

Government of India

Ministry of Electronics and information Technology

National Informatics Centre, Himachal Pradesh, Shimla

Technical Presentations by NIC HP Officials: 06-July-2024

As part of an ongoing series of 10-minute technical talks presented by NIC officials of their choice on a regular basis, the recent technical session held on 06-July-2024.

The details of the presenters, along with their topics are as follows:

| S.No. | Name | Designation | Topic |
|-------|-----------------------|---------------------|----------------------------------|
| 1. | Sh. Ajay Singh Chahal | SIO-Cum-Scientist-G | Interesting facts about Internet |
| 2. | Sh. Ashish Sharma | Scientist-D | Video Conferencing Protocols |

Interesting facts about Internet

State Informatics Officer, Himachal Pradesh presented an interesting and informative talk on “Interesting facts about internet”. The internet (interconnected network) is a vast system that links various computer nodes, including mobile devices, computers, and servers, enabling seamless data transmission across the globe. No one individual, company, organization, or government-controls the internet. Instead, it consists of numerous voluntarily interconnected autonomous networks.



SIO HP giving the Technical Talk on Interesting Facts about Internet

More than 65% of the world's population use the internet. A single Google query utilizes 1,000 computers in just 0.2 seconds to provide an answer. 16–20% of the searches Google

receives each day are unique and have never been queried before. The keyword "Insurance" holds the record for the most expensive Google AdWords cost-per-click at \$55. The first spam email was sent in 1978. The first registered domain, symbolics.com, still exists today. Google.co.in is the most visited domain in the world.

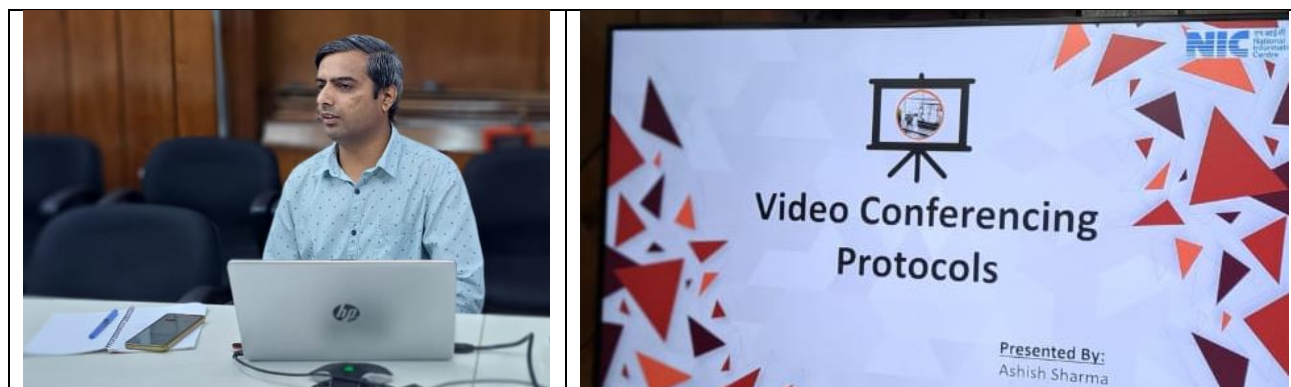
The internet can diminish our creativity and memory retention, making us less reflective and more dependent on digital aids for simple tasks.

China, North Korea, Iran etc. are the countries with severe internet censorship. China uses extensive internet censorship mechanisms known as the Great Firewall to block access to many foreign websites and monitor online activity. Social media platforms like Facebook, Twitter, and Instagram are blocked. Chinese users rely on domestic services like WeChat, Weibo, and Baidu, which are heavily monitored by the government. Similarly, in North Korea Internet access is extremely limited, with only a small elite having access to the global internet. All internet content is state-controlled and heavily censored.

Undersea cables are fiber-optic cables laid on the ocean floor and used to transmit data between continents. These cables are the backbone of the global internet, carrying the bulk of international communications, including email, webpages and video calls.

Video Conferencing Protocols

Sh. Ashish Sharma delivered a presentation on Video conferencing protocols which are essential for enabling real-time video and audio communication over the internet. These protocols ensure that data is transmitted efficiently, securely, and with minimal latency. Some of the key protocols he discussed include:



Sh. Ashish Sharma giving presentation on Video Conference Protocols

H.323: An ITU standard that provides protocols for audio, video, and data communication. It's widely used in enterprise environments for its robustness and interoperability.

SIP (Session Initiation Protocol): A signaling protocol used for initiating, maintaining, and terminating real-time sessions that include voice, video, and messaging applications. It's popular in VoIP (Voice over Internet Protocol) services.

WebRTC (Web Real-Time Communication): An open-source project that enables web browsers and mobile applications to provide real-time communication via simple APIs. It's

designed for peer-to-peer connections, making it a popular choice for browser-based video conferencing.

Each protocol has its unique strengths and use cases, contributing to the seamless and efficient operation of modern video conferencing systems.

Quiz Competition on Mobile App

A quiz competition was also organized based on the technical presentations delivered by NIC Officials. A total of 31 officials participated in the quiz competition which was held on the Hindi Bodh Mobile App developed by NIC HP. 15 multiple-choice questions based on the technical content delivered by the officers were asked in the quiz competition.

The result of the quiz competition was as follows:

| Position | Participant Name | Designation | Place of Posting |
|-----------------|-----------------------|----------------------------------|---------------------------------|
| 1 st | Sh. Ajay Singh Chahal | SIO-Cum-Scientist-G | NIC HP State Centre |
| 2 nd | Sh. Swetansh Shatak | Scientific/Technical Assistant-B | NIC Distt Centre Solan |
| 3 rd | Sh. Jagdeep | Scientific/Technical Assistant-A | NIC Distt Centre Lahaul & Spiti |



NIC HP officials attending the technical session

State Informatics Officer, Himachal Pradesh reviewed various activities being undertaken by the NICHP and provided instructions to officials related to their activities.

The SIOHP discussed administrative problems and various issues with the officials of NIC HP. He also reviewed the upcoming edition of HimNIC Informatics, a quarterly newsletter by NIC HP and encouraged all officials to participate and contribute their valuable content. The

objective is to develop better writing skills. He also exhorted all the officials for sharing the original and self-written content. He also encouraged all NIC officials to contribute their compositions for Hindi Rajbhasha.

As agreed that the following NIC officials will present a technical talk on the topic of their choice during the upcoming meeting scheduled for coming working Saturday, 20-July-2024.

| S.No. | Participant Name | Designation | Place of Posting |
|-------|------------------------|-------------|---------------------------|
| 1. | Sh. Sandeep Sood | Scientist-F | NIC HP State Centre |
| 2. | Sh. Vimal Kumar Sharma | Scientist-F | NIC HP State Centre |
| 3. | Sh. Vinod Kumar Garg | Scientist-F | NIC Distt Centre Hamirpur |
| 4. | Sh. Mangal Singh | Scientist-D | NIC HP State Centre |

The following officials were present in the technical talk on 09-07-2024:

| NIC HP State Centre | | |
|---------------------------------|------------------------|----------------------------------|
| 1 | Sh. Ajay Singh Chahal | SIO-Cum-Scientist-G |
| 2 | Sh. Lalit Kapoor | Scientist-F |
| 3 | Sh. Sanjay Kumar | Scientist-F |
| 4 | Sh. Sanjay Sharma | Scientist-F |
| 5 | Sh. Sandeep Kumar | Scientist-E |
| 6 | Sh. Daljeet Singh Rana | Scientist-E |
| 7 | Sh. Sanjay Thakur | Scientist-E |
| 8 | Sh. Ashish Sharma | Scientist-D |
| 9 | Sh. Mangal Singh | Scientist-D |
| 10 | Sh. Sarvjeet Kumar | Scientist-C |
| 11 | Smt. Vandana Sankhayan | Scientist-C |
| 12 | Sh. Mukesh Kumar | Scientist-D |
| 13 | Sh. Prithvi Raj | Scientist-C |
| 14 | Smt. Pooja Mann | Scientific/Technical Assistant-A |
| District Centre Bilaspur | | |
| 15 | Sh. Rakesh Kumar | Scientist-D |
| District Centre Hamirpur | | |
| 16 | Sh. Vinod Kumar Garg | Scientist-F |

| District Centre Kangra | | |
|---|---------------------------|----------------------------------|
| 17 | Sh. Bhupinder Pathak | Scientist-F |
| 18 | Sh. Akshay Mehta | Scientist-E |
| District Centre Kinnaur | | |
| 19 | Sh. Balwan Singh | Scientist-D |
| District Centre Kullu | | |
| 20 | Sh. Brijender Kumar Dogra | Scientist-E |
| 21 | Sh. Sanjay Gupta | Scientist-E |
| District Centre Lahual & Spiti | | |
| 22 | Sh. Jagdeep | Scientific/Technical Assistant-A |
| District Centre Mandi | | |
| 23 | Sh. Akhilesh Bharati | Scientist-E |
| 24 | Sh. Ashwani Kumar | Scientist-E |
| District Centre Shimla | | |
| 25 | Sh. Pankaj Gupta | Scientist-F |
| District Centre Sirmour | | |
| 26 | Sh. Vijay Kumar | Scientist-E |
| 27 | Sh. Mohan Rakesh Aggarwal | Scientist-D |
| District Centre Solan | | |
| 28 | Sh. Sanjeev Kumar | Scientist-C |
| 29 | Sh. Swetansh Shatak | Scientific/Technical Assistant-B |
| District Centre Una | | |
| 30 | Sh. Sanjeev Kumar | Scientist-E |
| 31 | Sh. Bhupinder Singh | Scientist-D |