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Re: Consultation Paper on Regulatory Framework for Over-The-Top (OTT) Communication Services (Nov 12, 2018)

With the advent of charging only for data usage with free voice services, spearheaded by Reliance Jio and now being emulated all other service providers, mobile service in India has been turned into a pure network access service, i.e. the user only pays for connecting to the network and the amount of data he/she consumes. In this scenario OTT services do not in any way cannibalize service providers' voice revenues. Furthermore OTT voice services have also been rendered valueless (i.e. there is no longer any financial incentive to buy OTT voice services). Thus there is no longer any need to create a regulatory framework for over-the-top services.

The crux of the Indian Telegraph Act, 1885 is shown below:

PART II

PRIVILEGES AND POWERS OF THE GOVERNMENT

4. Exclusive privilege in respect of telegraphs, and power to grant licenses.— [9][(1)] Within [10][India], the Central Government shall have exclusive privilege of establishing, maintaining and working telegraphs:

Provided that the Central Government may grant a license, on such conditions and in consideration of such payments as it thinks fit, to any person to establish, maintain or work a telegraph within any part of [11][India]:

[12][*Provided further* that the Central Government may, by rules made under this Act and published in the Official Gazette, permit, subject to such restrictions and conditions as it thinks fit, the establishment, maintenance and working—

[5][[6][(1AA)] 'telegraph' means any appliance, instrument, material or apparatus used or capable of use for transmission or reception of signs, signals, writing, images and sounds or intelligence of any nature by wire, visual or other electro-magnetic emissions, radio waves or Hertzian waves, galvanic, electric or magnetic means.

Explanation.—'Radio waves' or 'Hertzian waves' means electro-magnetic waves of frequencies lower than 3,000 giga-cycles per second propagated in space without artificial guide;]

Some observations:

- The Act does not use the phrase “Service Provider” anywhere. Thus there is no definition of who or what is a “Service Provider”. In the context of the Act perhaps the only viable definition of “Service Provider” is a Licensee, i.e. someone who “establishes, maintains, and operates” a “telegraph (telecom network)”.
- The Act makes no exceptions, i.e. anybody who “establishes, maintains, and operates” a “telegraph” must have a license. In particular the Act does not distinguish between private/free and public/commercial use. Thus one may not set up a “telegraph” without a license for private use.
- The Act places no limitations or licensing requirements on users of the “telegraph”

In 1885 when the law was enacted the “telegram” only went from telegraph office to telegraph office. Thus the demarcation of the network was clear and self-evident. However with the evolution of telecom technology and the advent of customer premises equipment the definition of the network becomes blurred. Most countries, including India, have chosen the point of interconnection between the service provider network and the customer premises equipment (typically metallic, digital, or fibre distribution frames) as the point of demarcation. For example, in India, for EPABXs, this is codified in the section of Telephone Rules addressing Private Branch Exchanges:

> **B. Subscriber Owned PBXs**
>
> The present policy of the Department is to permit the subscribers to own and use EPABXs. Only EPABXs of the types approved by the Department are permitted to be used under the following commercial and technical conditions:-
>
> …
>
> (vii) **the MDF or suitable frame at the PABX will be the isolation point between the subscriber equipment on one side and the junction line(s) on the other**; the subscriber will install and maintain the PABX including the frame, power supply, the extensions, and the telephone instruments.
>
> …

Such a point of separation between the service provider network and customer equipment provides an effective reference for determining whether devices/appliances should be considered a “telegraph” for the purposes of the Act and associated regulation. All devices/appliances on the “junction line” side, i.e. the service provider network side would be telecom network elements and devices/appliances on the “subscriber equipment” side would be customer premises equipment. The service provider side in general needs to be, and is, carefully regulated around the world whereas the customer premises side is far more lightly regulated. In India, customer premises equipment such as handsets, PBXs etc. would need to be licensed in a literal interpretation of the Indian Telegraph Act. However, quite wisely, such licensing requirements have been eliminated.

OTT Services, by definition, are those applications/services provided by using “subscriber equipment” and thus do not require the provider to “establish, operate, and maintain” a telecom network (telegraph). Further, such OTT services are not restricted in any way by the Indian Telegraph Act itself. Thus it is not clear that the services-under-consideration can be regulated under the Act.

Issues for Consultation:

Q.1 Which service(s) when provided by the OTT service provider(s) should be regarded as the same or similar to service(s)being provided by the TSPs. Please list all such OTT services with descriptions comparing it with services being provided by TSPs.

TSP services include a "network access identifier" – a phone number or an IP address – that can only be provided by a TSP. Hence OTT services, by definition, cannot be the "same" as those being provided TSPs.

It is also very difficult to answer this question. There seem to be no TEC specifications that define the attributes/requirements of TSP services. Even the "enrolment" forms provided by TSPs do not precisely define the attributes of the service being provided. In the absence of such a specification it is difficult to answer the question.

Q.2 Should substitutability be treated as the primary criterion for comparison of regulatory or licensing norms applicable to TSPs and OTT service providers? Please suggest factors or aspects, with justification, which should be considered to identify and discover the extent of substitutability.

No, because 'substitutability" is context dependent and often cannot be determined a priori.

The advent of peer-to-peer applications also represents a serious challenge. E.g. when two users used Skype (when it was originally launched) the communication, which could be considered a substitute for a TSP service, occurred directly between the users. Then the only licensable entities are the users themselves. Clearly bringing every user of a peer-to-peer application into the licensing regime is not practical.

Q.3 Whether regulatory or licensing imbalance is impacting infusion of investments in the telecom networks especially required from time to time for network capacity expansions and technology upgradations? If yes, how OTT service providers may participate in infusing investment in the telecom networks? Please justify your answer with reasons.

No. With the advent of tariffs including free voice OTT voice services cannot have an impact on "infusion of investments".

Q.4 Would inter-operability among OTT services and also inter-operatbilty of their services with TSPs services promote competition and benefit the users? What measures may be taken, if any, to promote such competition? Please justify your answer with reasons.

This is perhaps no longer achievable in an open, competitive environment where it is imperative for suppliers to differentiate their offerings. The modern telecom industry was created when AT&T was allowed to become a regulated monopoly with the notion "one network, universal service". Prior to this there were thousands of phone companies in the U.S. and it was difficult, and often impossible, to make phone calls across phone companies. With de-regulation the industry has come full circle and the network is once again likely to get fragmented with great variation in services that one can avail from network to network.

Q.5 Are there issues related to lawful interception of OTT communication that are required to be resolved in the interest of national security or any other safeguards that need to be instituted? Should the responsibilities of OTT service providers and TSPs be separated? Please provide suggestions with justifications.

Lawful interception and national security are clearly very important. With the globalization of the network, especially through the Internet, perhaps the only viable solution is cooperation between law enforcement agencies around the world. E.g. if two people in India use a service based out of another country lawful interception might be impossible. Peer-to-peer applications, which could even be open source with no identifiable application provider, represent an even greater challenge.

Q.6 Should there be provisions for emergency services to be made accessible via OTT platforms at par with the requirements prescribed for telecom service providers? Please provide suggestions with justfication.

OTT services can only be used with a "smart phone". These devices include location identification capabilities which far exceed that which can be provided by a TSP. E.g. Uber, Ola, etc. are able to pinpoint the users' location fairly accurately. Since emergency services are totally location dependent it would be far more effective to integrate such technology with emergency services than to force OTT voice providers to emulate TSP-like access to emergency services.

Q.7 Is there an issue of non-level playing field between OTT providers and TSPs providing same or similar services? In case the answer is yes, should any regulatory or licensing norms be made applicable to OTT service providers to make it a level playing field? List all such regulation(s) and license(s), with justifications.

No. With the advent of tariffs including free voice OTT voice services the advantage has moved from OTT providers to TSPs!

Q.8 In case, any regulation or licensing condition is suggested to made applicable to OTT service providers in response to Q.7 then whether such regulations or licensing conditions are required to be reviewed or redefined in context of OTT services or these may be applicable in the present form itself? If review or redefinition is suggested then propose or suggest the changes needed with justifications.

Not applicable.

Q.9 Are there any other issues that you would like to bring to the attention of the Authority?

It is deeply troubling that over 70 years after independence telecom in India is regulated by an archaic, colonial act whose objective was to subjugate and enslave Indians. Thus, although the Constitution of India formally recognizes the right of citizens to "free speech" (i.e. communications) the laws and regulations governing telecommunications do not recognize such a right. The need to reform and update the regulatory and licensing regime in India is well articulated in The National Digital Telecommunications Policy – 2018:

2.1 Catalysing Investments for Digital Communications sector:

a) According Telecom Infrastructure the status of Critical and Essential Infrastructure

i. By recognizing communication systems and services as essential connectivity infrastructure at par with other connectivity infrastructure like Roadways, Railways, Waterways, Airlines etc. for development of India, and, in the process, enable low cost financing for development of communication infrastructure

b) Reforming the licencing and regulatory regime to catalyse Investments and Innovation, and promote Ease of Doing Business by:

i. Reviewing of levies and fees including LF, SUC and the definition of AGR and rationalisation of Universal Service levy
ii. Reviewing the concept of pass through charges to align the same with the principles of input line credit thereby avoiding double incidence of levies.
iii. Reviewing the rationalization of license fees on fixed line revenues to incentivise digital communications
iv. Rationalising taxes and levies on Digital Communications equipment, infrastructure and services
v. Enabling unbundling of different layers (e.g. infrastructure, network, services and applications layer) through differential licensing
vi. Promoting Open Public Wi-Fi access through Wi-Fi / Public Data Office Aggregators and Public Data Offices
vii. Introducing various fiscal and non-fiscal benefits for development of telecom clusters around cable landing stations to foster innovation in Digital Communications Technologies

c) Simplifying and facilitating Compliance Obligations by:

i. Reducing license and regulatory compliance requirements keeping in view best international practices
ii. Simplifying existing systems and procedures for grant of licenses, approvals, clearances, permissions and developing a comprehensive end-to-end online platform
iii. Specifying timelines within which various types of licenses, permissions and clearances shall be provided by the relevant administrative offices
iv. Improving the Terms and Conditions for 'Other Service Providers', including definitions, compliance requirements and restrictions on interconnectivity
v. Reforming the Guidelines for Mergers & Acquisitions, 2014 to enable simplification and fast tracking of approvals
vi. Reorganizing Wireless Planning and Coordination (WPC) Wing to facilitate Ease of Doing Business
vii. Reviewing the penalty provisions to ensure proportionality and reasonableness
viii. Creating a regime for fixed number portability to facilitate one nation – one number including portability of toll free number, Universal Access numbers and DID numbers
ix. Simplifying ETA (Equipment Type Approval) process for low powered (< 1 watt) radio devices
x. Simplifying import licensing requirements of Wireless Planning and Coordination (WPC) Wing

A very important step in the right direction is the recognition of telecommunications as a utility (critical infrastructure, above), i.e. a fundamental human right of every citizen to have access to the telecom network (a right implicitly denied in the Indian Telegraph Act – 1885 by creating an exclusive privilege for the Government).

Most of the world seems to have followed the US model of de-regulation, what I would term as, vertical de-regulation as opposed to horizontal de-regulation. In the former each company has rights over a geography (i.e. the "licensee" owns the network and provides services over that network). If the US had perhaps gone for horizontal de-regulation i.e. separating the network from the services thereon the situation could be very different.

In India the situation is further complicated by the fact that it has mandated "facilities-based competition". This can result in, and has resulted in, significant inefficiencies in network construction. In a competitive environment service providers naturally need to look for the "most valuable" customers. Thus all service providers want to "wire-up" the same commercial areas. However the telecom network is similar to the road system – it is very cost-inefficient to build multiple roads to the same house, the customer can use only one road at a time. This is akin to the problem with automatic teller machines (ATMs) when banks did not share ATMs. Many, presumably wealthy, neighbourhoods had multiple ATMs serving them while many neighbourhoods had none. Thus a given level of investment in ATMs ended up serving far fewer customers than it could have if the ATMs were better distributed. The RBI solved this problem very effectively by mandating that ATMs had to be shared! It may be worth considering separating the network infrastructure from the services thereon and allowing "licensees" to share or even marge network construction, operations, and maintenance.

One of the major difficulties faced by service providers is that the license fee is a share of the revenues. Ideally it should be scrapped because it is an unjustified additional tax on the citizens of India (in the final analysis it has to be paid by the users of the network services). Best I can tell (I am not an expert on taxation!) there is no license revenue share on electric, water, road, railway utilities. Presumably to avoid endless disputes and also maximize government revenues everything that a licensee does is included in AGR. This itself makes OTT as well as other products and services offered by telcos uncompetitive. E.g. the licensor has ruled that pre-paid monies from a customer may be used to sell them other services. However such revenues will be counted as part of the AGR and not passed through. So telcos are at a significant pricing disadvantage with their offerings. If it is not possible to scrap the revenue share as license fee, it may be worth considering moving to a fixed fee per subscriber (e.g. Rs. 5/month (~8% of Rs. 72 ARPU). This would perhaps be revenue neutral to the government (at the moment), eliminate AGR-related complexities, free telcos to be competitive and diversify.

Other very significant, but perhaps unjustified, costs and also complexity incurred by telcos in India is municipal right-of-way charges and rents demanded by landlords. In Mumbai right-of-way charges are Rs. 1.2 Cr. per kilometer! If the Mumbai municipal authorities demanded these kinds of monies from citizens for access to water supply or the electricity grid there would likely be riots! Similarly, once telecom is recognized as an utility landlords should not be allowed to determine which service providers tenants have access to.

Some license conditions are also anti-innovation. E.g. one of the license conditions is that equipments that telcos deploy must adhere to international standards. However, a lot of innovation, by definition, cannot have international standards – standards, in general, can only be developed through experience whereas cutting-edge innovation demands doing things nobody has done before. Thus no telco in India could have developed a search engine and become a Google since there are no international standards (as far as I'm aware) for search engines!