C-DOT sets up its 6th Centre of Excellence at IIT (BHU), Varanasi for next-gen telecom technologies

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News

The Centre for Development of Telematics (C-DOT), the premier R&D centre of the Department of Telecommunications (DoT), signed an MoU with IIT (BHU), Varanasi (Uttar Pradesh) and opened its 6th Centre of Excellence (CoE) (announced 23 Oct 2026). It was signed in the presence of Dr Pankaj Kumar Dalela, EVP, C-DOT, and Prof. Amit Patra, Director, IIT (BHU), followed by the CoE's inauguration. Focus: wireless communications, quantum technologies, cybersecurity and AI-driven communication; 5G-Advanced/6G, very-large-scale MIMO, integrated sensing and communication (ISAC), and quantum and post-quantum communication.

Key facts

Centre	C-DOT's 6th CoE – IIT (BHU), Varanasi, Uttar Pradesh
Earlier 5 CoEs	IIT Kanpur, IIT Gandhinagar, IIT Roorkee, IIT Hyderabad, IISc Bengaluru
Research	5G-Advanced/6G, massive MIMO, ISAC, AI-native networks, quantum & post-quantum comms
C-DOT	Autonomous R&D centre of DoT; CEO: Dr Rajkumar Upadhyay

Aim	Link academic research with real telecom needs; build talent; indigenous technology

Background

- C-DOT history: set up in August 1984 as an autonomous body under Sam Pitroda; took telephones to villages with the Rural Automatic Exchange (RAX) and MAX switches; now develops indigenous 4G/5G and GPON. HQ New Delhi.
- Policy: the 'Bharat 6G Vision' document was released by the PM in March 2023 (target 2030); TRAI is the telecom regulator set up in 1997 under the TRAI Act; the Telecommunications Act 2023 replaced the Indian Telegraph Act 1885.
- Science: MIMO (Multiple-Input Multiple-Output) uses many antennas to send more data at once; post-quantum cryptography means encryption designed to resist attacks even by quantum computers.
- Geography: Varanasi (Kashi) lies on the Ganga in Uttar Pradesh; BHU was founded in 1916 by Madan Mohan Malaviya; IIT (BHU) became an IIT in 2012.

Tamil Nadu link: India's indigenous 5G Testbed was built by 8 institutes led by IIT Madras at over ₹220 crore; the PM launched it on 17 May 2022 at TRAI's silver jubilee. (None of C-DOT's 6 CoEs is in Tamil Nadu.)

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