# 5G & 6G Hackathon WTSA and IMC 2024

# International Telecommunication Union



ITU is the United Nations specialized agency for information and communication technologies (ICTs), with 193 Member States and over 1000 affiliated organizations. It is headquartered in Geneva, Switzerland

ITU facilitates international connectivity

- by allocating global radio spectrum and satellite orbits,
- developing technical standards, and
- working to improve digital access in underserved communities.
- It provides a platform for international agreements, knowledge sharing, and capacity building.

# World Telecommunication Standardization Assembly
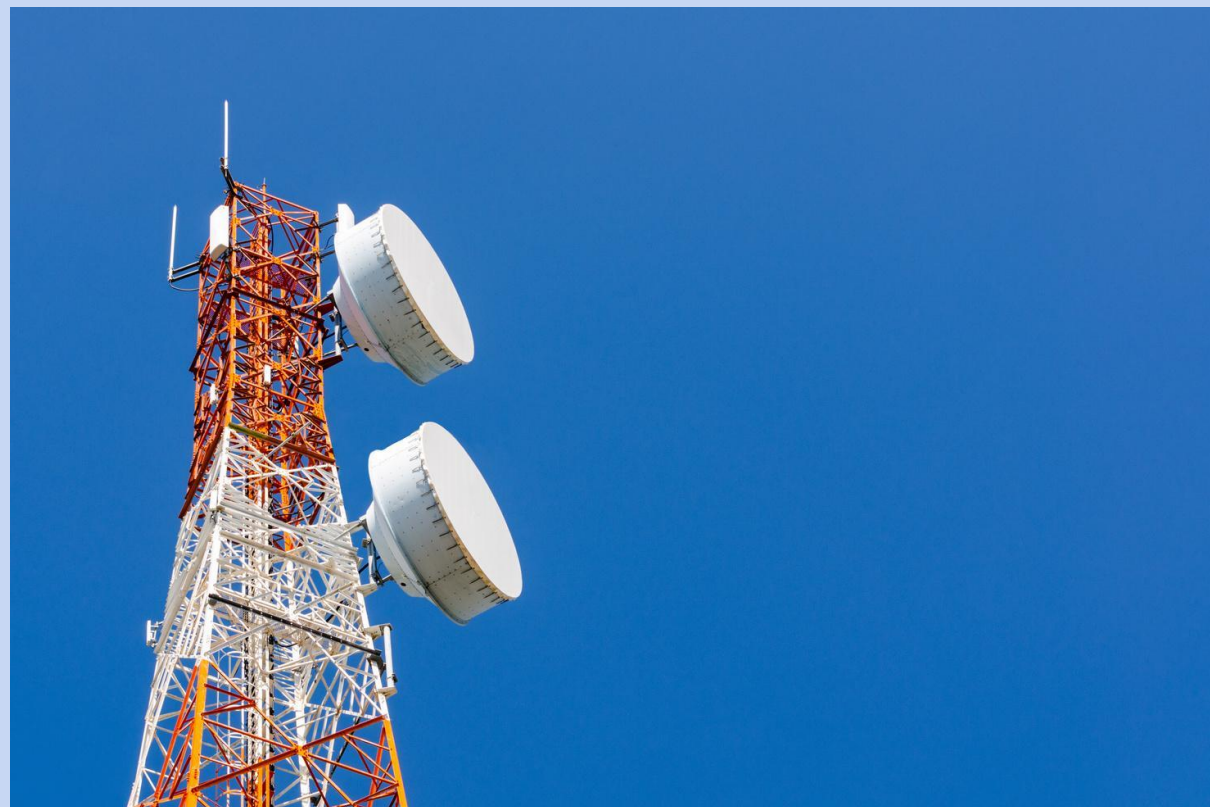


- The World Telecommunication Standardization Assembly is held every four years and defines the next period of study for ITU-T.
- WTSA-2024 is planned to take place from 15 to 24 October 2024 in New Delhi, India.

# Indian Mobile Congress

## Asia's Largest Tech Fest



- The India Mobile Congress is a significant tech event that blends innovation with imagination, focusing on shaping the future digital landscape through the convergence of dreams, technologies, and aspirations.
- The eighth edition of the India Mobile Congress will be held from 15-18 October 2024 at Bharat Mandapam, New Delhi.
- This edition of the Congress will take place alongside WTSA'24, the governing conference of the ITU Standardization Sector (ITU-T), highlighting its importance in the global tech and ICT landscape.

# 5G & 6G Hackathon 2024



- TCOE India, on behalf of Department of Telecommunications (DoT),has launched '5G & 6G Hackathon 2024'.
- Aim is to support development of new range of 5G & Beyond use case applications for the emerging needs of Global Digital community
- Shortlisting of winners will be notified 15 - 20 days prior to the WTSA 2024 event.

# Timeline

**29th Aug '24**
Launch of 5G & 6G Hackathon 2024

**01**

**29th Aug - 15th Sep '24**
Registration And Ideas Submission

**02**

**16th Sep - 21st Sep '24**
Screening Phase I for Submitted applications (Online)

**03**

**26th Sep - 27th Sep '24**
Screening Phase II (Physical demo at prescribed 5G site)

**04**

**September End '24**
Winner Announcement

**05**

**15th Oct - 18th Oct '24**
Demonstration of Product/ Solution in IMC Event (For winners)

**06**

**PROBLEM STATEMENTS**

**5G & 6G Hackathon 2024**

# Suo Moto





**Solution using 5G, 6G and Emerging Technologies for the following Application verticals:**

- Automobile/ Transport/Logistics
- Industry 4.0
- Tourism
- Enterprise & Emergency Communication
- Smart Cities
- Railways
- Mining/ Ports/ Airports
- Power
- Rural & Remote Communication
- FinTech
- Water Management
- Sports
- Cyber Security, Quantum communications and security
- Environment, Public Safety & Disaster Management

# AI-Driven Network Maintenance



Develop an AI-powered system that predicts network failures, optimizes maintenance schedules, and reduces downtime.

# Design of Multi-Modal Interactive system



Multi-modal interaction system that combines visual, auditory, and haptic feedback for a fully immersive experience. This could include realistic gestures, voice commands, and tactile responses, all synchronized

# 5G Kiosk



Kiosk that uses 5G wireless technology to improve its functionality.

- Faster speeds
- More devices
- Better Security

## Problem Statement

With a very poor doctor to patient ratio in the country, access to medical practitioners and health care workers remains a big challenge for even the first level diagnosis at the primary health care centers across rural India.

# Twin Technology



- A digital twin is a virtual representation of an object or system designed to reflect a physical object accurately. It spans the object's lifecycle, is updated from real-time data and uses simulation, machine learning and reasoning to help make decisions.

## Problem Statement

- Design a digital twin application that solve a real life problem in India

# Non-Terrestrial Network (NTN) Communications



- Wireless communication systems that operate above the Earth's surface.
- They use a variety of platforms, including satellites, high-altitude platforms, and drones, to provide connectivity in places that are otherwise difficult to reach

## Problem Statement

IoTs applications in remote areas are resource constrained in terms of power, data management , and network scalability. Design a NTN-Enabled IoT solution to address the above-mentioned challenges.

# 5G Broadcasting



## Problem Statement

Lack of visual information on natural calamity prone areas such as landslide areas of motorable sections of the highways/roads, water levels at bridges in flood prone regions, areas affected by cyclones leads to loss of life and property.

# 5G BROADCASTS

- Enables the delivery of multimedia content over 5G networks in broadcast mode .

## Problem Statement

Human-animal encounters across country is a common problem for all the roads in remote forest areas

# 5G O-RAN



**Problem Statement**

Develop industry automation use case(s) using 5G O-RAN

- Open RAN, or Open Radio Access Network, is a shift in the way to designing and deploying radio access network infrastructure in the telecommunications industry.

- It aims to disaggregate and open up the Radio Access Network, enabling greater flexibility, interoperability, and innovation in network deployments, and nourish new innovative business opportunities.

# Contact us

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# THANK YOU!