



30 June, 2016, New Delhi

To,

1. Shri R.S. Sharma
Chairman
Telecom Regulatory Authority of India (TRAI)
New Delhi

2. Shri Arvind Kumar
Advisor (Broadband and Policy Analysis)
Telecom Regulatory Authority of India (TRAI)
New Delhi

Re: Response to Consultation Paper on Free Data

Dear Sir,

The TRAI Consultation Paper on Free Data is a commendable step towards achieving digital equality. The objective of ensuring that unconnected as well as under-connected consumers are better connected is a comprehensive goal. With the internet assuming a greater role for delivery of essential services as enshrined in legislations like the Aadhar (Targeted Delivery of Financial and Other Subsidies, Benefits and Services) Act, 2016, the need to connect every Indian to the internet for effective delivery of basic services has also grown. While presenting this response to the consultation, due care has been taken that the suggestions made herein are in line with internationally accepted standards of 'free internet', and are also tailor-made to India's access and quality of service requirements.

Question 1:

Is there a need to have TSP agnostic platform to provide free data or suitable reimbursement to users, without violating the principles of Differential Pricing for Data laid down in TRAI Regulation? Please suggest the most suitable model to achieve the objective.

Response:

At the outset, the current consultation paper outlines two main issues:

- (i) How can access be facilitated/ incentivized for consumers?

Access can be defined as provision of reliable internet connectivity to consumers on a regular basis. Here, consumers include both the group who have reliable broadband connectivity as well as the under-connected and unconnected. Broadly, it may be divided into two components:



- a) Quantitative: The quantitative component of access may be understood as facilitating internet connectivity in terms of number of consumers. According to TRAI data with only 332 million internet subscribers, about 72 per cent of the Indian population remains unconnected. Thus, an integral component of quantitative access is to connect that share of the population which has minimal or no access to the internet.
- b) Qualitative: The qualitative component of access includes aspects such as speed and content. The TRAI has notified “quality of service” regulations defining minimum speeds for broadband (512 kbps) and wireless data service (indicated in the provider’s wireless data plan). Access to content may be generally categorized as follows:
- All-access Plans: Provision of access to the internet at a ‘base-rate’ or through significantly cheaper ‘data plans’ which usually have data caps.
 - Limited Plans: Provision of access is limited to bundled websites/applications (apps) usually for a reduced price as compared to all-access plans. It can include plans wherein certain apps can be accessed for free or for reduced charges or without impacting data caps.

We humbly submit that incentives aimed at extending internet connectivity to the unconnected and under-connected should take into account both the quantitative and qualitative aspects of access.

The platform-based models suggested by TRAI, which includes the reward-to-customer based app or platform, toll-free API with a third-party platform owner and the direct money transfer approach, presuppose that the target consumer already accesses the internet. Thus, the quantitative impact on access will be limited to that segment of the population which is already connected. Further, providing free data/reimbursement only for specific apps, services or content will limit the quality of access.

In light of this, before finalizing a policy it may be necessary to conduct surveys or assessments of the potential impact of free data plans on quantitative and qualitative access, as defined above. It is also recommended that any potential plan maximizes the quality of access by providing free data/reimbursements with higher speeds without limiting the accessible content, as discussed below.

Providing plans to boost broadband connectivity for the under-connected and unconnected is an important mandate in line with the National Telecom Policy, 2012 wherein broadband is recognized as a key telecommunications service for enabling access to high quality content and services on the internet. Thus, it is recommended that an appropriate intervention be introduced at the broadband level to promote access, accounting for the following considerations:

- As per Indian Telecom Services Performance Indicators (December 2015) out of approximately 332 million internet subscribers in India, close to 60 per cent were narrowband subscribers (<512 kbps). The upgradation of under-connected consumers to broadband is a qualitative aspect of access that may be alleviated, to an extent, by free data plans. **Thus, it is**



recommended that narrowband subscribers be given all-access free broadband plan (that may be limited by speed or data caps if required) at the time of purchasing narrowband data plans.

However, even if limited free data for broadband is provided to narrowband users they may not be able to afford purchasing broadband plans, despite experiencing its benefits. Further, often narrowband subscribers are limited by the network infrastructure available geographically. In such a scenario, initiatives will have to go beyond free data plans, as discussed in the subsequent paragraph.

- With only 12.86 per cent of India's rural population accessing the internet, the issue of providing access to the unconnected is larger in magnitude. While a well-documented reason behind low penetration is network infrastructural limitations, another key obstacle in expanding internet access is affordability. In line with the Sustainable Development Goal, the Broadband Commission for Digital Development (ITU and UNESCO)¹ defines broadband as affordable if an entry level (500 MB) data pack costs less than 5 per cent of the average monthly income. In India, for almost 75 per cent of rural households the average monthly income of the highest earning member was less than Rs.5000 per month (as per 2011 socio-economic census), and as per the Affordability Report 2015-16² the corresponding broadband costs for the economically backward is 12 - 19³ per cent of their average monthly incomes. Internet affordability is further reduced when coupled with the cost of a smartphone. Thus, connecting the unconnected as well as the under-connected requires the adoption of both quantitative and qualitative measures.

Thus, it is recommended that broadband access be provided to the unconnected and under-connected by:

- accelerating existing infrastructural initiatives such as BharatNet;**
 - reducing the cost of entry-level broadband data packs in partnership with TSPs, through appropriate government interventions.**
- The remaining population falls into the group of existing broadband subscribers who need upgraded broadband connections that improve access qualitatively. In this regard, an important global development that has emerged is – increasing or entirely removing usage based pricing such as data caps. Data caps or bandwidth limits imposed by service providers increase broadband costs for consumers, thereby compelling OTT businesses to subsidize cost of access by participating in zero-rated programmes or tying up with reward platforms. However, there is a growing consensus that the cost of increasing broadband capacity has declined much faster than the increase in data traffic and data caps do not prevent/lower network congestion. This is

¹ Broadband Commission's Broadband Targets for 2015, Broadband Commission for Digital Development. Available at http://www.broadbandcommission.org/Documents/publications/Broadband_Targets.pdf

² Affordability Report 2015-16, Alliance for Affordable Internet. Available at http://a4ai.org/affordability-report/report/2015/#policy_recommendations

³ Cost of 500 MB data pack as a percentage of the average of monthly incomes less than USD 94 and USD 58 respectively



especially considered true for fiber-optic supported wired broadband connections. However, there is a dearth of TSP data on the effect of usage based pricing on network congestion. **Thus, it is recommended that relevant assessments be conducted on network congestion in order to inform regulatory measures that be undertaken to remove data caps for wired/ fixed broadband connections.**

With regard to limited free data plans, due consideration should also be given to the class of data (content, service etc.) being extended. Considering the growing importance of the internet as a means for enhancing basic service delivery, providing access to government services should be prioritized. **Thus, it is recommended that government websites could be made freely accessible either as a free data/ reimbursement plan or across the board for everyone who has the means to access the internet.**

(ii) How can businesses gain access to more consumers?

- Promotional free data/ reimbursement plans: Limited promotional offers are often integral to offline marketing and therefore allowing free data or similar incentives to internet consumers, is in principle a question of offline – online parity. However, it is important to note that internet networks are prone to manipulation and therefore the question of parity is a nuanced one. Promotional offers should be limited by time, if allowed, in order to avoid interference in consumption patterns by any intermediaries.

Similar to promotional offers, limited free data offers may be extended to all consumers at the time of purchasing new sim cards/ mobile phones to facilitate early access to internet applications.

Thus, it is recommended that limited promotional offers be allowed as they do not violate net neutrality.

- Third-party platforms: If third party owned platforms subsidize access to consumer applications, OTT service providers may become subject to differential pricing. Further, the costs can become prohibitive for small businesses/ startups. Such platforms can effectively become intermediaries between consumers and businesses; thereby increasing the complexity of the access ecosystem and enabling the possibility of third-party 'gatekeepers'. Thus, OTT service providers prefer avoiding third party platforms altogether. However, if such platforms are allowed, compliance must be ensured to the Discriminatory Tariffs Regulation and net neutrality principles (as they evolve) by prohibiting TSP interference and mandating that such platforms allow any content of the same class without discriminating between OTT service providers of the same category. For example, if a third-party platform subsidizes costs for video content then all OTT providers in this category must have the option of participating.



Thus, it is recommended that third-party platforms be discouraged to prevent fostering 'gatekeepers'. It is further recommended that if such platforms be allowed, suitable norms and measures be put in place to ensure that such platforms are TSP agnostic and do not discriminate between the same class of OTT providers.

Question 2:

Whether such platforms need to be regulated by the TRAI or market be allowed to develop these platforms?

Response:

It is recommended that TRAI continue to regulate any platforms as per jurisdiction granted under Sections 11 and 36 of the TRAI Act, 1997 to ensure the Discriminatory Tariffs Regulations are not violated.

However, the broader principles of net neutrality extend beyond discriminatory tariffs or differential pricing and include well-established laws such as the Information Technology Act, competition and anti-trust laws as well technical considerations such as network management and security. Thus, it is recommended that alternate oversight and dispute resolution mechanisms be explored to regulate, among other things, such platforms on broader principles of net neutrality. One such mechanism that may be explored is a co-regulatory model in vogue in jurisdictions such as Japan and Norway. A note on possible models is attached as ***Annexure A***. **Thus, it is recommended that alternate oversight and dispute resolution mechanisms be considered to for enforcing overarching net neutrality principles.**

Further, even with the introduction of relevant regulations, some aspects will require fine-tuning. For example, while the Discriminatory Tariffs Regulations make an exception for data transmitted over a closed electronic communication network (CECN) when not in contravention of the Discriminatory Tariffs Regulation, it is possible that service providers may provide access to content already available on the internet through the CECN (Please refer to our Response to Question 4 for a detailed discussion on CECN). **Thus, it is recommended any platform should be monitored by TRAI based on norms on free data for a predefined period of time to ensure robust adherence.**

Question 3:

Whether free data or suitable reimbursement to users should be limited to mobile data users only or could it be extended through technical means to subscribers of fixed line broadband or leased line?

Response:

As discussed under Question 1.

To reiterate:

- **It is recommended that relevant assessments be conducted on network congestion in order to inform regulatory measures that be undertaken to remove data caps for wired/ fixed broadband connections.**



- **Government websites could be made freely accessible either as a free data/ reimbursement plan or across the board for everyone who has the means to access the internet.**
- **Limited promotional offers be allowed as they do not violate net neutrality.**
- **Third-party platforms be discouraged to prevent fostering 'gatekeepers'. It is further recommended that if such platforms be allowed, suitable norms and measures be put in place to ensure that such platforms are TSP agnostic and do not discriminate between the same class of OTT providers.**

Question 4:

Any other issue related to the matter of Consultation.

Response:

It is widely accepted that net neutrality exclusively impacts the internet at present. Thus, networks that exist independent of the internet are not required to adhere to the existing Regulation on Discriminatory Tariffs or any future net neutrality regulation. These include enterprise and managed services that are covered by contractual obligations and are usually provided on an exclusive basis to an external party. It is best if such contractual services are not interfered with by way of regulations. However, it is important that any exceptions be clearly carved out and be limited in scope.

In this regard, the Prohibition of Discriminatory Tariffs for Data Services Regulations, 2016 exempts CECNs defined as networks where data is neither received nor transmitted over the internet.

It is foreseeable that public networks other than the internet may be developed. For example, 'Next Generation Networks' may go beyond the TCP/ IP protocol⁴ and it has been argued that the Internet of Things may exceed the capacity of the internet infrastructure and require its own network.⁵ Thus, it is recommended that all regulations on this topic be forward-looking. In light of the exponential nature of technological developments, current regulations should be formulated in a manner so as to avoid any inadvertent impact on future technologies.

In this regard, the observations of the Department of Telecom Committee on Net Neutrality are relevant. The Committee recommends an exception for enterprise/ managed services which are defined as "tailor made, SLA (Service Level Agreement) based, one-to-one arrangement between the TSP and Enterprise. These are commercial arrangements with guaranteed QoS, SLAs etc. and therefore are kept out of the Net Neutrality debate."⁶ **Thus, it is recommended that suitable clarifications be issued to qualify the CECN exception and limit the possibility of transgressions.**

⁴ Andy Sutton, Richard Li (ed.), 'Next Generation Protocols – Market Drivers and Key Scenarios', European Telecommunications Standards Institute, May 2016. Available at http://www.etsi.org/images/files/ETSIWhitePapers/etsi_wp17_Next_Generation_Protocols_v01.pdf

⁵ Gail Dutton, 'Does The Internet Of Things Need Its Own Network?', Forbes, July 3rd 2014. Available at <http://www.forbes.com/sites/ptc/2014/07/03/does-the-internet-of-things-need-its-own-network/>

⁶ Para 4.28 (c)



An analysis of existing jurisprudence on CECN or 'specialized services' indicates that various factors beyond the definition in the Differential Pricing Regulations may be taken into consideration. These are recalled here for your convenience, as follows:

1. Article 3 (5) of Regulation (EU) 2015/2120 for 'laying down measures concerning open Internet access'⁷ also provides for a service akin to the CECN. Such 'additional services' are limited by necessity of optimization and should not be detrimental to internet access in terms of network capacity or quality. The relevant Article is recalled here verbatim, for your kind perusal:

"Providers of electronic communications to the public, including providers of internet access services, and providers of content, applications and services shall be free to offer services other than internet access services which are optimised for specific content, applications or services, or a combination thereof, where the optimisation is necessary in order to meet requirements of the content, applications or services for a specific level of quality.

Providers of electronic communications to the public, including providers of internet access services, may offer or facilitate such services only if the network capacity is sufficient to provide them in addition to any internet access services provided. Such services shall not be usable or offered as a replacement for internet access services, and shall not be to the detriment of the availability or general quality of internet access services for end-users."

2. The 'Net Neutrality Policy Framework'⁸ developed by the United Nations Internet Governance Forum Dynamic Coalition on Net Neutrality⁹ defines the specialized services exception which is akin to the CECN, with the criteria of strict admissions control and qualifies it such that specialized services may not be detrimental to internet services in terms of access, performance, affordability or quality and its adoption should be voluntary. Further, the 'Draft Net Neutrality Policy Statements'¹⁰ enumerates its characteristics. A copy of the relevant document is attached as **Annexure B**.

⁷ REGULATION (EU) 2015/2120 "laying down measures concerning open internet access and amending Directive 2002/22/EC on universal service and users' rights relating to electronic communications networks and services and Regulation (EU) No 531/2012 on roaming on public mobile communications networks within the Union."

⁸ Available at <https://www.thisisnetneutrality.org/>

⁹ For more information, please see <http://www.intgovforum.org/cms/dynamic-coalitions/1330-dc-on-network-neutrality>

¹⁰ Available at

<https://nebula.wsimg.com/d8e1a0b7b1c1ef34799b9197321a059d?AccessKeyId=B45063449B96D27B8F85&disposition=0&alloworigin=1>



Annexure A

Existing Regulatory Models

Countries which have created a regulatory framework for ensuring network neutrality, have done so using three broad approaches -

- a. Enacting legislations – As found in Brazil, Chile, Netherlands etc.
- b. Self-regulation – As found in the UK, Sweden etc.
- c. Co-regulation – As found in Japan and Norway.

Co-Regulation

While in a self-regulatory model stakeholders create a code of conduct for themselves, in a co-regulatory model the regulators play an active role in creation of such code of conduct as well as its monitoring. The advantage of this is that the regulations can be made more dynamic without a heavier legislative process, whereas the drawback is that the arrangement is voluntary and lacks any formal means to impose sanctions.

Various jurisdictions have adopted a co-regulatory approach. The Japanese and Norwegian co-regulatory models are summarized for your perusal:

- **NORWAY:** Norwegian guidelines for net neutrality were developed by a working group consisting of Internet Service Providers, content providers and consumer organisations, under the leadership of Norwegian Post and Telecommunication Authority (NPT). The guidelines that were launched in 2009 encompass principles that require neutral internet access services from providers in the Norwegian market, with the exception of specific forms of reasonable traffic management. The working group that developed the guidelines has subsequently functioned as a reference group that meets once a year to discuss developments in the industry and whether the guidelines are functioning as intended.
- **JAPAN:** Japan's approach is characterized by lack of formal, specific rules and broad authority granted by law to the regulator – Minister of Internal Affairs and Communications (MIC). In 2006, MIC's Telecommunications Bureau created a working group to provide recommendations on net neutrality. The findings of the working group though non-binding, were adopted in the New Competition Promotion Program 2010 that laid down principles of net neutrality for Japan. As a part of the recommendations, a group of four communication industry associations with MIC as an observer developed guidelines on packet shaping which forms the core of Japan's net-neutrality regulations.



Annexure B

Statement II. On Specialised Services (Excerpt)

1. Specialised Service Definition

Specialised services are electronic communications services that are provided and operated within closed electronic communications network using the Internet Protocol, but being separated from the Internet and not available on the Internet. Specialised services rely on discriminatory traffic management and therefore the network neutrality principle need not apply to such services.

2. Characteristics

Specialised services:

- i. do not constitute a substitute for Internet access services, nor for any service already available on the public Internet and therefore cannot be marketed as a substitute for such services;
- ii. are provided by the ISP for a fee on a specially-requested basis;
- iii. offer enhanced functionalities, whether that is assured quality of service, speed or security, whose level or type is not readily available on the public Internet;
- iv. rely on strict access control, although they are offered to the public;
- v. are conveyed via physically or logically separate infrastructure from the one used to convey Internet traffic.

Physical separation implies that specialised services and Internet traffic are transported over separate equipment.

Logical separation implies that specialised services and Internet traffic use the same physical equipment but the network operator dedicates specific and clearly defined resources to each type in a manner functionally equivalent to physical separation - that is resources are allocated upfront and cannot be reallocated without explicit modification of the service agreement. Such resources should also not be dynamically (re)allocated.

3. Business models

Internet service providers should be allowed to offer specialised services in addition to Internet access service, provided that such offerings are not to the detriment of Internet access services, or their performance, affordability, or quality.

Offerings to deliver specialised services should be provided on a non-discriminatory basis and their adoption by Internet users should be voluntary.