

# 5G Technology Demonstration at India Mobile Congress 2024 by CMPDI

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CMPDI in collaboration with Tidal Wave Pvt Ltd. is showcasing 'how 5G technology is revolutionizing the mining industry' through different cutting-edge technology use cases at the ongoing India Mobile Congress 2024 (IMC 2024) at Pragati Maidan, New Delhi from 15-18<sup>th</sup> October, 2024. Each use case highlights the transformative power of 5G in improving safety, efficiency and operational precision in mining. Earlier in the day, Prime Minister Shri Narendra Modi Inaugurated the India Mobile Congress 2024.



Chairman –cum- Managing Director, Coal India Limited Shri P.M. Prasad was the first visitor to CMPDI's stall at IMC 2024. CMD, CMPDI, Shri Manoj Kumar and other senior officials from CMPDI were also present on the occasion.

CMPDI is showcasing total 13 use cases in the IMC 2024 which are as below

1. 5G Network infra
2. Mission Critical communication (MCX)
3. 5G Enabled Remote Drone operations
4. 5G Camera with AI enabled video analytics
5. 5G IoT Environmental sensors.
6. 5G IoT Machinery sensors.
7. Backward compatibility with legacy devices using CPE
8. 5G Enabled Automated drilling operations.
9. AI enabled Traffic control system
10. 5G Enabled slope stability Radar system
11. AR with 5G enabled remote maintenance support.
12. 5G C-V2X based collision avoidance system
13. Digital Twin of Load Haul Dump operations



5G enables real-time communication, allows remote monitoring and control in the most challenging environment by surpassing traditional wireless technologies like Wi-Fi and Tetra. It also ensures seamless automation, reduces risk and supports future-ready operations making it indispensable for mining's digital future.

Coal Ministry had successfully demonstrated 5G technology use cases (5G enabled Drones, AI powered camera, Vehicle Tracking System (VTS) and Mission Critical Voice and Video communications) in Amlohri Open Cast mine (OCP) of Northern Coalfields Limited from IMC 2023, New Delhi. CMPDI conceptualized and played a pivotal role in deployment of India's First Private 5G Network in Coal Mining at Amlohri OCP.

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