



Response to TRAI Consultation Paper on Enabling Unbundling of Different Layers through Differential Licensing

Preamble

1. At the outset, BIF wishes to compliment TRAI for bringing out a very important Consultation Paper on a subject that is contextual, timely and has the potential to help achieve the national priority of Digital India.
2. Post the 1991 Liberalization, Privatization and Globalization model, India has experienced gradual but significant growth — by moving away from the license raj’ system. The stated goal of the Government, "Minimum Government, Maximum Governance", is expected to facilitate ease of doing business and encourage long-term investments into the economy. The Indian economy is now looking to achieve the target value of USD 5 trillion by 2024. It is also recognized that a level playing field will be created for all businesses along with rationalized regulation as well as promising new economic opportunities.
3. It is generally accepted that essentially regulation is required for any one or more of the following reasons, namely,
 - where it is clear that competitive outcomes cannot be achieved by market forces alone
 - where deviation from economic efficiency is deemed socially desirable
 - where private and social benefits are clearly different
 - when there is a need to enforce adherence to technical standards.

The current licensing framework is based on a legacy command and control framework, wherein connectivity cannot be provided without detailed and onerous permissions coupled with burdensome license terms. The question to be asked therefore is whether to continue with the command and control mechanisms in place or bring changes that would be in tune with the modern requirements of increased privatization and competition and the national priority of “Digital India”. It is a generally accepted that, in markets where there is effective competition, there should be, if at all, a very light level of regulation since the market would itself take care of consumer interest.

4. The Indian Telegraph Act, 1885 gives exclusive privilege to the Central Government for establishing, working and maintaining telecom services in India. **The Act empowers the government to grant a license to any person “on such terms and**

conditions and in consideration of such payments as it deems fit”, to establish, maintain and work a telegraph within any part of India [Proviso to Section 4(1), Indian Telegraph Act, 1885].

5. The exclusive privilege/right can be parted with in any of the multiple ways, including the following:
 - a. under a written license with prescribed conditions
 - b. under a written license agreement, with certain terms that are written and certain others that are inferred from the policy
 - c. under a written license agreement with terms that are not so stringent
 - d. under a regime that requires merely a registration
 - e. under a regime that requires no licensing or even a registration.

Clearly, it is a wide, all-encompassing power that embraces all possibilities (including ‘no terms’) as appropriate for different types of “telegraph” systems and communications. Thus, the Act allows complete flexibility for choosing specific types of regulation/licensing or no licensing at all.

6. In view of such a wide power/discretion available with the Central Government, this CP is very timely, since the technological advances, internet based services and multitude of other applications and services, have proliferated at such a pace in the last 5-7 years, that any policy decision could have a significant impact on the stated purpose of regulation. This is especially relevant presently, since a whole host of such technologies/innovations, applications & services are invaluable, not only to end-users, but also to all the stakeholders in the value chain and the economy. This has been borne out by the ICRIER-BIF joint study on the benefits of the economy as a whole which estimated that a 10% increase in the use of the Internet and the associated applications & services, results in a 3.3 % increase in the GDP.⁶ Given the fact that by placing Mobile Phones in the hands of over 90% Indians has resulted in a 6.5% contribution to the GDP, the Internet economy has the potential to provide manifold times contribution to the GDP. Hence, liberalization of the Internet economy and the next generation applications including new & emerging technologies viz. 5G, M2M, IoT, ASI, Cloud, etc. will provide the impetus that is required for these services to take off and flourish. Resorting to a rigid explicit license in such cases would perhaps only negate most benefits. It will, moreover, unnecessarily increase the administrative workload and delay service deployment. If we are to realize Digital India, policy & regulation must work hand in hand to promote innovation and fair competition.
7. The current heavy-handed licensing approach is a discouraging aspect for many possible investors due to the difficulty of conducting business in a scenario where massive investments are needed. A heavy-handed approach will stifle the growth of new technologies and business models. As an illustration, the provisioning of millions of public Wi-Fi hotspots can attract large cumulative investments from a huge number of small/local entrepreneurs. However, this can be made possible only if the licensing requirements are simplified and a simple registration scheme is introduced.

BIF, in its letter dated July 2019, has clearly highlighted the need to liberalize Wi-Fi to meet Public Wi-Fi Hotspots Requirements in India and how it is a big opportunity to attract large Investments and promote local entrepreneurs. Creation of millions of hotspots is not possible with just limited players and would require a vast army of small operators - Public Data Office Aggregators (PDOA). PDOAs will allow smaller players to provide Wi-Fi services without having to incur heavy costs. This will help develop Wi-Fi hotspots like a small-scale industry akin to the case of PCOs as it will enable small shop owners, viz. kirana stores and micro-entrepreneurs such as chai-wall as and pan shops to provide Wi-Fi services, which can generate an additional revenue stream. The interoperability of hotspots will enable 'roaming' and increase its adoptability. This will lead to an exponential increase in the number of Wi-Fi hotspots in the country.

8. There are illustrative examples of monetization of public Wi-Fi. In India, there is an opportunity of having scores of Public Wi-Fi Aggregators/Integrators and therefore, one can only imagine the enormous value creation it can lead to for us - an enterprise value running in thousands of crores. Similarly, unbundling of licenses can help bring in a huge army of small and local entrepreneurs and create an unprecedented investment opportunity. Heavy handed licensing may not be that big a challenge for large players with large resources, but it would definitely be a big deterrent for small and local entrepreneurs with limited resources.
9. 5G is the first generation of mobile communications technology that transcends telecommunications use cases. 5G is expected to have a significant and profound impact on the modernization of virtually every sector of the economy. As the country is gearing up for 5G, the need for private or campus networks of 4G and 5G will become vital. These will become essential to optimize functioning of non-telecom verticals - Energy, Healthcare, Finance, Education, Industry 4.0, Manufacturing and numerous other sectors. A suitable form of simple licensing needs to be provided for these since they would not have interconnection with PSTN and would also not be servicing retail customers. These networks would also not need the scarce resources of RoW and exclusive numbers.
10. Thus, the digital communications sector in India is now at a stage where market competition would be more effective than regulation to drive the growth, penetration, innovation and introduction of new services and business models. Unshackling the telecom sector players from unnecessary regulatory restrictions will enable them to achieve greater heights in a highly competitive market and will ensure better promotion of user interest. This will allow innovation to thrive and new services to proliferate within the country. In our opinion, license conditions should be rationalized to make levies and fees proportional to actual costs incurred in regulation.
11. While advocating a liberal approach for new technology based next generation services, to have some sort of parity between incumbents and startups, it needs to be ensured that the existing licensing/regulatory framework be amended so that conditions are more liberal than earlier for any existing player in the ecosystem. It should insist on "licenses" being required only when these are accompanied with

exclusive rights such as access to spectrum, numbering resources, Right of Way, etc. For the TSPs, it may be apt to even suggest declaring a common sunset date and align all licensees to make pro-rata payments or credits on License Fees (LF) and spectrum usage charges (SUC) as one-time fees.

12. Some examples of license exempt services in the present regime include:

- Handsets: With fast expansion of mobile telephone services, the Government decided to do away with the requirement of individual mobile handsets with the customer/subscribers (Public) and licensing of such handsets was subsumed in the overall wireless license for the cellular infrastructure (BTSS, etc.). This was done considering the practical difficulties in granting license for millions and millions of handsets.
- Wireless modems/routers: The wireless (wi-fi) modems/routers have played a crucial role in the proliferation of internet. With their fast deployment and growth, it was considered appropriate by many countries, including India, that the operation of such modems be exempted from licensing requirements, due to the huge number of devices involved (estimated at anything between 20-50Bn by year 2022). Under the conventional licensing regime, grant and issue of licenses (including periodical renewal) for such large number of devices is likely to be a mammoth task and might not bring in commensurate benefits for the society or large revenues for the government, this approach seems the most rational one.

13. A radically liberalized approach in the form of a simple online registration for service providers and those that wish to provide integrated services including the network layer through a choice of licensed spectrum and other associated rights viz. RoW, Numbering resources, right to interconnection, etc. may be subjected to operate under a framework of some form of licensing.

Q1. Do you agree that in order to attract investment and strengthen the service delivery segment, Network services layer and Service delivery layer needs to be separated by introducing specific license for Network Layer alone? Please justify your answer.

BIF RESPONSE

1. The current heavy-handed licensing approach is discouraging many possible investors due to massive size of investments requirement and the onerous conditions of doing business. An army of many small investors is needed to fuel the investment needs of the large Indian market. Ease of doing business could also be easier to provide for small businesses. Unbundling is a step forward in this direction.
2. Unbundling of different layers will offer opportunities for sharing telecom resources (including networks) and thereby lead to its optimum utilization, which would create additional revenue streams for the service providers. Unbundling becomes important from the point of view of all stakeholders viz. IP-1s, OTTs and service providers for next generation services.

3. With the scope of each layer being clearly defined and less than that required of the full-fledged big player, the investment requirement will reduce and may encourage more participation from the small and mid-size players. While unbundling the above layers, the following could be envisaged in terms of scope for each layer:
 - a. The scope of the Network Layer as envisaged through the enhanced scope of IP1 so as to include active infrastructure besides passive infra is sufficient.
 - b. The Network Providers would be responsible for owning, building, operating, managing and maintaining the network.
4. For a large diversified economy such as India, this sort of delayering will add to more efficiency and more investments.
5. The Service Delivery Layer would be like an overlay on the network layer and consist of players providing services using telecom resources from others such as VNOs. With no spectrum requirement, the players need not worry about the huge investment that is usually required to acquire spectrum and this will encourage increased participation, innovation and competition in this segment.
6. The layered licensing will also help to strengthen the service delivery in terms of improving the quality of service and lead to efficient delivery of service. This is because the focus would be on players operating in areas of their core competence, specialization and focused delivery. A vertically integrated operator is not expected to deliver services as efficiently as an operator who is focused only on its core competence.
7. There would be other innumerable benefits of an unbundled licensing regime. Notably, it would unlock the potential of the transformative power of Digital Communications, which otherwise would have been stifled as the full potential of Next generation technologies would not be realized. Unbundling will lead to so many benefits that the sum of the parts is likely to far exceed the total.

Q2. Should the Network Services Layer licensee be permitted to take the Service Delivery Category licenses and provide the service? If yes, what kind of restrictions and safeguards are required to be built, in order to protect the competition and innovation in service delivery segment? Please justify your answer.

BIF RESPONSE

1. A single entity could be permitted to have license of both the layers. The Network Layer entity could be permitted to provide services under the Service Delivery layer. However, those that are exclusively in the Service Delivery Layer must have fair, reasonable, transparent and non-discriminatory access to the Network layer for providing the services on equal footing as integrated players/service delivery entity.
2. To enable this, we suggest the following approach:

- a. A radically liberalized approach in the form of a simple online registration for service providers.
- b. Those that wish to provide integrated services that shall include both the service layer and the network layer through a choice of licensed spectrum and other associated rights viz. RoW, Numbering resources, right to interconnection, etc. may be subjected to operate under a framework of some form of licensing.
- c. For an entity operating in both layers, there would be need for clear structural separation of the two parts and clear accounting separation.
- d. Proper safeguards to protect competition and innovation need to be introduced. Conditions to safeguard competition and innovation would also include the rule that the integrated entity cannot offer terms more favorable to its own service delivery section as compared to other competing service providers. Regulatory framework is required with regulatory oversight to ensure that competition and innovation is protected in the Service delivery layer.
- e. Integrated operator should attract more regulatory oversight as compared to the service delivery operator.

Q3. Whether certain obligations should be imposed on the existing Unified Licensees, and other measures should be taken to encourage UL licensees to provide their network resources to VNO licensees particularly in mobile service segment? Please suggest the measures in detail.

BIF RESPONSE

1. Though the VNO Guidelines came out in 2015 and were revised in 2016 with an intention of encouraging more competition and investments in this segment, the concept of VNOs has not been successful so far in India. Thus, this becomes a very appropriate question to ask.
2. Multi-TSP (NSO) parenting not being allowed limits the options available to VNOs and leads to a monopoly situation as only one parent is allowed. Allowing multi-TSP parenting will encourage competition the sector and make the market more vibrant.
3. Further, at present there is no mandatory framework for TSPs/ISPs to have an engagement with a VNO which has led to this situation. We believe that there should be an obligation similar to the obligation to interconnect.
4. No obligations have been imposed on the existing Unified Licensees, and adequate measures have not been taken to encourage UL licensees to provide their network resources to VNO licensees particularly in mobile service segment.
5. Some other specific reasons why VNOs have not taken off include - double taxation because revenue pass-through was not permitted on account of procurement of Bulk Bandwidth, IUC, Roaming Charges, etc. The issue was subsequently dealt with and has now been resolved.

6. We believe that time has arrived for VNOs to propel the sector and expand the market to unaddressed segments.
7. While a license may be in the form of a commercial license agreement or a simple registration, the obligations/payments terms have to be commensurate with the rights given under such licenses. In our opinion, the notion that VNOs are competitors of TSPs need to change. TSPs stand on entirely different footing as compared to VNOs, holding at least 3 precious and unique rights viz.
 - a. Right to Licensed Spectrum
 - b. Right to PSTN Interconnection on regulated terms
 - c. Right to Numbering Resources

None of the above precious rights are available to VNOs.

8. As is evident from the above, the VNOs need to be fully supported by the TSPs. To enable/facilitate the same, a Regulatory framework with a clear time-bound and transparent mandate must be fixed to ensure that it is carried out. This should be accompanied by Regulatory oversight to smoothen and streamline the roadblocks, if any.
9. Apart from imposing obligation on the UL, one could also encourage them by approving softer license conditions for their service delivery segment.

Q4. In case network layer and service delivery layer are separated by creating separate category of licenses, as proposed in Q1; a) What should be the scope for Network layer license and Service Category licenses? b) Out of various responsibilities and obligations enumerated in Unified License, what should be the respective responsibilities and obligations of Network layer licensees and Service delivery category licensees? Please elaborate with justifications. c) What mechanism should be put in place to regulate the access to network services of Network layer licensees by the service delivery Category licensees? Whether certain obligations should be imposed on Network layer licensees to provide the network resources in a time-bound, transparent and non-discriminatory manner? d) What incentives (for example, lower license fee, lower SUC, etc.) could be provided to Network Layer licensees in the new unbundled licensing regime to encourage the investment in the Network layer? Please justify your answer. e) Whether the existing Unified Licensees should be mandated to migrate to the unbundled licensing regime, or the new regime should be introduced, while keeping the existing regime continued for existing licensees till the validity of their license, with an option of migration? f) Whether existing VNO licensees be mandated to migrate to service delivery category licenses as per unbundled licensing regime? g) Whether service delivery category licensees be permitted to parent with multiple Network Service layer licensees? Please justify your answer.

BIF RESPONSE

While unbundling the above layers, the following could be envisaged in terms of scope for each layer:

The Network Layer would perhaps consist of two kinds of players viz.

- Basic Digital Infrastructure Creators layer &
- Network Providers layer

The Digital Infrastructure creators would include the IP1s who are permitted to rollout both passive and active infrastructure. This is aligned to TRAI's Recommendations on enhancement of scope of IP1s dated 13th March, 2020.

The Network Providers would possess and own the core Networks akin to the MSC and the BSC in the GSM era and would have access to unique rights viz. right to interference free and scarce spectrum, right to numbering scheme and right to interconnection.

All the network providers shall provide access to their network in a fair, reasonable, time-bound, transparent and non-discriminatory manner to all players in the service delivery layer.

The Digital Infrastructure players (the current IP1s) should continue under the extant 'Registration' regime. This is based on TRAI's existing Recommendations on Enhancement of Scope of IP1s dated 13th March, 2020.

The Network Providers who shall have unique rights and access to scarce resources viz. interference free spectrum, numbering resources and right to interconnection, should however be subject to some form of a license. However, the license conditions may not be as onerous as the extant UL License conditions. Incentives in the form of Reduction in License Fees & SUC, easy availability of interference free spectrum, availability of spectrum at reasonable prices, besides reduction of some other obligations should be provided to the players in the network layer.

Some kind of mechanism should be put in place to ensure that Network Layer is obligated to enter into a service arrangement with the service delivery layer in a time-bound, transparent and non-discriminatory manner without holding the 'right of refusal' to do so.

The Service Delivery Layer would be like an overlay on the network layer. In our opinion, to induce competition, investment and innovation in the service delivery layer [which subsumes the Application layer in the classical 4 layered model of Infrastructure (passive), Network (active), Service & Application], should be either subjected to light licensing or 'registration' or be permitted license exemption.

The service delivery category licensees should be permitted to parent with multiple Network Service layer licensees.

VNOs must be permitted a liberalized regime and all the barriers to their operations must be removed. This would lead to flourishing of VNOs and would enable/facilitate the unbundling of the layers in the true sense. Migration of all VNOs to the liberalized service delivery layer in the unbundled framework may be encouraged and not mandated.

While advocating a liberal approach for emerging technologies based next generation services, to have some sort of parity between incumbents and startups, it needs to be ensured that the existing licensing/regulatory framework be amended to make the conditions and obligations more liberal than earlier for incumbents in the ecosystem. For the incumbents, it may be apt to even suggest declaring a common sunset date so as to align all licensees to the new regime by making pro-rata payments or credits on license Fees (LF) and spectrum usage charges (SUC) as one-time fees.

Q5. Any other issue related to the subject may be raised with suitable explanation and justification.

BIF RESPONSE

Telecom is the backbone for many other industries. A robust and competitive telecom sector is essential for the national economy, and it is important for the government to revive the health of the telecom sector by adopting suitable long term measures that are sustainable over a period of time. Our suggestions in this regard are given below:

- a. The sector has evolved from the earlier wireline/analogue era to the modern era of digital technologies and fast-paced developments. This necessitates an appropriate change of approach towards licensing.
- b. BIF believes that competition and market forces should be allowed to play a role in the evolution of the sector rather than rely on heavy controls. Light regulation is required. There is a need to significantly reduce or minimize ex-ante regulation. In any event, TRAI has the right to intervene in a market at any time to protect consumer rights and examine issues on a case by case basis after giving a reasonable opportunity of hearing to the operators.
- c. One of the key measures would be to review the existing structure of taxes and levies in the current Licensing Regime. Scrapping of the current system of License fee (LF) as a percentage of AGR is a key requirement. A high LF % is a major anachronism. It was appropriate when licenses were packaged with spectrum. But this principle should have been scrapped in 2012 itself, when licenses and spectrum were separated, and the latter only allocated through e-auctions ever since. It is universally accepted that, without spectrum, license is a mere piece of paper, not worth anything practically. With spectrum bought in an open and transparent manner, license fee could be an annual fixed fee that just covers the cost of administration and regulation. This cost is a small figure — currently equal to about 0.1% of the present AGR. The abovementioned cost also includes the cost to the wireless planning and coordination department, and that of regulating spectrum.

Hence, the current levy of spectrum usage charges as a percentage of AGR also needs to be scrapped.
