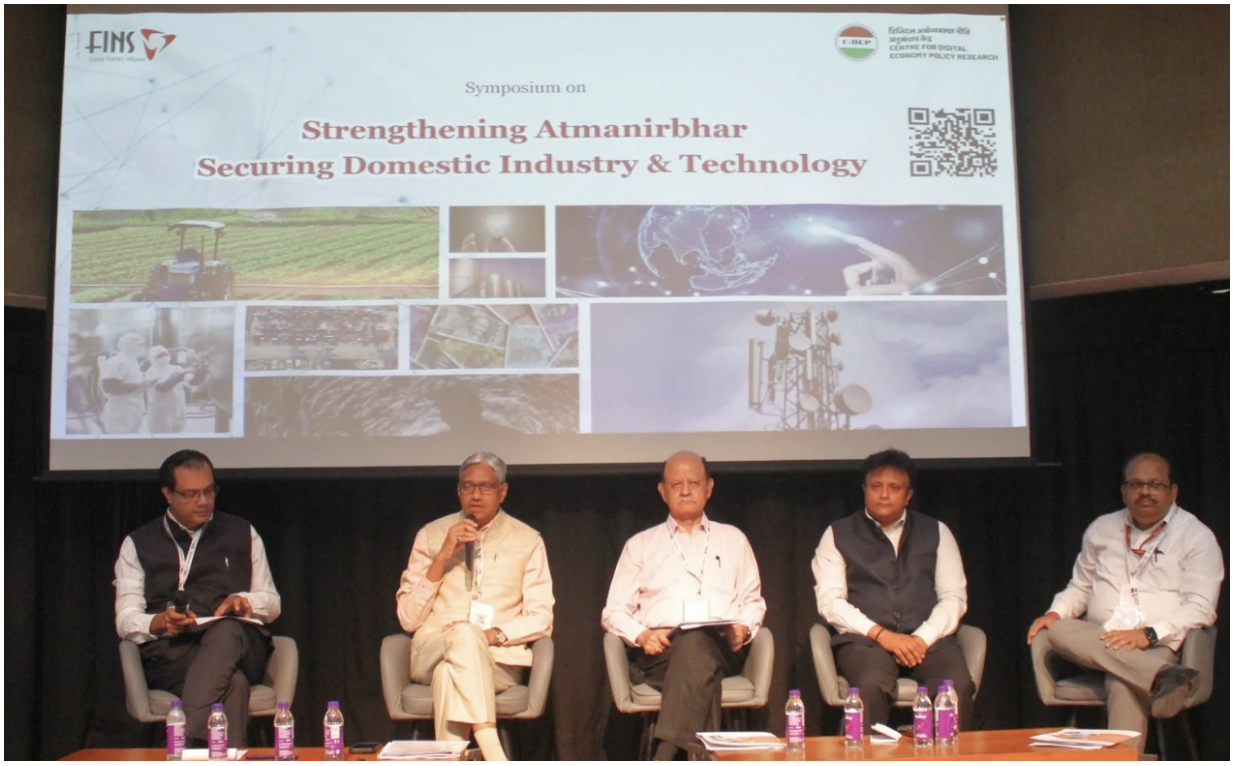
6. Telecom Networks - The Lifeline of Bharat

6.1 Panelist

- Shri Anil Kumar Lahoti, Chairman, TRAI
- Shri Niraj Verma, Administrator, USOF
- Lt. General Dr. S.P. Kochhar, Director General, COAI
- Shri Vijayanand Choudhury, Global Head - SCM, STL
- Dr. Jaijit Bhattacharya, President, C-DEP



6.2 Background

Accessing the internet – in homes or offices – is often a challenge for us. It remains a fact of life that we still are ironically forced to put up with even in what we consider to be an advanced internet age. With 900 million internet users, India already has the second largest user base in the world. More are taking to the internet and their number is likely to hit one billion even before 2025. Post Covid, the phenomenon has accelerated with Indians embracing digital connectivity as never before.

India’s building laws – the National Building Code (NBC) – does not mandate telecom infrastructure as an essential ingredient before a building can be declared habitable. Though accessing digital services these days is as necessary as water and electricity, it still has not been accorded the same importance as it ought to be. High quality optical cables that are fire retardant and bend resistant are an essential ingredient to improve quality of life of Indian’s today.

In the contemporary era, telecom networks serve as the backbone of connectivity and communication, profoundly impacting the daily lives of individuals and the broader socio-economic landscape. India, with its burgeoning digital ecosystem, faces both triumphs and challenges in sustaining its telecom industry amidst escalating data consumption and evolving market dynamics.

The panel dissected the nuances surrounding India's telecom networks, acknowledging their pivotal role as the nation's lifeline. The discourse delved into the confluence of factors driving the growth of availability of telecom networks for all, while also addressing the financial strains faced by Telecom Service Providers (TSPs) tasked with network development and maintenance.

There has been an exponential surge in data usage propelled by factors such as increased smartphone penetration and the proliferation of streaming services. This has placed considerable burdens on TSPs, who bear the sole responsibility for network infrastructure costs.

6.3 Thematic areas of discussion

1. Bringing connectivity to antodaya
2. Ensuring quality connectivity to every new building through
3. Assessing the financial strains faced by TSPs and evaluating potential models for revenue generation and cost-sharing
4. Debating approaches to ensure fair contribution from OTT platforms towards network infrastructure costs while upholding principles of net neutrality

6.4 Key Actionable Insights

Background: The digital communication sector is crucial for development and governance in India. The government has undertaken significant reforms in the telecom sector to improve infrastructure, promote domestic production, and encourage industry growth. These reforms include moratorium on spectrum charges, rationalization and settlement of the interest accrual of AGR, and the introduction of the Telecom Act of 2023. However, the sector faces significant challenges that threaten its financial resilience and infrastructure stability.

Despite significant investments, the telecom sector continues to face gaps in infrastructure development, particularly in rural areas. The integration of BharatNet phases and the need for high-

quality, indigenous telecom equipment remain pressing issues. Delays in infrastructure development, particularly in rural areas, could widen the digital divide, undermining efforts to achieve inclusive connectivity across the country.

6.4.1 Fair Share of Revenue between Telecom Operators and Large Traffic Generator (LTG)

The increasing volume of data traffic generated by large online platforms that are also referred as Large Traffic Generators (LTGs) place a substantial financial burden on telecom service providers. Therefore the issue of fair share of revenue by LTGs was discussed. These LTGs benefit from the existing network infrastructure without proportionately contributing to its maintenance and expansion costs. Without immediate intervention, the financial pressures on telecom service providers could lead to reduced investments in network infrastructure, slowing down the expansion and modernization of telecom services. The panel discussed in detail the fair share of revenue model where LTGs contribute to the costs of network infrastructure. This model, adopted by countries like Korea, ensures that the financial burden of network maintenance and expansion is equitably distributed without impacting startups and other smaller users of the internet.

6.4.2 Support for procurement of high quality indigenous telecom equipment for large scale government project

The panel emphasized the need to manufacture high-quality, indigenous telecom equipment. Government schemes like the Production Linked Incentive (PLI) and initiatives to establish semiconductor plants are critical in this regard. The panel highlighted the need for promoting infrastructure sharing, spectrum leasing, and machine-to-machine communication to enhance network efficiency and reduce costs. Establishing industry standards is crucial for smooth technology adoption, while monetizing dark fibres can significantly increase bandwidth, especially in rural areas. Obtaining permissions for deploying telecom infrastructure is cumbersome, leading to delays and increased costs. Streamlining these procedures is crucial for timely infrastructure development. Establishing a national portal to streamline Right of Way (RoW) permissions and procedures was discussed to reduce delays and costs associated with infrastructure deployment.

Currently, Indian buildings and other infrastructure have low quality fibre deployed, and as a result require replacement every 8-10 years. This is because these D type low quality fibres are not bend resistant, and deteriorate with time. Fibres known as A1/A2 quality are essential because they have lifespans exceeding 30 years, and as a result are making India future ready. While A1/A2 fibres cost slightly more, costs are saved in the long run as they are long lasting. The Government's Model Building Bye Laws (MBBL) need to specify A1/A2 fibres as the preferred fibre cables deployed in construction such that the quality of Indian infrastructure improves significantly.

Government initiatives such as the Telecom Technology Development Fund and the Digital Communication Innovation Square were highlighted as essential for supporting new telecom technologies and startups.

The telecom sector is integral to India's goal of becoming a $10 trillion economy by 2030. Ensuring a financially resilient and technologically advanced telecom infrastructure is vital for sustaining economic growth.

Watch the session on YouTube

https://www.youtube.com/watch?v=IDSqy6OH5fo

Scan to QR to view the panel discussions