

# DoT and C-DOT Sign Agreement to Establish End-to-End Optical Network Testbed for Indigenous Optical Communication Technologies

**Testbed to bridge the gap between lab-stage innovation and market readiness through testing and validation of indigenous optical communication technologies**

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The Department of Telecommunications (DoT), Ministry of Communications, Government of India, has officially signed a strategic five-year agreement with the Centre for Development of Telematics (C-DOT) to establish a state-of-the-art End-to-End Optical Network Test Bed. Funded and supported by DoT, this Test Bed will be located at the C-DOT Campus in New Delhi. It will serve as a critical real-world environment to accelerate the development, testing, and commercialization of optical communication solutions created by Indian startups and industry players.



The agreement was signed on 27th August 2026 by the representatives of DoT & C-DOT in the august presence of Sh. Alok Shukla, Advisor (Technology), DoT; Dr. Rajkumar Upadhyay, CEO, C-DOT and Sh. Atul Kumar Singh, DDG (Networks & Technologies), DoT.

## **Empowering India's Optical Communication Ecosystem**

The public-funded project primarily bridges the gap between lab-stage innovation and market readiness. This initiative will further accelerate the development and deployment of home-grown optical communication technologies, to further advance the vision of "Aatmanirbhar Bharat" and strengthen

India's capabilities in next-generation communication infrastructure. By combining C-DOT's mature, field-ready products across optical core, access, and Quantum Security technologies, the test bed will function as a catalyst for the Indian telecom ecosystem.

The Test Bed will serve as a platform for skill development and capacity building in advanced optical communications, providing students, researchers, startups and industry professionals opportunities for hands-on training and exposure to next-generation optical networking technologies.

The End-to-End Optical Network Test Bed will be a shared national resource for innovation, testing, validation, skill development and commercialization. The technical blueprint structures the initiative into two definitive phases:

- Set-up Phase (Years 1–2): Focuses on creating the necessary infrastructure for the Test Bed, including the various elements of Optical Core, Optical Access as well as Quantum Security besides third party advanced test & measurement tools from trusted vendors, resulting in the formal rollout of the test bed.
- Operations & Maintenance Phase (Years 3–5): Dedicated to sustained test bed maintenance, direct technical support for ecosystem users, and targeted educational outreach programs.

#### **About the Centre for Development of Telematics (C-DOT)**

C-DOT is a premier telecom technology research and development center of the Department of Telecommunications, Ministry of Communications, Government of India. It has consistently been at the forefront of developing indigenous, secure, standards-compliant and deployment-ready telecom technologies, aligned with the national priorities of technological self-reliance and secure digital infrastructure.

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