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भारत संचार निगम लिमिटेड
(भारत सरकार का उपक्रम)

BHARAT SANCHAR NIGAM LIMITED

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To,

The Advisor (TD & QoS),
Telecom Regulatory Authority of India,
Mahanagar Doorsanchar Bhawan,
Jawahar Lal Nehru Marg,
(Old Minto Road), New Delhi-02

No: Regln/1-35/2015/ 852

Dated: 24.4. April, 2015

{Kind Attn: Shri. A. Robert J. Ravi}

Sir,

Sub: - Comments on Consultation paper on "Regulatory Framework for Over-the-top (OTT) services."

Kindly refer to your office press release dated 27th March, 2015 vide which a Consultation paper on "Regulatory Framework for Over-the-top (OTT) services" was released for inputs/ comments from the stakeholders.

In this context, kindly find herewith the BSNL comments on the above mentioned consultation paper:

Q.1 Is it too early to establish a regulatory framework for OTT services, since internet penetration is still evolving, access speeds are generally low and there is limited coverage of high-speed broadband in the country? Or, should some beginning be made now with a regulatory framework that could be adapted to changes in the future? Please comment with justification.

BSNL Reply: Over the Top (OTT) applications have taken the "data" space in a big way and is now directly competing with the Basic Tele Services (Voice, SMS and Video Call) being offered by TSPs. It is felt that it is right time that a regulatory mechanism for governing the OTT services is initiated. Further, as the nuances of the OTT Services and bringing them in the ambit of regulatory regime vis a vis the net neutrality debate are yet to emerge and establish, it is felt that in the beginning a broader regulatory framework is formed with ample provisions for intervention and correction to incorporate the evolving changes that are bound to occur in this space.

Q.2 Should the OTT players offering communication services (voice, messaging and voice call services) through applications (resident either in the country or outside) be brought under the licensing regime? Please comment with justification.

BSNL Reply: It is felt that the OTT players offering communication services (Voice, Messaging and Video Calling Services) should be brought under the licensing regime. Indian Telecom Market is one of the most competitive markets in the world, where, on one hand, the tariffs are extremely cheap and on the other the TSPs are subjected to a set of stringent regulations, licenses and fees. Indian TSPs are subjected to various provisions which involves licensing, adhering to quality of service parameters, obligations under various Telegraph Acts, adherence to security conditions, adherence to emergency and public utility services and have also to pay heavy amounts to the Government for spectrum allocation, spectrum relating charges, space relating charges, bank guarantees to the Government and various penalties by the Government.

Further, these charges are in addition to the Capex which a TSP has to necessarily incur to provide a world class infrastructure and tele services for its customers, if it has to remain in business. As it is evident that OTT players are presently neither governed by any regulation nor have to pay charges to the Government for providing services akin to that of a TSP. This is putting TSPs in an extremely disadvantageous position as well as on an uneven level playing field.

Q.3 Is the growth of OTT impacting the traditional revenue stream of TSPs? If so, is the increase in data revenues of the TSPs sufficient to compensate for this impact? Please comment with justification.

BSNL Reply: The growth of OTT is severely impacting the traditional revenues streams of TSPs. OTT Communication applications offer a low (or often no) cost alternative to traditional Voice & SMS Service. OTT also offer additional communication service such as video calls, Group chat, transmission of voice recordings etc. Usage of OTT services is likely to increase with growing mobile penetration and increasing smart phone take up.

The best case examples are that of the SMS and international calling, there has been a significant decline in SMS traffic of all TSPs. Both these businesses have been severely impacted because of OTTs who are providing services on similar lines at a fractional cost, though the quality may not be similar to that of Tele Services being offered by the TSPs. However, the customer seems to be not bothered for the same looking at the fractional cost he has to pay for using the OTT services. Due to introduction of 4G services in near future QoS for voice calls through OTT will significantly improve which in turn will impact the voice revenue also.

As far as ILD scenario is concerned, due to International call traffic being significantly higher, a deeper penetration of smart phones and improvement in QoS of OTT services will lead to significant decline in ILD revenue due to subscribers switching to OTT communication services for international voice calls. It has been observed that the outgoing ILD traffic of BSNL is already showing a declining trend since November 2014 as detailed below:

Month	Nov-2014	Dec-2014	Jan-2015	Feb-2015
Traffic Minutes	18,180,472	15,697,946	14,656,627	13,139,200

At present BSNL is leasing 250 GB International Bandwidth. With rise in OTT services, requirement of International Bandwidth will sufficiently increase leading to significant increase in expenditure.

Although, there has been an increase in data revenue of the TSP, however, the same is far from sufficient, to compensate for the correspondence decrease in revenue that the TSP would have attained through its conventional Tele Service.

Q.4 Should the OTT players pay for use of the TSPs network over and above data charges paid by consumers? If yes, what pricing options can be adopted? Could such options include prices based on bandwidth consumption? Can prices be used as a means of product/ service differentiation? Please comment with justification.

BSNL Reply: OTT players providing services that are in direct competition with its Basic Tele Services (Voice, Messaging and Video Calling Services) provided by the TSP should be asked to pay TSP network over and above the data charges paid by the customers. This would be very much in line for providing a level playing field to the TSPs. A number of pricing mechanism involving 'URL based charging', band width / data volume consumption etc can be worked out. As the entire eco system is getting stabilized, a complete model may take to evolve and stabilize. However, an initiation towards this model is very much required.

Q.5 Do you agree that imbalances exist in the regulatory environment in the operation of OTT players? If so, what should be the framework to address these issues? How can the prevailing laws and regulations be applied to OTT players (who operate in the virtual world) and compliance enforced? What could be the impact on the economy? Please comment with justification.

BSNL Reply: Presently, the OTT Services are not under the control of any regulation/ licensing regime, they have been left to work freely without any security/ licensing /regulatory/ QoS compliance whereas the TSPs are heavily under licensing/ regulatory regime thereby creating an imbalance which can be fulfilled by bringing at-least those OTTs, which are competing directly with TSPs basic tele services to be brought in under some regulation framework on line to that of TSPs so as to have a level playing field.

If the OTT players are not brought under licensing regime and level playing field is not provided to the TSPs, this will impact the investment plans of TSPs. It will further impede the efforts being made by TSPs to upgrade their telecom networks & increase the broadband penetration. This ultimately will have major adverse impact on Digital India Program of Govt. Of India and its aim to increase telecom connectivity.

Q.6 How the security concerns should be addressed with regard to OTT players providing communication services? What security conditions such as maintaining data records, logs etc. need to be mandated for such OTT players? And, how can compliance with these conditions be ensured if the applications of such OTT players reside outside the country? Please comment with justifications.

BSNL Reply: The Indian TSPs are highly regulated and are mandated under license to comply to various security conditions involving providing interception and various resources/ data as requested by LEAs (Law Enforcement Agencies) under the license. These security conditions have evolved over the period of time and are taking into account changing scenarios and LEAs need. However, no such regulation is applicable to OTT Services. Further, most of the OTT Services are proprietary in nature and are using TSP network merely as a 'dump pipe'. TSP's network has no role except carrying and delivering data packets from end to end user.

It is felt that this would create an uneven security environment wherein the TSP Tele Services (Voice, Messaging and Video Calling Service) would be traceable, whereas "OTTs would be untraceable".

To enforce the security compliance by OTT players they shall be mandated to install their application servers in the country itself & provide the data record/ logs etc as already being provided by the TSPs to the designated security agencies. There have been innumerable incidences in past where law enforcement agencies have found it very difficult to get the desired inputs as the servers providing the services were installed outside the Indian jurisdiction. Seeing the importance of national security, it is necessary to make them install their servers on Indian soil and comply with Indian Regulation and Laws.

Q.7 How should the OTT players offering app services ensure security, safety and privacy of the consumer? How should they ensure protection of consumer interest? Please comment with justifications.

BSNL Reply: The TSPs are mandated under the licence to ensure security, safety and privacy to the consumers. Further, these licence conditions are subject to changes from time to time as per the needs and concerns evolving. Whereas the OTT Players on the other hand are under no such mandate from any Government agency for providing such assurance. This situation would be highly unwarranted, as most of the OTTs are based out of India and the data collected by them may be used for other purpose, without any accountability.

Q.8 In what manner can the proposals for a regulatory framework for OTTs in India draw from those of ETNO, referred to in para 4.23 or the best practices summarised in para 4.29? And, what practices should be prescribed by regulatory fiat? Please comment with justifications.

BSNL Reply: The initial design of the internet was primarily meant for transporting packets between the end-point but the bandwidth of the channels was of little concern. The internet was not designed with focus on the architectural constraints of the networks. Today, data traffic has a direct and widely varying impact on the network performance, which is a huge departure from the early days. The IP applications can in fact cause undue load that can easily overload the volume sensitive portions of the deployed networks.

An OTT application which generates heavy traffic may become very popular as has happened with a few applications over the years. Such applications can bring the network of the operator under tremendous pressure. In such case, if operators are able to work out an arrangement with the OTT application provider thereby managing the traffic load on their network, it must be considered as their legitimate action.

Q.9 What are your views on net-neutrality in the Indian context? How should the various principles discussed in para 5.47 be dealt with? Please comment with justifications.

BSNL Reply: India is witnessing competitive market scenario and it is difficult for any firm to set its own price and receive it by imposing undue control on network it offers. The market forces will come to work in case of any such attempt. Hence net neutrality may ofcourse be adopted as a legal concern but imposition of any regulation on net neutrality is not warranted at the moment.

Internet service access providers establish the backbone of the internet connection. The current state of internet has been achieved due to the robust infrastructure made available by the access providers. They need to manage the infrastructure in the most effective way to ensure that their customers are served gainfully and efficiently.

In such case, if operators are able to work out a commercial arrangement with the OTT application provider thereby managing the traffic load on their network, it should be allowed. However if, there are attempts from any quarter to act against the basic tenets of net neutrality (say, discriminating against any particular content provider), the regulator may resort to ex-post regulation.

Q.10 What forms of discrimination or traffic management practices are reasonable and consistent with a pragmatic approach? What should or can be permitted? Please comment with justifications.

BSNL Reply: Broadband networks are like transport highways which require heavy investment both during initial establishment and also during regular upgrades/replacements. The network in the meanwhile is subject to heavy congestion which is not precisely predictable. Telecom service providers are responsible for ensuring that their networks operate effectively and efficiently all the time, even during the intervening period. Though network investment is a fundamental tool for dealing with network congestion and should continue to be the primary solution for access service providers, however, Limited capacity of the networks with operators drives them to have a legitimate interest in the traffic management of their networks.

The combination of capacity augmentation and traffic management is therefore a must for an operator to address the terrific growth in data traffic. Even if the initial plans of the pumping in additional bandwidth is achieved, this will not continue forever and soon the network will be exposed to yet another demand for upgrade. Investment in bandwidth alone does not obviate the need for traffic management, which may be used

to address temporary network capacity constraints and changing network conditions, as well as for service innovation.

The traffic management techniques are designed by the providers not only to manage congestion that occurs often unpredictably, but also to ensure that the performance of different applications that have varying requirements in terms of delay and accuracy sensitivity etc matches customer expectations. Additionally it also allows operators to offer differentiated services to the users, and to ensure return on the heavy investment costs that have been incurred in building these networks. Operators need to manage the traffic, given the reality that they will confront varying, adverse and unpredictable circumstances impacting their network and services rendered. Even a popular application from an OTT operator can bring the deployed network of the operator under tremendous pressure.

The bandwidth available with the access service providers has turned into a limited resource over the years due to exponential growth in the data traffic. If economic aspect is considered by the operators in managing the traffic load on their network, it must be considered as their legitimate action. The market forces will come to work under such cases. However, the access providers must not employ traffic management practice to the extent which is unjustly discriminatory (such as blocking of the content from a content provider since it is detrimental to their own business interest).

Q.11 Should the TSPs be mandated to publish various traffic management techniques used for different OTT applications? Is this a sufficient condition to ensure transparency and a fair regulatory regime?

BSNL Reply: The access service provider networks are faced with external influences which are unpredictable and unrelated and may require the access service providers to adopt flexible traffic management approach. Traffic management allows the access providers to ensure that small number of people do not flood the network with data traffic so that as many people as possible can make use of the network.

Traffic management is not a straightforward issue to explain to customers, particularly as the impact of traffic management practices is only one component of various factors that can impact on a consumer's experience of their broadband service. Many other issues such as contention ratio, bottlenecks in other parts of the network, network elements in the consumer's premise can all impact the consumer's experience.

Furthermore, even when the service provider's network is not congested, the customer may have a choking experience because the content, service or application they are seeking to access is itself congested, or subject to restrictions, or otherwise managed by the content owner. Consequently traffic management practices by the access service provider are not the only factor governing the internet experience of the customer. Though transparency of the network is important, there is a need for careful approach to ensure customer comprehension while safeguarding network reliability. In view of this, it is important that access providers are allowed to provide the information about the traffic management practices for their consumers alongside other relevant information about their service that can impact on the consumer experience.

Further, since services vary across access service providers, it will be good if the service providers are allowed to communicate to the customers the information about the traffic management practice in the language of their convenience which is easily understood in their context.

Q.12 How should the conducive and balanced environment be created such that TSPs are able to invest in network infrastructure and CAPs are able to innovate and grow? Who should bear the network upgradation costs? Please comment with justifications.

BSNL Reply: To have conducive & balanced environment for TSPs as well as the OTT players the huge investment in upgrading the network shall be shared by all the players who are using the network resources to deliver their services to the end users. The revenue share arrangement with the TSPs will ensure that costs of investment are shared appropriately.

If TSPs are able to invest in last mile, it will not only help the TSPs and consumers but also the OTT players as they will have now larger market to serve and higher bandwidth to deliver innovative and revenue generating rich multimedia applications.

Q.13 Should TSPs be allowed to implement non-price based discrimination of services? If so, under what circumstances are such practices acceptable? What restrictions, if any, need to be placed so that such measures are not abused? What measures should be adopted to ensure transparency to consumers? Please comment with justifications.

BSNL Reply: Yes, the TSPs may also be allowed to implement non-price based discrimination of services to provide differentiated experience. Some of the services may require high/ reserved bandwidth to deliver good experience to end consumers. To ensure transparency TSPs may be mandated to publish all the traffic management policies.

Q.14 Is there a justification for allowing differential pricing for data access and OTT communication services? If so, what changes need to be brought about in the present tariff and regulatory framework for telecommunication services in the country? Please comment with justifications.

BSNL Reply: Yes there is a justification to allow TSPs to adopt differential pricing for different services. Toll Free Number (1800 series) for voice are being provided by TSPs from many years without any opposition from smaller companies who can't pay for subscriber's calling charges. If providing toll free voice is completely justified, how providing the toll free or zero rated data is unjustified? Prices are always used as a means of product/ service differentiation as same is normal business practice across the various industries.

Allowing the TSPs to provide different pricing for few appealing services will help in increasing the data adoption in the country. The existing regulation frame work if required may be suitably amended to facilitate above.

Q.15 Should OTT communication service players be treated as Bulk User of Telecom Services (BuTS)? How should the framework be structured to prevent any discrimination and protect stakeholder interest? Please comment with justification.

BSNL Reply: No, OTT players cannot be treated as bulk consumer as they themselves are the competitor of TSPs and are providing the same services. OTT players (Providing Voice, SMS & Video Calling Services) need to be treated as another TSP licensee.

Q.16 What framework should be adopted to encourage India specific OTT apps? Please comment with justifications.

BSNL Reply: To encourage the India specific OTT apps government may establish a fund to support Indian start-ups engaged in developing apps.

Q.17 If the OTT communication service players are to be licensed, should they be categorised as ASP or CSP? If so, what should be the framework? Please comment with justifications.

BSNL Reply: OTT service players are to be categorized as CSP and to be brought under same licensing regime as they are providing similar services to the consumers.

Q.18 Is there a need to regulate subscription charges for OTT communication services? Please comment with justifications.

BSNL Reply: Regime for regulating the subscription charges should be same as applicable for TSPs as they are providing the same services to end consumers.

Q.19 What steps should be taken by the Government for regulation of non-communication OTT players? Please comment with justifications.

BSNL Reply: A different regime for such OTT application may be worked out keeping in view the specific requirements.

Q.20 Are there any other issues that have a bearing on the subject discussed?

BSNL Reply: It is evident from past learning that there is a decline in revenue for SMS & VAS service. There is an anticipated decline in voice revenue also in future due to OTT Services. So, TRAI should take any policy decision keeping this in mind.

The Hon'ble Authority is requested to kindly consider the BSNL's views/ comments on above mentioned Consultation paper.

Yours sincerely

Raghuvir Singh
AGM (Regn-II)

24/4/15