



MADHAV INSTITUTE OF TECHNOLOGY & SCIENCE GWALIOR

(A Govt. Aided UGC Autonomous & NAAC Accredited Institute, Affiliated to R.G.P.V. Bhopal)

Near Gola Ka Mandir, Gwalior-474012; www.mitsgwalior.in

Department of Mechanical Engineering

09/08/2022

Report on Expert talk

On

“IoT and 5G”

The Department of Mechanical Engineering has conducted an expert talk on “5G and IoT” on 26th August 2022 (Friday) from 04:00 PM– 06:00 PM through online platform MS-Meet. The expert talk on “5G and IoT” organized especially for the students of the MITS Gwalior (MP).

Our Proud alumni of batch 1992, Mr. Ashish Khare General Manager and Global Head IoT& 5G, Wipro Limited delivered a lecture.

Joining Link <https://teams.live.com/meet/9580592749536>

Brief Objective of the Program

As young brigade of India need to be understand the current technologies and its significance in mechanical engineering.

Objectives:

- (a) To spread global need of the upcoming technology of 5G.
- (b) To make student familiar with the internet of things (IoT)

Salient points of discussion / deliberations

- 5G spectrum and its consideration
- IoT and areas of intervention
- Global market and connectivity
- 5G as enabler of communities in future aspects of mechanical engineering

Outcomes

- How 5G technologies spreading in India?
- Key feature of 5G networks, establishments and its advantages in various sectors.
- Learn about the effectiveness of IoT with 5G Network.
- Activity and Q & A session on the understanding of concept “5G and IoT”.
- Understand about small scale startup policies with reference of 5G network.

Overall, this interaction was very informative for all participants.



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The seminar poster and glimpses are given below:

An expert talk on
IoT and 5G

A proud alumni of MITS

Mr. Ashish Khare
General Manager and Global Head
– IoT & 5G, Wipro Limited

Date & Time
26 August, 2022 Friday
04 PM to 06 PM

Joining Link
<https://teams.live.com/joinmeeting/9580592749536>
Online platform- MS Team

Organized by
Department of Mechanical Engineering

Madhav Institute of Technology & Science, Gwalior- 474005
Contact: Dr. Gavendra Norkey (8770541940)

5G Readiness

Incremental happening on 5G

2017-18	2018-2020	2020-2025	2025+
Initial Steps <ul style="list-style-type: none">Testing of pre-standards technologyConfirm feasibility of mm wave access technologyContinue standards study items and transition to work item	Incremental 4.75/5G Deployment, Demos, & Business Plans <ul style="list-style-type: none">Deployment of sub-6 GHz 3GPP standards compliant LTE-A, LTE-A ProGrowing availability of Phase 1 compliant terminal devicesDemos of pre-standards & proprietary mm Wave systems<ul style="list-style-type: none">Up to 40 GHz in 5G NR Ph1Ad hoc terminalsProprietary "5G-like" fixed wireless access & small cell deployments<ul style="list-style-type: none">Backhaul, self config mesh, SDN network management	Pilot Deployment & Tech Winners Emerge <ul style="list-style-type: none">Pilot deployment of standards compliant 5G – mm Wave and sub-6 GHz<ul style="list-style-type: none">Growing availability of standards compliant 5G terminal devices with mm WaveTech Emergent on<ul style="list-style-type: none">Indoor air interfacesLTE-U/LAA/MultiFireBackhaul / FronthaulCost effective fixed wireless access & dense small cell deployments: Self Config Mesh, SDN network management	Mass Rollout <ul style="list-style-type: none">Mass deployment of standards compliant 5G<ul style="list-style-type: none">mm Wave and sub-6 GHzIndoors and outdoorsMass market availability of standards compliant 5G terminal devices with mm WaveMature fixed wireless access & dense small cell deployment technologies



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Meeting chat

NG Nikhil kumar Gupta 4:17 PM

sanjay skv (Guest) was invited to the meeting.

Nairitya gupta (Guest) was invited to the meeting.

Alok Sharma (Guest) was invited to the meeting.

Deepesh (Guest) was invited to the meeting.

ADARSH DWIVEDI (Guest) was invited to the meeting.

https://teams.live.com/join/9580592749536 (Guest) was invited to the meeting.

Devraj Rajput (Guest) was invited to the meeting.

ADARSH DWIVEDI (Guest) was invited to the meeting.

ADITYA Pratap Singh Tomar (Guest) was invited to the meeting.

KAPIL RAJE (Guest) was invited to the meeting.

sujeet (Guest) was invited to the meeting.

Deepesh (Guest) was invited to the meeting.

Ankit Singh was invited to the meeting.

Rahul Yadav (Guest) was invited to the meeting.

Type a new message

5G as a Transformation Catalyst

Implications

- Differentiated & Guaranteed service**: Meet specific needs, even while on the move
- Network aware applications**: Context awareness
- Very high density of UEs**: Seamless connectivity for all UEs
- Ultra low energy consumption**: Long life UEs without recharge
- Cost effective service**: Business & operational model alignment

A sea of possibilities to unlock value

Search

Infinite Connectivity Requirements some examples

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Areas of Intervention

<p>1 Unified Connectivity</p> <p>Private 5G, Convergence of Connectivity, Connected Everything. Enable Application aware Network, Hybrid network Management, Test automation...</p>	<p>2 Legacy Modernization</p> <p>Control Systems, Devices, Sensors - IoT Enabled with Connectivity & Centralized Control, IT & OT Application Modernization, Robot & Robot Adoption, ...</p>
<p>3 Cloud & Edge</p> <p>NFVI, Micro Data Centers, Intelligence & Control at the Edge, Augmented Analytics for Automation, ...</p>	<p>4 Digital Experience</p> <p>E2E experience through new capabilities - Intelligent, Immersive, Automated, Real-time, Zero-touch, ...</p>
<p>6 Data Driven Ind. 4.0</p> <p>Augmented & Intelligent Decisions, Real-time Analytics with AI/ML, Cognitive & Intelligent Automation, Predictive quality & Maintenance ...</p>	<p>5 Apps & Platforms</p> <p>Opensource tools, Refactoring of Application, Systems and Platforms, Modernization, APFs, Test automation, ...</p>
<p>7 Security</p> <p>End-2-End Security: IT-OT Security, Multi-Access Edge, Surveillance, ...</p>	

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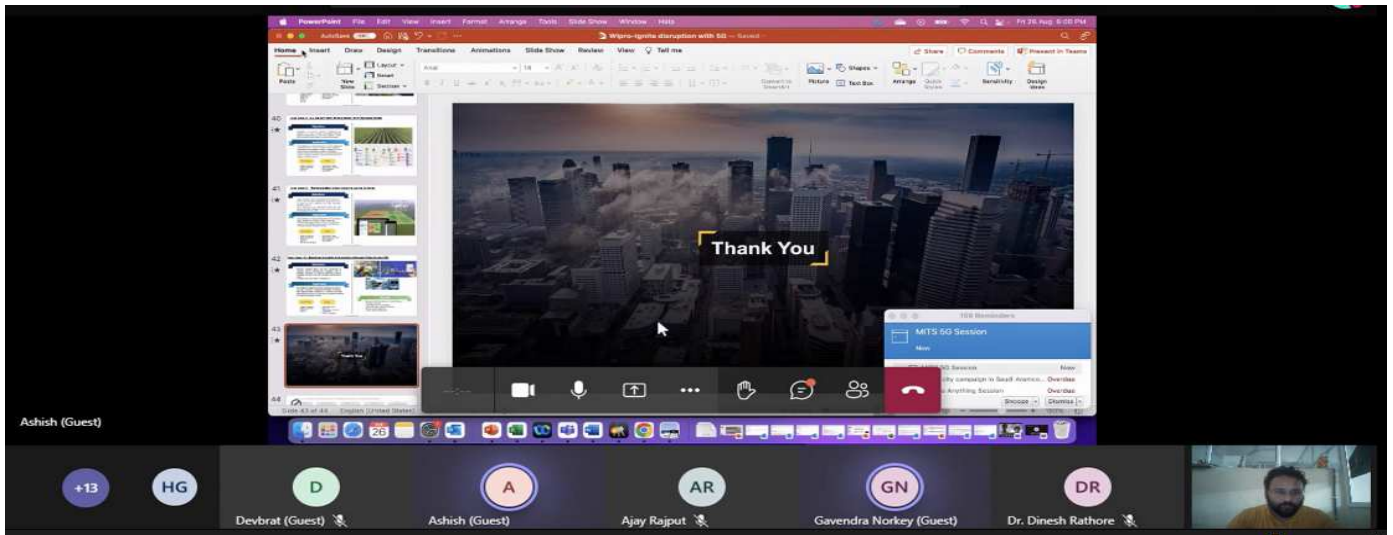


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Thanks with regards

Dr. Gavendra Norkey
I/c of Departmental Activity

Dr. Manoj Kumar Gaur
Professor and Head Department of Mechanical Engineering