Government of India
Ministry of Electronics and information Technology
National Informatics Centre, Himachal Pradesh, Shimla
Technical Presentations by NIC HP Officials held on 17-May-2025

The fortnightly Technical Talk session was held on **17th May 2025**.The session featured ten-minute Technical presentations by individual Officers of NIC, followed by a five-minute session highlighting the Technical News during this time period. The Technical Presentations of every individual were also evaluated by the NIC Staff on various parameters such as Content, Delivery Style, Usefulness of Topic, Time Constraint, Font & Style on the scale of 5 through the Hindi Bodh Mobile Application.
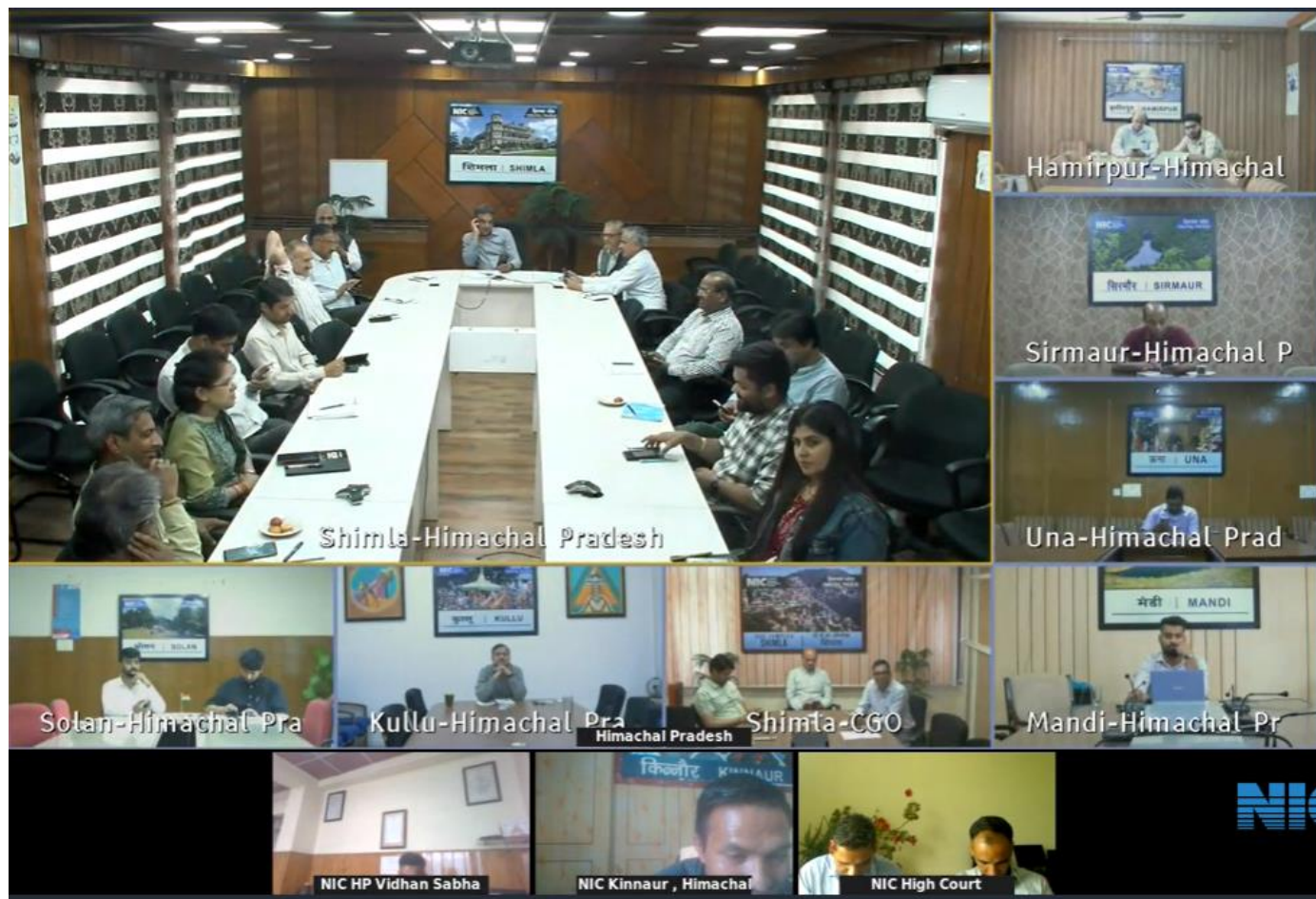
The details of the presenters & rating are as below:

Sr. No.	Name	Designation	Topic	Rating (5.0)
1.	Sh. Balwan Singh	Scientist-D	Technical News	4.2
2.	Sh. Chetan Saini	Scientific Officer SB	Mern Stack Explained	4.5
3.	Sh. Prashant Kumar	Scientific Officer SB	Quantum Computing's	4.4
4.	Smt. Pooja Mann	Scientific/Technical Assistant-A	Digital Brand Identity	4.3

In addition to the presentations, a quiz competition was organized related to technical content delivered. A total of **27** officials participated in the quiz, which was conducted on the Hindi Bodh Mobile App. The quiz featured **15** multiple-choice questions, all based on the technical presentations delivered by NIC officials.

The result of the quiz competition are as below:

Position	Participant Name	Designation	Location
1st	Sh. Chander Shekhar	Scientific Officer - SB	NIC District Centre, Solan
2nd	Sh. Lalit Kapoor	Scientist-F	NIC State Centre
3rd	Sh. Anurag Gupta	Scientist-E	NIC District Centre, Hamirpur

NIC HP officials attending the technical session

The following officials were present during the technical talk held on 17-05-2025

Sr. No	Name of official	Designation	Centre (State/District)
1.	Sh. Ajay Singh Chahal	SIO-Cum-Scientist-G	NIC State Centre
2.	Sh. Lalit Kapoor	Scientist-F	NIC State Centre
3.	Sh. Sandeep Sood	Scientist-F	NIC State Centre
4.	Sh. Sanjay Sharma	Scientist-F	NIC State Centre
5.	Sh. Pankaj Gupta	Scientist-F	NIC State Centre
6.	Sh Sanjay Thakur	Scientist-F	NIC State Centre
7.	Sh. Ashish Sharma	Scientist D	NIC State Centre
8.	Sh. Mukesh Kumar	Scientist D	NIC State Centre

9.	Sh Sarvjeet Kumar	Scientist C	NIC State Centre
10.	Sh. Prithvi Raj	Scientist C	NIC State Centre
11.	Smt. Vandana Sankhyan	Scientist C	NIC State Centre
12.	Smt. Pooja Mann	Scientific/Technical Assistant-A	NIC State Centre
13.	Sh. Rajesh Kumar Yadubhushanam	Section Officer	NIC State Centre
14.	Vinay Dogra	Assistant Section Officer	NIC State Centre
15.	Sh. Himanshu Gupta	Steno Grade-III	NIC State Centre
16.	Sh Sanjay Kumar	Scientist-F	NIC HP CGO Complex
17.	Sh. Vinod Kumar Garg	Scientist-F	NIC HP CGO Complex
18.	Sh Mangal Singh	Scientist-D	NIC HP CGO Complex
19.	Sh. CI Kashyap	Scientist-C	NIC High Court
20.	Sh. Jitender Sharma	Scientist-B	NIC High Court
21.	Sh Sandeep Kumar	Scientist-F	NIC Vidhan Sabha
22.	Sh. Anurag Gupta	Scientist-E	NIC District Centre, Hamirpur
23.	Sh. Prashant Kumar	Scientific Officer SB	NIC District Centre, Hamirpur
24.	Sh. Chetan Saini	Scientific Officer SB	NIC District Centre, Mandi
25.	Sh Jagdeep	Scientific/Technical Assistant-A	NIC District Centre, Lahaul & Spiti.
26.	Sh. Brijender Dogra	Scientist-E	NIC District Centre, Kullu
27.	Sh. Balwan Singh	Scientist-D	NIC District Centre, Kinnaur
28.	Sh. Chander Shekhar	Scientific Officer - SB	NIC District Centre, Solan
29.	Sh. Swetansh Shatak	Scientific/Technical Assistant-B	NIC District Centre, Solan
30.	Sh. Mohan Rakesh Aggarwal	Scientist-D	NIC District Centre, Sirmaur
31.	Sh Bhupinder Singh	Scientist-D	NIC District Centre, Una

<u>**Overview of Technical Presentations**</u>

Mern Stack Explained:

Sh. Chetan Saini presenting on the Mern Stack Explained.

Sh Chetan Saini delivered the presentation on the Mern Stack Explained. The MERN stack is a full JavaScript-based technology stack used for building modern web applications, consisting of MongoDB (a NoSQL database), Express.js (a lightweight web application framework), React.js (a frontend JavaScript library for building user interfaces), and Node.js (a server-side JavaScript runtime). It follows three-tier architecture (frontend, backend, and database) entirely using JavaScript and JSON, which simplifies development and data handling. Each component plays a specific role: MongoDB stores data in a flexible JSON-like format; Express handles server-side routing and middleware; React manages the user interface with reusable components; and Node.js executes server-side JavaScript. The stack is easy to learn, especially for beginners, as it requires familiarity with only JavaScript, enabling quick onboarding, efficient development, and easier long-term maintenance.

Quantum Computing's:

Sh Prashant Kumar presenting on Quantum Computing's.

Sh. Prashant Kumar delivered a presentation on *Quantum Computing's*. The presentation explores the impact of quantum computing on encryption, highlighting how quantum principles like superposition and entanglement enable powerful computational abilities that threaten traditional cryptographic methods. Classical encryption relies on problems like integer factorization, which are difficult for current computers

but can be efficiently solved by quantum algorithms like Shor's algorithm, potentially breaking widely used encryption standards such as RSA. In response, the field of Post-Quantum Cryptography (PQC) is emerging, offering new algorithms resistant to quantum attacks. Transitioning to quantum-resistant encryption requires thorough assessment, planning, and overcoming challenges like legacy system compatibility and organizational resistance.

Digital Brand Identity Manual:

Smt. Pooja Mann presenting on Digital Brand Identity Manual

Smt Pooja Mann delivered a presentation on Digital Brand Identity Manual. The presentation highlights The *Digital Brand Identity Manual (DBIM)* provides comprehensive guidelines for standardizing the digital presence of Indian government platforms. It emphasizes consistency, trust, accessibility, and mobile readiness. Key components include the use of the State Emblem for logos, the Noto Sans typeface for multilingual support, defined color palettes, and a structured iconography system. The manual outlines specifications for imagery, content structuring with SEO and user-friendly language, and adherence to accessibility standards in line with GIGW 3.0 and the RPWD Act. It also details technical parameters such as file formats and sizes and emphasizes effective search functionalities including multilingual and voice-based search.

Technical News:

Sh. Balwan Singh, presenting the Technical News

Sh. Balwan Singh presented the technical news. Here's topics of the main news covered in the presentation:

AI Growth: Major global advancements in AI, including Google's Gemini expansion and autonomous research capabilities.

Cybersecurity Concerns: Data breaches, ransomware threats, and ongoing cyberattacks on Indian government websites from foreign sources.

Big Tech Updates: Meta, Apple, Microsoft, and Tesla face legal, ethical, and operational challenges.

India's AI Focus: IIT Madras launches AI B. Tech growing AI adoption in apps like True caller and rising demand for AI roles.

E-Governance Expansion: NIC rolls out several digital public service portals across Indian states.

Emerging Tech: Launch of AI-powered products like Ray-Ban Meta smart glasses and Google's experimental features.