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Organising Committee

Organising Chairman

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Mr. Azmuddin Khan, Vice Chairman CSI, Udaipur
Mr. Naveen Malkani, Director Microsystem, Udaipur

About Geetanjali Institute of Technical Studies

The Geetanjali Institute of Technical Studies, popularly known as GITs is approved by gov. of Rajasthan and AICTE and affiliated to Rajasthan Technical University, Kota.

We offers 5 degree and 2 master degree courses with over 2000+ students studying in varied courses. It provides a conducive environment for study and extra curricular activities. Thus it plays a dynamic and catalytic role through education for the character building of its citizens and development of nation.

CSI-Special Interest Group Wireless Networks (CSI-WNs)

(SIG-WNs) seeks to:

- Showcase and promote the use of wireless communications in a broad range of markets including multimedia, consumer electronics, enterprises, healthcare, industry and security.
- Explore new business and research opportunities for members in these technologies and their application and share expertise on development issue of wireless networks standards.
- Improvement in data delivery mechanism, handoff procedures, efficient formation of heterogeneous wireless networks, etc.

Contacts

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National Workshop

on

Wireless Networks

(NWWN-2010)



September 17-18, 2010

www.nwwn.git.ac.in



SIG-WNs



Organized by :

SIG-WNs, Computer Society of India
Computer Society of India, Udaipur Chapter
Geetanjali Institute of Technical Studies, Udaipur (Raj.)

Venue :

Society of Computer Professionals,
Geetanjali Institute of Technical Studies,
Udaipur (Rajasthan)

Preamble

The national workshop on wireless networks dedicates to address the challenges in the areas of wireless networks design, implementation, up-gradations and security issues. This workshop seeks to define and describe some basic concepts about sustainability and to provide example that illustrate them. Although wireless networking technologies include satellite networks, microwave, Wi-Fi, wi-max, wireless, optical links, etc., this workshop is organized mainly to Wi-Fi networks under the IEEE 802.11 standards and their families.

The goal of this workshop is to bring together students, researchers and practitioners from academia and industry to focus on advanced wireless networks concepts. The workshop consists of various tracks like design, device configuration and installation, planning and security.

Design

Wireless standards: This topic gives an introduction to standards in general and IEEE 802.11 in specific.

Wireless Infrastructure and topologies: A high level introduction to wireless modes and topologies, based around real life cases, and supplying basic knowledge about setup of such infrastructure.

Communication towers: The lecturer provides a general guide for establishment of communication towers and masts.

Outdoor radio simulation: This tutorial serves as an introduction to the software "Radio Mobile", a radio simulation tool for outdoor environments. The focus of this workshop should be on the understanding of the different building blocks of the software.

Configuration and Installation

Access point configuration: How to configure wireless access points and routers based on general principles and clear motivations.

Wireless client installation: An introduction for selecting hardware, installing and configuring a

wireless device on client computer (laptop, desktop).

Antennas and cables: This gives the brief overview of the concept "Link Budget" in order to provide a clear picture of when, where and why the choice of antennas and cables matters in wireless implementations

Budgeting and Planning

Budgeting and planning: This session of the workshop focus on the importance of having a good implementation plan to produce a good budget and how to budget and plan for a wireless network.

How to shop: This session will give some general guidelines that are important to keep in mind when procuring wireless devices and focus on what criteria that should be clear before one can select a product for implementation

Security and troubleshooting

Wireless security: This tutorial describes in the context of information security. General security attributes are described.

Troubleshooting: This lecture provides a general methodology for troubleshooting communication networks. It introduces two approaches to problem solving, briefly describes the OSI model and presents the tools available to troubleshoot each of the OSI layers.

Important Dates

Registrations Starts - 8th Sep. 2010
Registrations upto - 14th Sep. 2010

(Online Registration@ www.nwvn.gits.ac.in)

Fee Structure

For members of CSI	Rs. 100/-
For others	Rs. 400/-
For lifetime CSI member	No Charge

National Workshop on Wireless Networks September 17-18, 2010

Registration Form

Ms./Mr. _____

Organization _____

Qualification _____

Age _____

Address _____

City _____ State/Province _____

Country _____

Postal Zone/Zip Code _____

Phone _____ Mobile _____

(Please include area code as well)

E-mail _____

Amount submitted: 100 400

Cash DD/Cheque no: _____

Date: _____

Bank Name: _____

**DD/Cheque should be drawn in favour of "Geetanjali Institute of Technical Studies, Udaipur, Rajasthan"

**Photocopy of this form will be accepted.

Category

CSI Member Faculty Other

Lifetime CSI member

IMPORTANT NOTE:

Filled up registration form along with the fee should be sent or to be submitted to:

Ms. Ridhima Khameera

Department of Computer Science and Engineering

Geetanjali Institute of Technical Studies,

Deok, Udaipur (Rajasthan)

Signature _____ Date: _____