

Pre Consultation on Net Neutrality

Introduction

TRAI's Explanatory Memorandum on "Prohibition of Discriminatory Tariffs for Data Services Regulations, 2016"

"Keeping in view India's large number of internet users and content producers, both of which are rising exponentially, the Authority has taken a view that prohibition of discriminatory tariff for data services is necessary to ensure that service providers continue to fulfil their obligations in keeping the internet open and non discriminatory."

The Authority seems to have made a complete *volte face* in its position on the issue of zero rating from these Regulations issued as on 8 February 2016. The words used in the Introduction by the Regulator stating an intent to look at – "possible options to facilitate free access to certain websites/ contents or incentivising user to visit certain website/App without violating the existing TRAI Regulation on discriminatory tariff for data services" is inherently paradoxical in terms of its form and intent. Does the Authority really believe allowing 'free accesses' to certain websites wouldn't impede upon the abovementioned regulations?

The regulator also seems to be blurring the lines between access and content in the process. By looking to go into the content side of the debate (viz., non Telcos), the Regulator is exploring grey areas wherein it is pushing the limits of its authority by looking to go beyond and regulating the access side of things. Also, the piecemeal approach in tackling the issue of net neutrality at large; isn't helping matters. The Authority first chose to examine neutrality from the perspective of OTT providers, then it examined the subject of differential data pricing. Now even while it examines the area of free data, this broader pre consultation paper on net neutrality has been issued.

The internet is at present, a major growth driver for the Indian economy and is a critical tool that leads to proliferation of access to information, knowledge, public records, etc. This, internet, ensures transparency in every walk of life. Our view is that proliferation of internet is something which is kind of given, and the penetration of internet is something which must increase manifold and at a faster rate, both in terms of availability and speeds, in order to

meet the key objectives of transparency and dissemination of knowledge at a pace not seen hitherto. In fact, average internet speeds in India are lower than most BRICS economies on account of skewed contention ratios and latency rates. For ubiquitous availability of internet with speed and to everyone requires investments, both by Telcos and some investments by the Government of India. **It must be understood that without access, the content is akin to a Desert Island.**

The recently issued Federal Appeals Court verdict in the U.S. has upheld the erstwhile Federal Communications Commission (FCC) Ruling that put in place a set of new regime for internet providers which banned blocking or slowing of Internet traffic to consumers. The regulations from the FCC also forbid carriers from selectively speeding up websites that agree to pay the providers a fee — a tactic critics have said could unfairly tilt the commercial playing field against startups and innovators who may not be able to afford it. The fact, that a mature internet market such as the US is taking such a strong step clearly illustrates the caution with which the TRAI must tread cautiously in making any provision for a zero rating/free data platform.

As per the latest TRAI telecom subscription data (as on 31 March 2016)¹, the number of broadband subscribers increased from 144.87 Million at the end of Feb-16 to 149.75 million at the end of Mar-16 with a monthly growth rate of 3.37%. Segment-wise broadband subscribers and their monthly growth rates are as below:

**Segment-wise Broadband Subscriber base and Monthly Growth Rates
in the month of March, 2016**

Segment	Broadband subscribers (in million)		Monthly growth rate in the month of Mar-16 (%)
	As on 29 th February, 2016	As on 31 st March, 2016	
Wired subscribers	16.75	16.98	1.38%
Mobile devices users (Phones and dongles)	127.61	132.24	3.64%
Fixed Wireless subscribers (Wi-Fi, Wi-Max, Point-to- Point Radio & VSAT)	0.51	0.52	2.36%
Total	144.87	149.75	3.37%

The growth in subscribers, as evinced from the data illustrates that the growth in wired subscribers pales in comparison to mobile devices and fixed wireless. This wrinkle, perhaps, would get ironed once Digital India or Bharat Broadband gets going.

¹ TRAI Press Release 34/2016

When we talk about “broadband highways” as a priority for the new Government, and as has been highlighted in the recent ‘Digital India’ initiative, we mustn’t lose sight of the basic premise on how roads or highways in the traditional sense of the term have been built. Roads can be state roads, state highways or national highways. Depending on the nature of the road, we have the system of toll charges wherein different class of vehicles pay differential toll charges. So, a truck would pay differently vis-a-vis a two-wheeler. Why do we levy such charges? The answer lies in the fact that it is the Government in collaboration with the infrastructure developer that builds these roads. The truckers do not invest in the ‘highways’ or play a part in building these ‘highways’. Similarly, the content provider does not play a part in the creation of the digital highway infrastructure. The service provider is a mere one user of this highway, amongst many other users.

‘You can’t have your cake and eat it (too)’ – This old adage holds true when we talk about network neutrality, or net neutrality. The end goal that the Government is looking to achieve must not be forgotten by the internet activists who are making a hue and cry over the damage that the absence of net neutrality can cause. Ensuring cost effective and quality internet access, with adequate speeds, to maximum number of Indians is of paramount importance to the Government. In this vision, however, it is not the content providers that would play a crucial role, but the telecom companies, as they are the infrastructure developers in the true sense. The telecom operators are responsible for paying taxes to the Government, managing an artificially created spectrum scarcity, paying huge sums of money for whatever limited quantum of spectrum is available in the market through an auction driven mechanism and also paying other incidental charges such as the USOF (Universal Services Obligation Fund) contribution. Some content providers, which are in the nature of providing bypass VoIP calling services, not all, cause revenue erosion to Telcos and Government, an example below. A taxi hailing apps may be a convenience and add to data traffic, but not the one example below.

The shrill voices or the frenzy over net neutrality has nothing to do with equal access, unlimited browsing, downloads, e-commerce, e-governance, e-education, e-medicine or any E for that matter, but with some of the OTT services which cause erosion into the conventional revenues of the Telcos and Government. The fight is to camouflage these unethical services, an example of which we hate to present below. The other question one begets is how many of these services are home grown, none? What is this evangelism about “Allow such services which bypass any scrutiny, whether revenues or security” **The**

byproduct of this campaign has been that misleading the custodians of Revenues and Security. This is too ominous to be allowed to pass.

There has been a lot of noise raised by the internet evangelists, consumer rights and free speech espousers on net neutrality. However, there seems to be a lot of misplaced notions floating around on net neutrality. For example, the idea that absence of net neutrality impedes on the concept of an open internet is misconstrued. In an open internet, the consumer gets to exercise choice over whichever sites and services permitted by law, regulation and security considerations, etc., he wishes to access. However, this doesn't imply that the same charges are applicable on all types of service used by the consumer.

Another word which is being thrown around in this debate is discrimination. But, discrimination needn't always be a word having negative implications. For example, a non discrimination rule that would ban all application-specific discrimination (i.e. discrimination based on applications or classes of applications), but would allow application-agnostic discrimination. This would allow certain but not all forms of Quality of Service. Such a practice can be interpreted in a positive light. The rule protects the factors that have fostered application innovation in the past, ensuring that the Internet can continue to serve as an engine of innovation and economic growth in the future.

We can also take the example of airlines charging different fares for different category of seats. However, this doesn't come at the cost of a discriminatory pricing within the category. Legitimate price discrimination is different from an anti-competitive practice or denial of service.

Content that is available over the internet can be classified according to various categories- knowledge, entertainment, application based services (such as e-governance or relating to easing the conduct of business, e-commerce, etc.), bypass services of a commercial nature (such as VoiP based calling services). The same principles of net neutrality cannot be applied uniformly across all categories of services, at the cost of access providers. There must be some differentiation between access to: knowledge-based public good services like e-Governance at all levels (for eg., passport, banking related, public utility) resulting in lessening burden on common facility allied with improvement in quality of life and ease in life, entertainment, and those purely commercial in nature impinging upon other territories of telecomm domain.

Right now, we believe that there does exist an economic rationale to charge a premium for the bypass kind of VoIP service offerings that provide voice over Internet protocol (VoIP) services that clog on considerable amount of bandwidth.

From an economics perspective, the net neutrality debate can be viewed from the lens of platform markets. Platform markets are essentially two sided markets which have a network effect attached to it. The telecom company providing Internet access deals with two sides: content providers and consumers. In a potential two sided pricing arrangement, a infrastructure provider controlling some part of the Internet (last mile access) will charge a fee to content or application firms "on the other side" of the network which typically did not have a contractual relationship with it.

Besides the economic arguments of revenue leakage, there is a security perception to communication over VoIP based bypass services that need to be plugged. A large part of their communication traffic is unmonitored traffic. In light of this, the regulator or the policy maker will need to take into consideration as to what steps can be taken to not allow such communication to go unmonitored without necessary checks and balances.

To begin with, let some regimentation be built to at least know the characteristics of bypass VoIP services and the impact they have on two main concerns Revenue and security. It would be better if the so called custodians also look at the issues on merits and not by frenzied campaign. Nobody is against quality internet for all at all times, but without bypasses to revenue and sovereignty. This free-for-all at all times without any controls has to be arrested. Some sense needs to be brought into the madness at least to know what is going on. This merry down loads of applications and one is business is too dangerous to be allowed to continue, are we a banana republic where there are no controls? A rule book has to be established before any application having far reaching consequences is allowed to run on our systems.

Conclusion

Network neutrality is not an absolute concept. The regulator should look to regulate, by function, not the type of technology or infrastructure that is being used. Any regulatory framework should follow certain principles that seek to promote transparency, innovation and policy reform.

In a strictly neutral Internet, low-value, elastic applications that are offering VoIP services are likely to crowd out quality-sensitive services offered by telecom operators because the demand for high-value, quality-sensitive applications will decrease if the quality of service cannot be maintained due to congestion. Thus, network congestion is a serious consideration that the regulator must bear in mind.

As a regulator, we would also urge TRAI to look at overall QoS parameters. As far as overall QoS is concerned, it has usually been the TSPs on whom the responsibility or onus has been placed. The onus is placed on the TSPs, for investing in setting up a network, to maintain a minimum standard of service. Are we implying, that standard of service, as far OTT goes, will come by way of some kind of tariff arrangement? Especially, given those OTT service providers other than those in the nature of browsing and other commercial activities, which erode into the revenue of Telcos.

There has to be a regulation, a soft touch one, in the nature of the 'Tentative Refinement' international approach that has been outlined in the paper. Something in the nature of keeping a log of all bypass VoIP service providers which are in the nature of communication services, can be maintained. The services these entities provide must also be catalogued and the impact of such services on QoS/revenue erosion needs to be studied.

At present, there are extensive and stringent security conditions that are laid down for the Telcos and these are required to be met by the licensed Telcos. These include:

- a. Taking permission/approval of the licensor for any new service
- b. Setting up Lawful Interception and Monitoring (LIM) systems
- c. Restriction on switching of domestic calls/messaging from outside the country
- d. Restriction on sending user information abroad
- e. Provision of assistance to LEAs as required by the designated LEAs (nine of them). This implies compliance to the DoT SoP issued in Jan 2014 on procedure for Interception requests from LEAs. This is often under Sec 91 of the CrPC.

- f. Follow the subscriber verification guidelines of the DoT. This requires considerable efforts for compliance, audit and penal provisions. There are specific requirements for the states of J&K, North East and Assam.

Given these obligations, there should be a similar security compliance requirement placed on the bypass VoIP provider as well, especially, those that are in the realm of providing communications services.

Data packages must implicitly look to remove the tariff policies which put limitations on data and speed usage post a certain threshold of usage. A more reasonable data traffic management can be evolved keeping in mind a tariff rebalancing approach that looks at a 'pay as you use' principle. This approach of a 'fair usage policy' as defined by Telcos must go. Such an action, if implemented, would result in a Carry Forward principle to be embedded as well in various packages. Carry forward principle means, wherein the quantum of unused data from a monthly data pack can be carried forward into the subsequent billing cycle. This would allow for a consumer to be justly and fairly incentivised for a prudent austere usage of his or her data plan through a period of time, instead of purely leaving the Telco with the discretionary arm to penalise/charge a premium for data usage beyond the monthly pack limits but not allow for any benefits when the consumer does end up using 'less' than the monthly allocation. This kind of tariff rebalancing regime would be fair transparent and pro-consumer. Application blindness (ie uniform access to applications in the same/similar category without any artificial prioritisation) of the network and user choice to the greatest extent possible is paramount considerations which must be protected as far as the internet architecture is concerned.

The authority must be cognizant of the tariff rebalancing that needs to be looked at vis-à-vis data with a 'same service same rules' principle followed. Tariff plans offered by TSPs/ISPs must conform to the principles of Net Neutrality set forth in guidelines issued by the Government as Licensor. TRAI may examine the tariff filings made by TSPs/ISPs to determine whether the tariff plan conforms to the principles of Net Neutrality.

It is laudable for someone other than the ultimate consumer to bear the cost of the data charges in the interest of driving internet penetration to unconnected regions of India. However, that should not impinge upon the consumer choice in limiting what constitutes 'basic internet services', provided by some and not all. Basic internet services as a public

good cannot be deemed to imply access restricted to entities or websites that have clout or financial power. Access cannot be used to exercise a subversive/unethical practice. For example, a "Zero Rating" plan to drive use of E-Gov services for the benefit of the citizenry in India isn't the same as a zero rating plan that merely facilitates access to a large scale content/social media website. Government can do prioritization of citizen services or zero rating, where the services are free for all users irrespective of the access network used by them. This, if anything, as an exception to allow for a differential pricing regime in favor of free application/data might be promoted when pure play social benefit is involved. A rationale for seeking to establish any form of differential pricing regime on data usage must look to demarcate a clear commercial objective from that which has a direct tangible social benefit attached to it.

A selective zero rating system is against the actual notion of what constitutes digital inclusion or digital equality. It is bad for economic inclusion. It is bad for the ability of new entrepreneurs to grow onto the global scale. It is bad for the long term health of the Internet. Should one e-commerce entity be allowed to pay a mobile operator, effectively to gain an advantage over competitors, who might not be able to afford the same fees? This can lead to discrimination within a bandwidth category. Thus, these need to be examined, more on a case-by-case basis.

All data is seen to be transmitted at a certain price, now whether that price is "zero" or anything else, consumers must be afforded the choice to pick the content based on the quality of that content, not the financial power and business partnerships of the provider. This way, new entrepreneurs can still reach any and all users on the Internet, even if they are a few people working in a co-working space with no ability to subsidize data charges. Such an 'equal rating' practice has been put in place by Mozilla in tie-up with Orange in several African and Middle Eastern markets. The regulator would be well advised to study these models while determining efficacy and motives behind a subsidized data pack. There are some examples of Bangladesh, Sri Lanka, and Philippines where they have achieved this goal by many innovative methods. e.g. voucher system for internet access in Sri Lanka, free wi-fi in Philippines etc.

We cannot lose sight of the fact that TSPs have made investments in establishing networks and providing services to consumers. A tariff design for a data plan isn't shorn of the

fundamentals that it compensates a TSP adequately and the consumer doesn't end up paying a price which is unreasonable.

Issues for Consultation

In light of our views expressed hereinabove, our humble submission to the Regulator on the questions posed by the Regulator are as follows:

Question 1: What should be regarded as the core principles of net neutrality in the Indian context? What are the key issues that are required to be considered so that the principles of net neutrality are ensured?

Question 2: What are the reasonable traffic management practices that may need to be followed by TSPs while providing Internet access services and in what manner could these be misused? Are there any other current or potential practices in India that may give rise to concerns about net neutrality?

<Combined Answer for 1,2>

Network neutrality is not an absolute concept. The regulator should look to regulate, by function, not the type of technology or infrastructure that is being used. Any regulatory framework should follow certain principles that seek to promote transparency, innovation and policy reform.

In a strictly neutral Internet, low-value, elastic applications that are offering VoIP services are likely to crowd out quality-sensitive services offered by telecom operators because the demand for high-value, quality-sensitive applications will decrease if the quality of service cannot be maintained due to congestion. Thus, network congestion is a serious consideration that the regulator must bear in mind.

As a regulator, we would also urge TRAI to look at overall QoS parameters. As far as overall QoS is concerned, it has usually been the TSPs on whom the responsibility or onus has been placed. The onus is placed on the TSPs, for investing in setting up a network, to maintain a minimum standard of service. Are we implying, that standard of service, as far OTT goes, will come by way of some kind of tariff arrangement? Especially, given those OTT service

providers other than those in the nature of browsing and other commercial activities, which erode into the revenue of Telcos.

The Regulator must be cognizant of the tariff rebalancing that needs to be looked at vis-à-vis data with a 'same service same rules' principle followed. Tariff plans offered by TSPs/ISPs must conform to the principles of Net Neutrality set forth in guidelines issued by the Government as Licensor. TRAI may examine the tariff filings made by TSPs/ISPs to determine whether the tariff plan conforms to the principles of Net Neutrality. Legitimate traffic management practices may be allowed but should be "tested" against the core principles of Net Neutrality. General criteria against which these practices can be tested are as follows:

- TSPs/ISPs should make adequate disclosures to the users about their traffic management policies, tools and intervention practices to maintain transparency and allow users to make informed choices
- Unreasonable traffic management, exploitative or anti-competitive in nature may not be permitted.
- In general, for legitimate network management, application-agnostic control may be used. However, application-specific control within the "Internet traffic" class may not be permitted.

We cannot lose sight of the fact that TSPs have made investments in establishing networks and providing services to consumers. It must be understood that without access, the content is akin to a Desert Island. A tariff design for a data plan isn't shorn of the fundamentals that it compensates a TSP adequately and the consumer doesn't end up paying a price which is unreasonable.

To begin with, let some regimentation be built to at least know the characteristics of bypass VoIP services and the impact they have on two main concerns Revenue and security. It would be better if the so called custodians also look at the issues on merits and not by frenzied campaign. Nobody is against quality internet for all at all times, but without bypasses to revenue and sovereignty. This free-for-all at all times without any controls has to be arrested. Some sense needs to be brought into the madness at least to know what is going on. This merry down loads of applications and one is business is too dangerous to be allowed to continue, are we a banana republic where there are no controls? A rule book has

to be established before any application having far reaching consequences is allowed to run on our systems.

Question 3. What should be India's policy and/or regulatory approach in dealing with issues relating to net neutrality? Please comment with justifications.

Question-4: What precautions must be taken with respect to the activities of TSPs and content providers to ensure that national security interests are preserved? Please comment with justification.

Question-5: What precautions must be taken with respect to the activities of TSPs and content providers to maintain customer privacy? Please comment with justification.

<Combined Answer for 3,4,5>

There has to be a regulation, a soft touch one, in the nature of the 'Tentative Refinement' international approach that has been outlined in the paper. Something in the nature of keeping a log of all bypass VoIP service providers which are in the nature of communication services, can be maintained. The services these entities provide must also be catalogued and the impact of such services on QoS/revenue erosion needs to be studied.

At present, there are extensive and stringent security conditions that are laid down for the Telcos and these are required to be met by the licensed Telcos. These include:

- a. Taking permission/approval of the licensor for any new service
- b. Setting up Lawful Interception and Monitoring (LIM) systems
- c. Restriction on switching of domestic calls/messaging from outside the country
- d. Restriction on sending user information abroad

- e. Provision of assistance to LEAs as required by the designated LEAs (nine of them). This implies compliance to the DoT SoP issued in Jan 2014 on procedure for Interception requests from LEAs. This is often under Sec 91 of the CrPC.
- f. Follow the subscriber verification guidelines of the DoT. This requires considerable efforts for compliance, audit and penal provisions. There are specific requirements for the states of J&K, North East and Assam.

Given these obligations, there should be a similar security compliance requirement placed on the bypass VoIP provider as well, especially, those that are in the realm of providing communications services.

Question-6: What further issues should be considered for a comprehensive policy framework for defining the relationship between TSPs and OTT content providers?

The authority must be cognizant of the tariff rebalancing that needs to be looked at vis-à-vis data with a 'same service same rules' principle followed. Tariff plans offered by TSPs/ISPs must conform to the principles of Net Neutrality set forth in guidelines issued by the Government as Licensor. TRAI may examine the tariff filings made by TSPs/ISPs to determine whether the tariff plan conforms to the principles of Net Neutrality.

It is laudable for someone other than the ultimate consumer to bear the cost of the data charges in the interest of driving internet penetration to unconnected regions of India. However, that should not impinge upon the consumer choice in limiting what constitutes 'basic internet services', provided by some and not all. Basic internet services as a public good cannot be deemed to imply access restricted to entities or websites that have clout or financial power. Access cannot be used to exercise a subversive/unethical practice. For example, a "Zero Rating" plan to drive use of E-Gov services for the benefit of the citizenry in India isn't the same as a zero rating plan that merely facilitates access to a large scale content/social media website. Government can do prioritization of citizen services or zero rating, where the services are free for all users irrespective of the access network used by them. This, if anything, as an exception to allow for a differential pricing regime in favor of free application/data might be promoted when pure play social benefit is involved. A rationale for seeking to establish any form of differential pricing regime on data usage must

look to demarcate a clear commercial objective from that which has a direct tangible social benefit attached to it.

A selective zero rating system is against the actual notion of what constitutes digital inclusion or digital equality. It is bad for economic inclusion. It is bad for the ability of new entrepreneurs to grow onto the global scale. It is bad for the long term health of the Internet. Should one e-commerce entity be allowed to pay a mobile operator, effectively to gain an advantage over competitors, who might not be able to afford the same fees? This can lead to discrimination within a bandwidth category. Thus, these need to be examined, more on a case-by-case basis.

All data is seen to be transmitted at a certain price, now whether that price is "zero" or anything else, consumers must be afforded the choice to pick the content based on the quality of that content, not the financial power and business partnerships of the provider. This way, new entrepreneurs can still reach any and all users on the Internet, even if they are a few people working in a co-working space with no ability to subsidize data charges. Such an 'equal rating' practice has been put in place by Mozilla in tie-up with Orange in several African and Middle Eastern markets. The regulator would be well advised to study these models while determining efficacy and motives behind a subsidized data pack. There are some examples of Bangladesh, Sri Lanka, and Philippines where they have achieved this goal by many innovative methods. e.g. voucher system for internet access in Sri Lanka, free wi-fi in Philippines etc.