

## TAIPA's response to TRAI Consultation Paper on

### “Roadmap to Promote Broadband Connectivity and Enhanced Broadband Speed”

TAIPA thanks the Authority for providing an opportunity to provide inputs on much needed and timely consultation paper for providing roadmap to promote broadband connectivity and enhanced broadband speed. The consultation paper has been issued with an objective to convert the strategies identified in the NDCP 2018 into actionable.

Robust telecom infrastructure enables ubiquitous Broadband connectivity which in turn, is the core backbone for Digital India. There has been a huge data surge in the country during last 4 years which has been facilitated by significantly reduced cost of ownership. The Total data traffic increased by 44 times over last 04 years; The year 2019 saw total broadband subscribers surpassing 600 million in the country.

- **Post introduction of 4G services in 2016, total data traffic increased by 44x (2015-2019) which is one of the highest in the world.**
- **Majority of the data traffic in 2019 was driven through 4G as a result of new 4G users and movement of data traffic from 3G to 4G due to network upgradations.**
- **Video viewership has been fueled by growth in number of OTT platforms, increased streaming of regional language content and cheaper subscription plans.**

Continued upgradation to 4G, low data prices, affordable smartphones and increased video viewership have driven higher data consumption in the country. All this has been possible due to broadband connectivity enabled by growth in telecom infrastructure. There has phenomenal growth in the number of wireless broadband subscribers over last few years.



Data subscribers as % of total subscribers

The Covid-19 situation has further led to huge surge in data consumption, with almost all the services and businesses – becoming dependent on telecom connectivity – due to possibility of various services on the broadband network. The telecom network has enabled virtual work and meetings, distance education, digital transactions, e commerce, e-health, social meetings, webinars etc. Apart from the common usage for entertainment in terms of OTT, social media, fitness and spiritualism – the telecom network has become fundamental to contactless transactions – telemedicine, contactless courier delivery, online shopping etc. Recent IP traffic measurements indicate that peak IP network traffic has stabilized at 25% to 30% above pre-COVID-19 pandemic levels. In India, internet traffic surged by as much as 40% during the national lockdown.

Post pandemic era will see a change in the ways we live, work, and interact. We would require living in a world which facilitates socializing and economic activities with minimized human contact. The widespread availability and use of broadband have both economic and social benefits. In the post-pandemic era, like potable water and electricity, access to broadband would become a necessity. Telecom services have proved to be critical for every walk of life.

Universal access to broadband is critical for the success of Digital India program and therefore creation of supporting ICT infrastructure becomes a priority for the Government as well as the industry. The National Digital Communication Policy is a transformation and comprehensive policy document, which has envisaged several strategies to bridge the digital divide and ensure “Broadband for All” by 2022. Besides this, the policy document also set up 2022 goals for providing universal broadband connectivity at 50 Mbps to every citizen and fixed line broadband access to 50% households.

With the availability of an excellent policy framework, and the increased pace of digitalisation, this is the most appropriate time that the strategies identified in the framework are converted into actionable. The adoption of enhanced broadband connectivity measures would also prepare the country for smooth transition to new technologies such as 5G, industry 4.0, IoT, M2M, AI, ML and blockchain etc.

In view of ongoing developments in telecom sector, TRAI has released this paper at a right time wherein there is an immense need for promoting telecom infrastructure sharing in a non-discriminatory manner. Moreover, Tower industry has undergone significant changes in the past and concepts like 'Tower Sharing' has emerged as a trendsetter and proved economically viable for the TSPs and IPs having benefits such as Reduced Capex & Opex, Increased Connectivity, Faster Roll-out of Towers, Energy Efficiency, etc. In Para 2.20 of the consultation paper, TRAI has also clearly highlighted that infrastructure sharing enables economies of scale, improve affordability and avoids duplication of networks where possible in addition to faster rollout of networks and services and bring substantial savings in terms of reduction in Capex and Opex.

In this regard, TRAI has already given its recommendations dated 13<sup>th</sup> March 2020 to the Government on “Enhancement of Scope of Infrastructure Providers Category – I (IP-I) Registration” recommending expansion of scope of Registration to satisfy the present need for telegraph in the country. The expanded scope of the IP-I registration should include to own, establish and maintain active infrastructure except core network elements. It is requested that TRAI may kindly take up this important recommendation with DoT for

completion of review at the earliest in view of exponential surge in Mobile Broadband Data consumption and advent of 5G networks in India in next 1-2 years.

TRAI vide this paper has focused on various innovative approaches for infrastructure creation to promote the broadband connectivity and enhancement of broadband speed. In our response, we will be sharing our comments specifically to Questions dealing with issues relating to grant of Right of Way (RoW) permissions and the concept of developing common duct infrastructure for laying OFC.

**Our response to the issues pertaining to telecom infrastructure providers, as raised in the Consultation paper are as follows:**

**Q1: Should the existing definition of broadband be reviewed? If yes, then what should be the alternate approach to define broadband? Should the definition of broadband be:**

- a. Common or separate for fixed and mobile broadband?
- b. Dependent or independent of speed and/or technology?
- c. Based on download as well as upload threshold speed, or threshold download speed alone is sufficient?
- d. Based on actual speed delivered, or on capability of the underlying medium and technology to deliver the defined threshold speed, as is being done presently?

**Kindly suggest the complete text for revised definition of the broadband along with the threshold download and upload speeds, if required for defining broadband. Kindly provide the reasons and justifications for the same.**

**Q.2: If you believe that the existing definition of broadband should not be reviewed, then also justify your comments.**

**Q.3: Depending on the speed, is there a need to define different categories of broadband? If yes, then kindly suggest the categories along with the reasons and justifications for the same. If no, then also justify your comments.**

**Q.4: Is there a need to introduce the speed measurement program in the country? If yes, please elaborate the methodology to be implemented for measuring the speed of a customer's broadband connection. Please reply with respect to fixed line and mobile broadband separately.**

#### **TAIPA's response**

No comments

**Q5. Whether the Indian Telegraph Right of Way (RoW) Rules 2016 have enabled grant of RoW permissions in time at reasonable prices in a non-discriminatory manner? If not, then please suggest further changes required in the Rules to make them more effective.**

#### **TAIPA's response**

1. Right Of Way is an important aspect for the infrastructure providers, telecom and broadband service providers to build towers and lay down fibre infrastructure

across the country. Indian Telegraph Right of Way (RoW) Rules 2016, which were Gazette Notified by the DoT, Government of India on 15-Nov-2016 after a thorough consultation process with all State/UTs., have enabled some improvement regarding timely grant of RoW permissions at reasonable price; however, not at a level they were envisaged for.

2. Despite the lapse of 4 years, not even 50 percent of total 36 States/UTs have adopted RoW Rules, Nov'2016 so far and remaining States are yet to adopt these Rules. Further, there are several implementation challenges also at various district/ local level even in the States where these Rules are already adopted
3. Few States and UTs are still considering RoW as a revenue opportunity and have shown their reluctance to adopt these rules and institutionalized their own framework to charge exorbitantly for granting RoW permissions for creation of the telecom infrastructure, despite the fact that telecom is a Central subject and telecom services fall under the critical services and now after COVID-19 outbreak, it is considered as one of the most critical public utility service.
4. We recommend the following specific provisions may be added in the RoW Rules to make them more effective for implementation across the Country:
  - i. **Alignment of Urban Development Authority** – Urban Development Authority/ Department in the States should be aligned with the RoW Rules, Nov'2016. As in most of the State's IT Departments are the nodal departments for implementation of RoW Rules, Nov'2016 thus the implementation of policies becomes a challenge on ground.
  - ii. **Uniform Policy Across the State** – All previous policies/ Government orders needs to be subsumed in the new Policy notified by States to avoid any ambiguity in implementation.
  - iii. **Role of Enforcement Agencies** – Enforcement agencies like Police needs to be well informed/ aligned with RoW Rules, Nov'2016 so that they can support telecom infrastructure providers on various ground level operational challenges.
  - iv. **Electricity Connection** - Specific provision in RoW Rules, Nov'2016 for providing Electricity (EB) connection for Telecom Infrastructure on priority basis, say within 15 days of submitting application, at industrial rates/ tariff.
  - v. **No coercive action**: The telecom infrastructure installation and / or its operations should not be stopped/ sealed/ dismantled/disconnected by any Local / municipal / State authority or any third party on account of any reason whatsoever including but not limited to radiation post issuance of approval / deemed approval without the specific involvement and concurrence of the head of the concerned LSA who is also the Chairman of the Telecom Disaster committee of the State.
  - vi. **Safety/Security of telecom installations**: Additional clause should be incorporated in RoW Rules, Nov'2016 for defining telecom infrastructure as 'Critical Infrastructure' along with the provision that any wilful damage, vandalism, theft, disconnection of EB, would be a cognizable offence and

necessary penal actions will be taken against the accused. Below suggested clause as followed in some of the States be incorporated in the RoW Rules, Nov'2016:

**“Safety and Security of Telecom Infrastructure**

*Mobile communication is one of the critical services; therefore, the security of the telecom infrastructure is utmost important. The State will provide support to the Applicant to ensure that strict legal action shall be taken by the respective Law & Enforcement authorities for security of the telecom infrastructure and would take strict action against any willful or negligent damage to the Telecom Infrastructure facility and causing interruptions to the network connectivity.”*

- vii. Provision related to Street furniture, small cells, use of electric poles for aerial cable and low power 4G/5G BTS etc. should be incorporated in the RoW Rule to facilitate rollout of new & emerging technologies.
  
- viii. **Few other suggestions:**
  - a. A suitable clause should be incorporated for creating awareness of the local bodies and public including the role of LSAs about the compliance to radiation limits as given in the license agreements.
  - b. All existing telecom towers / infrastructure which is yet to regularised formally by any State / UT should be regularised as per the RoW Rules within a prescribed time frame.
  - c. Detailed mechanism for dispute resolution / grievance for telecom infrastructure with role and responsibilities of the dispute resolution Nodal officer should be incorporated in the Row Rules, Nov'2016.
  - d. Government lands and buildings should be made available in a time bound manner for installation of telecom towers at reasonable rentals.
  - e. That Telecom being the Central subject, the RoW Rules as amended from time to time are mandatorily to be implemented in toto by each State / UT of the Union of India.
  - f. Well defined Governance and review mechanism at the Central and State level for the implementation of the RoW Rules as amended from time to time.

**Q6. Is there any alternate way to address the issues relating to RoW? If yes, kindly elucidate.**

**TAIPA's response:**

1. We recommend that the RoW Rules, Nov'2016 which was formulated post multiple consultations with all stakeholders including the State authorities, is one of the important comprehensive document /law which need to be adopted and implemented by all the States in true letter & spirit.
2. It is suggested that monitoring mechanism should be further strengthened by way of forming a high level committee at DoT HQs level having mandatory participation

from States/ UTs/ industry associations / concerned Government authority (ies) to monitor the actual implementation of the RoW Rules on the ground. This will certainly help in addressing TSPs / IPs various RoW related issues being faced at ground level.

3. As envisaged in the NDCP-2018, framework for the implementation of State Broadband Readiness Index should be completed at the earliest and monitoring mechanism to provide feedback to respective States / UTs on the progress made should be available in public domain. This will bring more competitiveness among States/ UTs and enable faster rollout of telecom networks and services.
4. There is no alternate way to address the issues relating to RoW. However, to make these RoW Rules, Nov'2016 more effective, our suggestions under response to Q5 may kindly be considered and implemented.

**Q7. Whether all the appropriate authorities, as defined under the Rules, have reviewed their own procedures and aligned them with the Rules? If no, then kindly provide the details of such appropriate authorities.**

**TAIPA's response:**

1. No, all the appropriate authorities as defined in RoW Rules, Nov'2016 have not reviewed their procedures and aligned with RoW Rules, Nov'2016, and continuing with their own bylaws/ rules for granting RoW permissions.
2. In many States, the local authorities like Municipal Corporations, Gram panchayats, municipal councils, Urban Development etc. have their own bye laws to follow and thus the objective of having a Uniform State policy in line with RoW Rules, Nov'2016 is entirely defeated. For example, like in various other states, in the State of Maharashtra, the Municipal Corporations of Nagpur, Bhiwandi, Nizampur and Pimpri Chinchwad have not adopted the new Policy as notified by the Maharashtra Government on 17<sup>th</sup> Feb 2018, and following their own procedures, administration fee etc. Such inordinate delays in granting RoW permissions in impacted States / UTs affect creation of telecom infrastructure including towers, laying OFC etc thereby impacting network rollout and quality of telecom services.
3. Thus, there is a dire need for uniform adoption of the RoW Rules, Nov'2016 by the States and UTs in true letter & spirit which will then support the telecom industry to build robust telecom infrastructure across the country

**Q8. Whether the RoW disputes under the Rules are getting resolved objectively and in a time-bound manner? If not, then kindly suggest further changes required in the Rules to make them more effective.**

**TAIPA's response:**

1. No, the RoW disputes under the Rules are not getting resolved objectively and in a timebound manner at present. Further, the Dispute Resolution Officers nominated by States are not well equipped and aware of their role and responsibility for resolution of disputes.
2. As a result, following issues continues to occur in the States:



- i. The States levy exorbitant rates as administration fee.
  - ii. The formal permissions are getting delayed/ not granted in timely manner even after submission of prescribed documents and one-time fee as defined under RoW Rules.
  - iii. Coercive actions like sealing, disconnection of EB on critical telecom Infrastructure being taken by the State authorities at their whims and fancy
3. Therefore, we recommend that if the additional provisions/ changes in the RoW Rules, Nov'2016 as suggested in our response to Q5 above may kindly be considered and implemented on priority.

**Q9. What could be the most appropriate 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? Justify your comments with reasoning.**

**TAIPA's response:**

1. As we all know, Indian Telegraph RoW Rules, Nov'2016 were notified by the DoT after due consultation with all State Governments; however, at the implementation level, all States and Local bodies have not adopted/aligned with the Rules and follow their own process & procedures and fee structures.
2. To overcome such challenges and various other implementation issues, a collaborative mechanism needs to be set-up between Centre, States and Local bodies through:
  - i. Formation of co-ordination committee consisting of representatives from State Departments - IT, UDD, and DoT LSA unit.
  - ii. Appointment of Nodal officers from respective departments, as well as organising frequent/ regular State/ District Level Committees meetings to resolve day to day operational matters.
3. We also suggest that necessary amendments should be made in the RoW Rules making it mandatory for such committees to meet on monthly basis for necessary action on the complaints filed by IP-I / TSPs regarding RoW so that same can be addressed in time bound manner. More power should be delegated to such committees to take all necessary measures to ensure resolution of the RoW issues.

**Q10. Should this be a standing coordination-committee at Licensed Service Area (LSA) level to address the common issues relating to RoW permissions? If yes, then what should be the composition and terms of reference of this committee? Justify your comments with reasons.**

**TAIPA's response**

1. There should be a standing co-ordination committee at a State level instead of LSA level (because there could be two or more States fall under one LSA) to address the RoW issues which should be chaired by the Principal Secretary-IT of

the respective State with other department such as the UDD, , Energy, Environment & Forest as members while the Advisor/ Sr DDG of DOT LSA may act as a Vice-Chair of the Committee. and should also have representative from TSPs / IP-I companies Further, such committee should convene its meeting at least once in a month to take all the RoW implementation and other permission related issues which are pending for resolution.

2. Recently, the DoT LSA units have coordinated and facilitated well with State and Local level authorities during the pandemic Covid-19 to ensure that day-to-day operational challenges being faced by infrastructure providers are addressed by State Government on priority to ensure 24x7 uninterrupted telecom operations.

**Q11: Is there a need to develop common ducts along the roads and streets for laying OFC? If yes, then justify your comments.**

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**Q12: How the development of common ducts infrastructure by private sector entities for laying OFC can be encouraged? Justify your comments with reasoning.**

**TAIPA's response:**

1. Yes, in order to cater ever increasing broadband data requirements and to cater upcoming 5G networks, there is an urgent need to develop common ducts along the roads and streets for laying OFC, due to the following benefits:
  - i. Prevents repetitive trenching, digging of roads etc.
  - ii. It saves capital costs in terms of manpower and materials
  - iii. Solve the problems of delay in ROW permissions and also avoid repeated restoration work / damages to roads/cables etc.
2. Availability of such common ducts will not only speed up the creation of telecom infrastructure but also bring substantial Capex & Opex savings in addition to bypassing hassles of RoW permissions. Moreover, development of such common ducts will also address RoW issues to a large extent.
3. Further, the development of common ducts already comes within the ambit of IP-1 registration. We recommend the following provisions to encourage private sector participation:
  - i. IP-1 should be the first one to be offered development of common duct, as their business model is based on sharing on a non-discriminatory manner.
  - ii. Sharing of ducts needs to be made mandatory. This will have similar positive impact at ground level as clear skyline provided through sharing of telecom towers.
  - iii. Exclusive rights of laying ducts should be given to ensure some long-term business viability/ visibility.
  - iv. The Common Duct, through the provisioning of micro-ducts should be permitted, to enable sharing with other utilities as well. This will provide additional business opportunities to the implementing agencies (IP-1) and also ensure optimum utilization of the laid infrastructure/ assets.



- v. The commercial arrangements with the seeker should be left on mutual consent/ bilateral basis.

**Q13: Is there a need to specify particular model for development of common ducts infrastructure or it should be left to the land-owning agencies? Should exclusive rights for the construction of common ducts be considered? Justify your comments with reasoning.**

**TAIPA's response:**

1. The model to be adopted for common duct infrastructure development should not be left to land owning agencies As recommended in our response to Q 11 & Q12 above, IP-Is should have the first right of refusal as implementing agency since their business model is based on infrastructure sharing in a non-discriminatory manner.
2. The exclusivity provides some long-term business viability/ visibility to the implementing agency constructing the common ducts and ensure adequate timeframe for return on investments/Capex incurred on development of such infrastructure.
3. For this purpose, Central / State Government should publish clear roadmap and policies. Selection of the private entities should be done through the process of RFP and linked to stringent eligibility conditions so as to ensure entry of serious private entities only.

**Q14: How to ensure that while compensating the land-owning agencies optimally for RoW permissions, the duct implementing agency does not take advantage of the exclusivity? Justify your comments with reasoning.**

**TAIPA's response:**

1. In order to prevent implementing agency from taking undue advantage of the exclusivity, the implementing agency should be mandated to share the infrastructure in a transparent and non-discriminatory manner with all utilities/ users of the facility.
2. This is possible only when the implementing agency is a neutral host like Infrastructure Provider (IP-1) who has proven track record of sharing telecom tower infrastructure with competing entities in a transparent and non-discriminatory manner.

**Q15. What could be the cross-sector infrastructure development and sharing possibilities in India? Justify your comments with examples.**

**Q18. What kind of policy or regulatory support is required to facilitate cross-sector infrastructure sharing? If yes, kindly provide the necessary details.**

**TAIPA's response**

1. This is the high time that we adopt cross-sector Infrastructure development and sharing in India. However, an enabling policy and regulatory framework is required in order to facilitate the same.

2. We recommend that enabling provisions should be there in respective Acts/Policies to permit/ allow players in each sector to share their infrastructure with players in other sectors on voluntary basis.
3. Such as the RoW Rules, Nov'2016 should provision that the infrastructure created for telecom may be shared with other utilities such as Water, Gas, Electricity etc.

**Q16: Whether voluntary joint trenching or coordinated trenching is feasible in India? If yes, is any policy or regulatory support required for reaping the benefits of voluntary joint trenching and coordinated trenching? Please provide the complete details.**

**TAIPA's response:**

No comments

**Q17: Is it advisable to lay ducts for OFC networks from coordination, commercial agreement, and maintenance point of view along with any other utility networks being constructed?**

**TAIPA's response:**

Yes, while laying the ducts for OFC Networks, provision should be made at the design stage itself to create micro-ducts for other utilities also with complete isolation.

**Q.19: In what other ways the existing assets of the broadcasting and power sector could be leveraged to improve connectivity, affordability, and sustainability.**

**TAIPA's response:**

No comments

**Q.20: For efficient market operations, is there a need of e-marketplace supported by GIS platform for sharing, leasing, and trading of Duct space, Dark Fibre, and Mobile Towers? If yes, then who should establish, operate, and maintain the same? Also, provide the details of suitable business model for establishment, operations, and maintenance of the same. If no, then provide the alternate solution for making passive infrastructure market efficient.**

**TAIPA's response:**

- i. Presently, IP-Is are allowed only to share the passive telecom infrastructure with Licensed TSPs. Therefore, for ensuring efficient market operations, there is an immense need for removing such restrictions and allow sharing of passive telecom infrastructure to other service providers including IoT & M2M service providers, Application Service Providers, OTT Communication Service Providers etc.
- ii. Therefore, the relevance of market place supported by GIS platform may not yield any benefits until IP-Is are allowed to share its telecom infrastructure with other service providers in addition to licensed TSPs.
- iii. In this regard, TRAI has already given its recommendations dated 13th March 2020 to the Government on "Enhancement of Scope of Infrastructure Providers Category – I (IP-I) Registration" recommending expansion of scope of Registration to satisfy the present need for telegraph in the country. It is requested TRAI to kindly take up this important recommendation with DoT for completion of review at the earliest.