



ICT INFRASTRUCTURE CO-DEPLOYMENT – INDIA PERSPECTIVE

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ACTS & RULES GOVERNING ICT SECTOR IN INDIA

- The Indian Telegraph Act, 1885
- The Indian Wireless Telegraphy Act, 1933
- Indian Telegraph Rules, 1951
- The Telecom Regulatory Authority of India Act, 1997
- The Information Technology Act, 2000
- Indian Telegraph Right of Way Rules, 2016

TELECOM POLICIES

- National Telecom Policy, 1994
- New Telecom Policy, 1999
- Broadband Policy, 2004
- National Telecom Policy, 2012
- National Digital Communications Policy, 2018

INFRASTRUCTURE STATUS

- The telecommunication sector has been granted the infrastructure status in the year 2012
- Infrastructure Status benefits includes:
 - Accelerated depreciation
 - Higher ECB limit
 - Eligible for viability gap funding (VGF)
 - Lower Import Duties and Excise Exemption
 - Softer lending rates
 - Tax holiday, etc.

ICT INFRASTRUCTURE

- Passive Infrastructure
 - Right of Way
 - Duct Space
 - Dark Fibre
 - Tower/ Mast
 - Land/ Building/ Shelter
 - Power Supply/ Battery Backup

ICT INFRASTRUCTURE

- Active Infrastructure
 - Transmission Systems
 - OF Systems
 - Radio Systems (M/W, Satellite)
 - Radio Access Network (RAN)
 - Antenna
 - Feeder Cable
 - Base Station/ e-Node-B
- Core Network Systems
 - TDM/ IP Switches, Routers
 - Next Generation Switches (NGS)
 - Enhanced Packet Core (EPC)
- Billing Systems/ NMS etc.

WHO CREATES ICT INFRASTRUCTURE ?

- Telecom Licensee(s)
 - Access Services Licensee(s)
 - National Long Distance Operators (NLDOs)
 - International Long Distance Operators (ILDOs)
 - Internet Service Provider(s)
- Infrastructure Provider Category-I (IP-I)

TELECOM LICENSEE

- An Indian Company may get an appropriate license under section 4 of the Indian Telegraph Act, 1885
- Permitted to own and share Telecom Infrastructure.
- Permitted to provide services under scope of the license

INFRASTRUCTURE PROVIDER CATEGORY-I (IP-I)

- Indian Companies may get themselves registered as IP-I
- Permitted to own and share Passive Infrastructure with Telecom Licensees.
- Permitted to install active elements (limited to antenna, feeder cable, Node B, Radio Access Network (RAN) and Transmission Systems only) on behalf of Telecom Licensees (*they can not own it*)

INDIAN TELEGRAPH RIGHT OF WAY RULES 2016

- Indian Telegraph Right of Way Rules, 2016 in November 2016
- Salient highlights are –
 - Lays down critical principles for grant of Right of Way permissions
 - Address and reduces various problems faced in getting RoW permissions
 - Sets up a simple and time-bound procedure for RoW clearances
 - Reasonable one time administrative fee

NATIONAL DIGITAL COMMUNICATIONS POLICY, 2018 – SALIENT POINTS

- According Telecom Optic Fibre cables the status of Public utility
- Promoting collaboration models involving state, local bodies and private sector as necessary for provision of shared duct infrastructure in municipalities, rural areas and national highways
- Establishing Common Service Ducts and utility corridors in all new city and highway road projects, and related elements

NATIONAL DIGITAL COMMUNICATIONS POLICY, 2018 – SALIENT POINTS

- Creating a collaborative institutional mechanism between Centre, States and Local Bodies for Common Rights of Way, standardisation of costs and timelines; and removal of barriers to approvals
- Promoting and incentivizing deployment of common sharable, passive as well as active, infrastructure

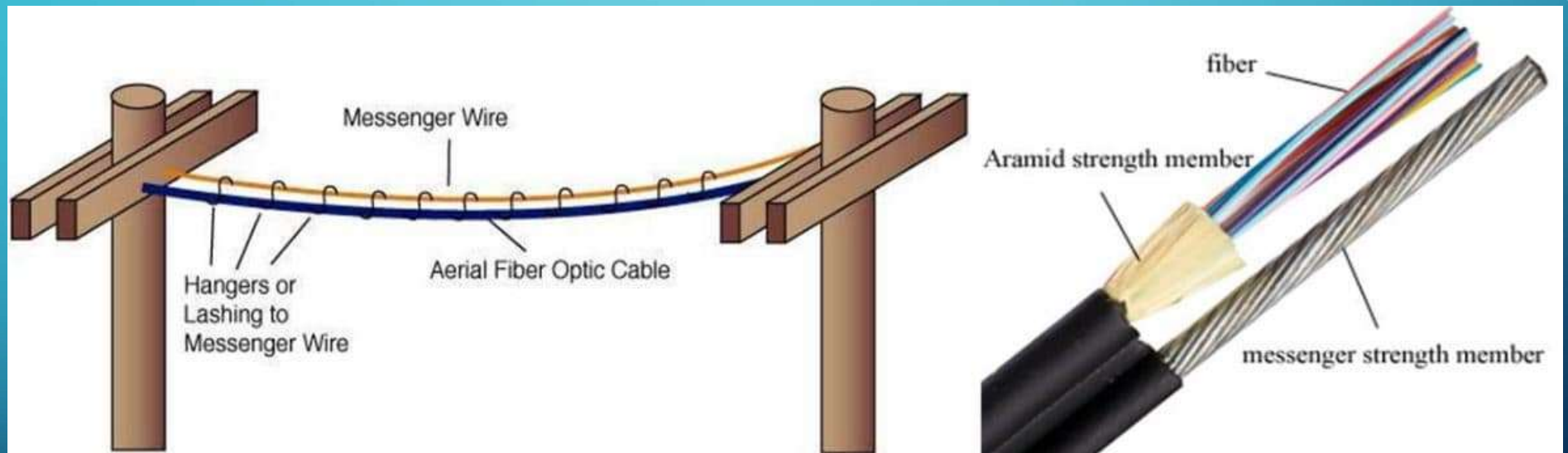
INITIATIVES FOR ICT SECTOR

- Telecom infrastructure provisioning on all lands & buildings of Central Government
- State Governments to provide their premises for tower installations to enable smooth telecom coverage
- Dig-Once policy: Common duct laid under the umbrella of 'Dig-Once' policy will enable Service Providers/ Infrastructure Providers to lay fibre easily for providing the services
- During development of a sector/town, all roads/bridges to have utility ducts provisioned for telecom infrastructure at a later stage.

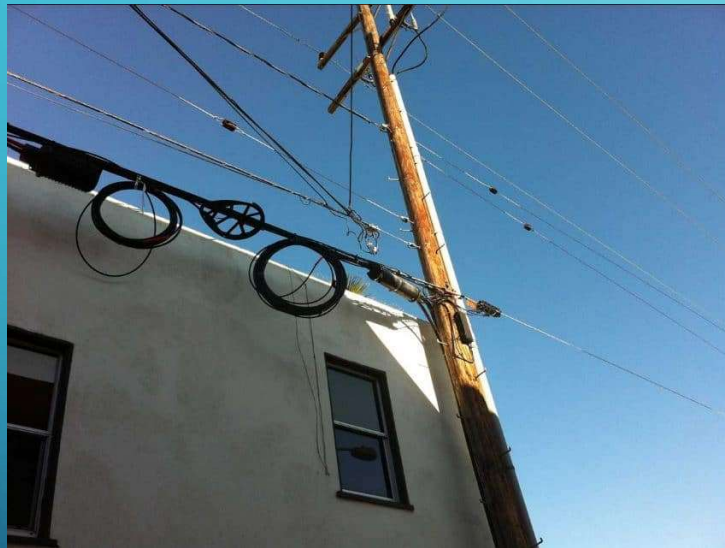
CO-DEPLOYMENT OF ICT INFRASTRUCTURE

- Co-deployment with Power Sector
 - Power Grid
 - State Electricity Authorities
- Co-deployment with Road/ Highway Sector
 - National Highways Authority of India (NHAI)
 - State PWD
- Co-deployment with Local Authorities
 - Municipality/ Municipal Corporations

OPTICAL FIBRE – CONSTRUCTION PRACTICES



OPTICAL FIBRE – CONSTRUCTION PRACTICES



OPTICAL FIBRE – CONSTRUCTION PRACTICES



NHAI EXPERIENCE

- In 2012-13, a feasibility study was initiated by NHAI for Facilitating Telecom Infrastructure within the National Highways Right of Way (NH-RoW)
 - Appointment of a Consultant/ Transaction Adviser
 - Identification of dark spots, where telecom services were not available
 - Consultations with Stakeholders
 - Invitation of EOI

THEN & NOW

- New and emerging telecom technology (5G)
 - eMBB
 - mMTC
 - URLLC
- Industry specific Use Cases (Transport sector)
 - High speed Infotainment
 - V2V & V2X Communications
 - Autonomous Vehicles

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THANK YOU

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