

14th Edition

TELECOM INFRASTRUCTURE IN INDIA

A VIRTUAL CONFERENCE

Networks of Tomorrow:
Potential and Challenges

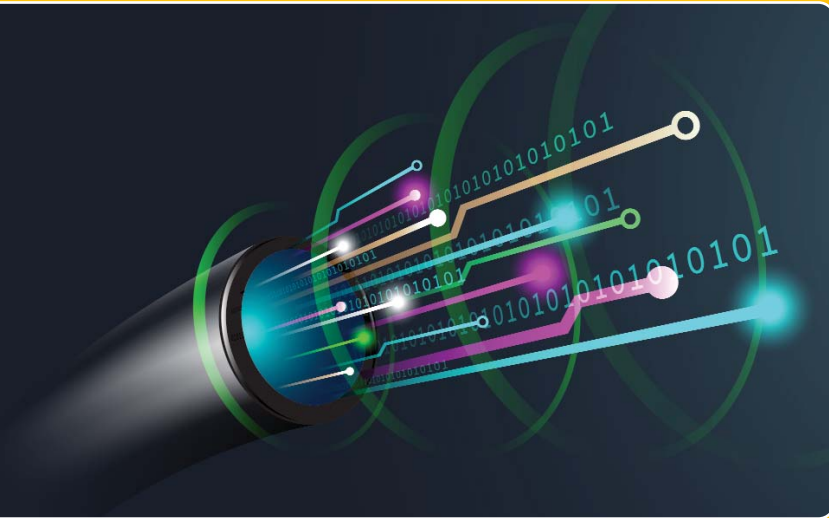
June 30, 2020



In-building Connectivity Partner:



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9th Edition

OFC NETWORKS IN INDIA

A VIRTUAL CONFERENCE

Demand Drivers, Challenges and
Opportunities

July 1, 2020

Co-sponsors so far*:



Organisers:



Supported by:



*Lead and Co-sponsorship opportunities are available

Mission

- The telecom infrastructure industry has been the backbone of India's telecom revolution. In these testing times, it has yet again come under the spotlight for ensuring business continuity for millions of organisations as their employees work from home during the lockdown to contain the Covid-19 outbreak.
- In the past few months, the telecom industry has witnessed significant capacity enhancement on existing towers and uptick in the fibre-to-the-home (FTTH) service usage to match the surge in residential broadband demand. Telcos, towercos and ISPs are already discussing the installation of new towers and preponing their optical fibre cable (OFC) network roll-outs.
- Over the years, towercos have taken up a bigger and significant role in the creation of next-generation digital infrastructure across the country. They have strategically moved beyond their traditional offerings to explore new competencies that complement their core expertise. These include data-led business streams such as fibre, small cells, Wi-Fi, IoT and data centres.
- Further, the launch of 5G services in India will open up new opportunities for telecom infrastructure providers as the technology would require massive network densification, more towers at short distances, small cell deployment and exhaustive site fiberisation.
- Currently, only 31 per cent of telecom tower sites in India are connected to a fiberised backhaul. This will have to increase to at least 70 per cent for 5G enablement.
- Large-scale fiberisation will also be critical to the success of government programmes such as BharatNet, Digital India and Smart Cities.
- Meanwhile, OFC investments in the last mile, particularly FTTH deployments, are also gaining traction. The fixed home broadband segment received significant impetus post Jio's entry last year. Now, the ongoing pandemic, as unfortunate as it is, has given a new stimulus to in-building solutions such as FTTH and Wi-Fi hotspots inside buildings.
- Post Covid-19, there is going to be a clear shift towards indoor coverage, which in turn would require huge investments in fibre roll-outs inside buildings and to the curbs. The industry is likely to see large-scale investments from existing players looking to expand their last mile fibre networks. In fact, estimates suggest that service providers will more than double their fibre footprint over the next three years.
- Going forward, new OFC roll-out/sharing models will have to be explored for an expeditious and enhanced coverage as well as to ensure a reasonable return on capital. This would require non-telco players to pitch in. For instance, towercos are well positioned to leverage the fibre opportunity, with their existing experience in managing distributed infrastructure assets. Meanwhile, utilities in sectors such as power, gas, water and railways, which are already deploying fibre networks, can operate as neutral wholesale providers for telcos. TRAI has recently recommended increasing the role of IP-1s, allowing them to deploy active components such as fibre, antennae and Wi-Fi. DoT's approval to these recommendations can be a game changer for the telecom infrastructure industry and also for India's digital transformation.
- **The mission of this event is to highlight the new growth drivers and opportunities for towercos and OFC players in India, discuss potential business models, study the impact of key government and private sector initiatives, and showcase the latest innovations and most promising technologies. The virtual conference will also provide a platform for telecom service providers, tower companies, policymakers, OFC manufacturers and technology providers to share their experiences and exchange ideas.**

Organisers

The conference is being organised by India Infrastructure Publishing, the leading provider of information on the infrastructure sectors through magazines, newsletters, reports and conferences. The company publishes tele.net, Indian Infrastructure, and Renewable Watch and Smart Utilities magazines. In addition, it publishes Telecom News (a weekly newsletter), and the Telecom Directory and Yearbook. The group also operates www.tele.net.in, India's most comprehensive telecom website.

What differentiates our conferences?

- The **agenda** is developed by our researchers, who track the sector round the year. It is thus **relevant** and **topical**. It is not driven by a particular organisation and does not have a particular slant.
- The **speakers** are **professionals** and **experts** involved in the sector, not a mix of ambassadors, ministers, celebrities and business owners.
- The conferences do not just comprise panels and speeches; they provide a good mix of **expert presentations** and **case histories**, and of course **panel discussions**.
- We have **representation** from **across the country**, as is the case at our physical conferences too.
- Each **stakeholder group** – **policymakers**, **developers**, **financiers**, **consultants** and **relevant NGOs** – is represented at our conferences.
- The moderators merely ask the questions. The **stars** are the **speakers** themselves.
- The **sessions** **begin and end on time**.
- There is adequate time for a **Q&A session** with **each speaker**. These are not “hit and run” speeches.
- The **delegates** are **professionals** who are vested in the sector, and are not just assembled through social media.
- The **participants** in each conference receive a **concise report** outlining the **key facts**, **trends** and **issues** in the sector.
- A **recap** of the conference is also made available to reinforce the key takeaways.

Delegate benefits (Virtual Conference)

- Direct interaction with senior speakers (Q&A facility)
- Easy connectivity to geographically dispersed delegates (click of a mouse)
- Concise report offered as a backgrounder
- Cost effective (lower ticket price as compared to a physical conference)
- Offers flexibility and convenience
- Access to conference recording
- Recap of conference sessions
- Contributes to sustainability and lower carbon footprint

Benefits of sponsorship (Virtual Conference)

- E-meet influencers and decision-makers
- Reach out to and engage with new or active prospects
- Generate high quality sales leads
- Increase brand recognition
- Target a captive and engaged audience
- Drive website traffic through social media promotions
- Position your company as the thought-leader in your industry

AGENDA/STRUCTURE

SECTOR TRENDS: RISING DEMAND AND CURRENT INFRASTRUCTURE

This session will feature a presentation by a leading consultant

- ❖ What are the key trends in the telecom infrastructure industry in India?
- ❖ How has the Covid-19 outbreak impacted the industry? What has been the role of infra players in ensuring business continuity during the crisis?
- ❖ What are some of the key emerging business models for the industry? What is the future outlook?

KEYNOTE SESSION: TOWERCOS' PERSPECTIVE - EXPLORING NEW GROWTH FRONTIERS

This session will feature a panel discussion among top executives from telecom tower companies

- ❖ What are the tower industry's key focus areas?
- ❖ What are the key challenges in the tower industry? How can these be addressed?
- ❖ How are towercos shaping sustainable business models for data-intensive services such as IoT and smart cities?

SPECIAL SESSION WITH DoT ON GOVERNMENT PROGRAMMES AND POLICIES

This session will feature remarks by a senior representative from DoT

- ❖ What is the government's perspective on the progress in telecom infrastructure roll-out?
- ❖ What are the various programmes & initiatives to encourage telecom infrastructure roll-out?
- ❖ What has been the progress under BharatNet?
- ❖ What is the government's view on the sharing of telecom assets in the industry and enhancing the role of IP-1s?

TELCO PERSPECTIVE: NETWORK EXPANSION AND INVESTMENTS

This session will feature remarks by senior representatives from telecom operators

- ❖ What is the current status of OFC deployments? What are the expansion plans?
- ❖ What is the current level of investments?
- ❖ What are the expectations from OFC suppliers?

FOCUS ON IN-BUILDING CONNECTIVITY - WI-FI AND SMALL CELLS

This session will feature remarks/presentations by senior representatives from TRAI, IBS providers and telcos

- ❖ What is the current status of small cell, microsite and IBS roll-outs?
- ❖ What are the key issues and challenges in implementing these solutions?
- ❖ What is the market outlook?

ACTIVE INFRASTRUCTURE SHARING

This session will feature a presentation/remarks by a leading regulatory expert

- ❖ What are the resolved and unresolved challenges related to active infrastructure sharing?
- ❖ What is the cost economics of active infrastructure sharing? What has been the industry experience?
- ❖ Is the regulatory environment conducive for such sharing in India?

PREPARING FOR 5G: KEY REQUIREMENTS

This session will feature remarks/presentations by senior representatives from leading network and technology vendors

- ❖ What is the industry readiness for 5G roll-out? What are the realistic timeline and investment needs?
- ❖ Which 5G applications are likely to gain momentum in the initial years?
- ❖ What does it imply in terms of data speeds and consumption patterns?

NON-TELECOM OPPORTUNITIES

This session will feature remarks/presentations by a senior representative from a leading towerco and/or an industry expert

- ❖ What are some of the non-core opportunities such as smart poles, EV charging points and surveillance being explored by the industry?
- ❖ What are the key issues and challenges in implementing these solutions?
- ❖ What is the market outlook?

Target Audience

- The conference is targeted at top and middle-level managers from:
 - Telecom operators
 - Energy efficient technology providers
 - Financial institutions
 - Policymakers and regulators
 - Energy management consultants
 - OFC manufacturers
 - Infrastructure service providers
 - Industry analysts
 - Telecom tower manufacturers
 - Broadband service providers
 - Wireless internet service providers
 - Infrastructure equipment manufacturers
 - Civil contractors
 - 4G service/solution providers
 - Legal and management consultants
 - Infrastructure developers
 - 5G technology providers
 - Supporting infrastructure companies
 - Other investors
 - Technology providers
 - Renewable energy companies
 - Power solution providers
 - Engineering design consultants
 - Telecom equipment manufacturers

Previous Participants

The participants at the conference on "Telecom Infrastructure in India" included: Aceline Infosolutions, ACME Cleantech Solutions, AKSH Optifiber, Amara Raja Batteries, Analysys Mason, Apar Industries, Applied Solar Technologies, Ardom Telecom, Arvind, Ascend Telecom Infrastructure, ATC India Towers, B4S Solutions, BBNL, Bharat Sanchar Nigam Limited, Bharti Infratel, Black & Veatch, BMR Advisors, Capitel Partners, Care Rating, CESC, China Telecom, COAI, Copius Capital Advisors LLP, Corning Technologies India, Coslight India Telecom, CRISIL, Customized Energy Solutions, Cyient, Delta India Electronics, DSM India, Edotco Group, Emerson Network, Enersys India Batteries, Enterprise Ireland, Ernst & Young LLP, Essential Energy India, Evaluesserve, Exide, GAIA Smart Cities, GE Grid Solutions, GTL Infrastructure, HBL Power, Huawei, ICICI Bank, Idea Cellular, IDFC Alternatives, IDFC Bank, IIFCL, Indus Tower, Infokool, Infozech, Intelligent Energy, Invendis Technologies India, Karam Industries, Keith Electronics, Khika, Kirloskar Oil Engines, Kotkar Energy Dynamics, KPMG, L&T Construction, MACOM Technology Solutions, Mahindra & Mahindra, Manifold, Microtex Energy, Morrison Hershfield Corp, Motilal Oswal, MTNL, NEC Technologies India, Nokia Networks, OMC Power, Owens Corning, Panasonic India, Paramount Communication, Polycab, PowerGrid, Pratap Technocrats, Profitviti, PRS Permacel, Quality Austria Central Asia, Ramboll, RBC Capital Markets, Reliance Jio Infocomm, Rosenberger Electronic Co., RV Solutions, SBI Capital Markets, Secure meters, Sify, Spectranet, Speedon Networks, Sterlite FTTH, Sterlite Technologies, Suyog Telematics, Svam Group, Synergy Telecom (P), Tafe Motors, TAIPA, Tarantula, Tata Communication, Techlineage, Technica Associates, Tek Components, Telecom Network Solutions, TelEnergy Technologies, Tirumala Seven Hills, TAIPA, Tower Vision, Trading Engineers (International), Ubico Networks, Vanu India, Vertiv, Videocon Telecom Tower, Viom Networks, etc.

AGENDA/STRUCTURE

STATE OF THE INDUSTRY POST COVID-19

This session will feature a presentation by a leading consultant

- ❖ In what ways has the Covid-19 outbreak impacted the demand for OFC in India?
- ❖ What has impact of remote working on OFC infrastructure?
- ❖ What are the emerging business models in the industry?
- ❖ What are the key challenges and future outlook?

SPECIAL SESSION WITH BHARATNET: TARGETS AND ACHIEVEMENTS

This session will feature remarks by a senior representative from BBNL

- ❖ What has been the implementation experience of Phase II? What has been the progress so far?
- ❖ What are the key challenges? How are they being addressed?
- ❖ What are the opportunities for the private sector?

TOWER SITE FIBERISATION: FOCUS ON 5G

This session will feature remarks by senior representatives from towercos, technology providers and industry experts

- ❖ What is the current level of tower fiberisation in the country? What are the key challenges?
- ❖ What role will fiberisation play in preparing for a 5G ecosystem?
- ❖ What are the realistic timelines and investment needs for 5G?

TECHNOLOGY PROVIDERS' PERSPECTIVE: NETWORK LIFECYCLE - DESIGN, DEPLOYMENT AND MAINTENANCE

This session will feature remarks/presentations by senior representatives from solution providers/suppliers

- ❖ What are the various network designs and deployment models being practised in India?
- ❖ How are the service providers ensuring network optimisation?
- ❖ What are the challenges in route survey, planning and maintenance of such networks?

INDUSTRY PERSPECTIVE: OFC IN THE LAST MILE

This session will feature remarks/presentations by senior representatives from telcos and leading ISPs

- ❖ What is the current status of last mile OFC deployments by the industry? What are the key drivers?
- ❖ What are the key deployment models?
- ❖ What are the key challenges and outlook?
- ❖ What are the expectations from OFC suppliers?

KEY CONSUMER SEGMENTS: DEFENCE, RAILWAYS AND UTILITIES

This session will feature remarks/presentations by senior representatives from RailTel, the Ministry of Defence, and power and gas utilities

- ❖ What is the current size of the OFC network? What are the expansion plans?
- ❖ How is this network being monetised?
- ❖ What are the key issue and challenges?

SMART CITIES: REQUIREMENTS OF SMART COMMUNICATION NETWORKS

This session will feature remarks/presentations by a leading technology consultant and senior representatives from smart city administrations

- ❖ What are the communication and OFC needs and requirements under the Smart Cities Mission?
- ❖ What has been the progress and level of investment so far?
- ❖ What are the key challenges in OFC deployment for such projects?

Target Audience

- The conference is targeted at top and middle-level managers from:

- Telecom operators
- Financial institutions and other investors
- Industry consultants
- Relevant railway organisations
- Civil contractors
- E-governance implementing agencies
- Relevant power sector organisations
- Other solution/service providers
- Rural development agencies
- Telecom equipment manufacturers
- Relevant government agencies (telecom/IT)
- Technology providers
- Telecom infrastructure providers
- OFC manufacturers
- Etc.

Previous Participants

The participants at our previous conferences on "OFC Networks in India" included: Agmatel, Aksh Optifibre, Anritsu, Anvil Cables, Apar Industries, ATC Telecom, BBNL-DoT, BBNL, Bharat Sanchar Nigam Limited, Birla Cable, Birla Furukawa Fibre Optics, Bharti Infratel, Borouge, Broadband India Forum, Capitel Partners, Coats India, Commscope, Corning Technologies, CYIENT, DCI, Delta Power Solutions, Deloitte, DSM, DuPont, EY, Evonik, EXFO, FCI OEN Connectors, Finisar, Finolex Cables, Fujikura, Herkula, HFCL, HTL, Huber+Suhner, Incap, Indore Composite, INVAS Technologies, Itco Industries, ITI Limited, Keith Electronics, Larsen & Toubro, LEPTON Software Export & Research, MEL Systems and Services, Mexichem Speciality Compounds, Ministry of Communications- Department of Telecommunications, NBG Systems, Paramount Communications, Polycab Wires, Power Grid Corporation of India, Pratap Technocrats, Reliance- Jio, Rex Polyextrusion, RHINO (Gupta Power Infrastructure), SEI Trading India, Simco Materials, Sterlite Technologies, Svarn Infratel, Taipa, Tata Communications Transformation Services, Teijin India, Telecom Regulatory Authority of India, Tirumala Seven Hills, Tower and Infrastructure Providers Association, Trikaal Tech Enterprises, UL India, VIAVI Solutions, Vindhya Telelinks, Viren Telecom, Virgo Consultants & Marketing, West Coast Optilinks, among others.

TELECOM INFRASTRUCTURE IN INDIA

June 30, 2020

OFC NETWORKS IN INDIA

July 1, 2020

REGISTRATION FEE

For both the conferences

	INR	GST@18%	Total INR	Total USD
1 Login	9,000	1,620	10,620	150
2 - 3 Logins	15,000	2,700	17,700	250
4 - 5 Logins	21,000	3,780	24,780	350
6 - 9 Logins	27,000	4,860	31,860	450
10 - 20 Logins	33,000	5,940	38,940	550

For any one conference (Telecom Infrastructure in India or OFC Networks in India)

	INR	GST@18%	Total INR	Total USD
1 Login	6,000	1,080	7,080	100
2 - 3 Logins	12,000	2,160	14,160	200
4 - 5 Logins	18,000	3,240	21,240	300
6 - 9 Logins	24,000	4,320	28,320	400
10 - 20 Logins	30,000	5,400	35,400	500

- GST @18 per cent is applicable on the registration fee.
- Registration will be confirmed on receipt of the payment.
- To register online, please log on to <https://indiainfrastructure.com/events/two-virtual-conferences-on-14th-edition-telecom-infrastructure-in-india-30-june-2020-9th-edition-ofc-networks-in-india-1-july-2020/>

Payment Policy:

- Full payment must be received prior to the conference.
- Payments for "early bird" registrations should come in before the last date of discount. Discount offers cannot be combined with any other offer.
- Conference fees cannot be substituted for any other product or service being extended by India Infrastructure Publishing Pvt. Ltd.

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