**Subject: Response to Consultation Paper on Pre- Consultation Paper on Net Neutrality**

To,
Shri Asit Kadayan,
Advisor (QoS)
TRAI

Sir,
Please find my response below on consultation paper


**Q.1 What could be the principles for ensuring nondiscriminatory access to content on the Internet, in the Indian context?**

First of all, another round of new consultation on 'net neutrality' was a surprise and also reflects that "someone' big stakes are definitely at risk. Last few consultations were exhaustive enough to arrive at recommendations. Since TRAI has 'again' published another paper, I would like to share my views for the same.


Principle *'for ensuring nondiscriminatory access to content on the Internet, in the Indian context"* is simple- Provide internet/data services to customer without proactively trying to regulate (manage) boundary and control of content being delivered.

India is fast growing market and defining NN boundaries is way too early for the same. With further news of consolidation floating around (Ex. Voda-idea, Aircel-RCOM, MTS, etc) , defining NN principles will be seen with wrong timing.

Since data will be key to future of billions of Indians going forward irrespective of ARPU which that subscribers may be contributing, it is best to keep concept of net neutrality in simple terms.

Net neutrality is about access to data (which included internet) in a fair and impartial manner without any intended obstruction to customer experience and as per worldwide industry QoS, here it would be availability, speed and accessibility to usage as per customer wish.

Talking about it in an Indian context, we are already facing lower QoS in voice and equal challenge is hovering for data soon. Over that, even telcos starts talking of walled garden approach, throttling of speed, killing competition in disguise of 'free data', it will start denting principles of net neutrality.

While partnerships are welcome to create a strong eco-system through new Apps, business models, same should not be created in order to corner choices of customers. It is important that regulatory keep strong check on how eco-system is developing since data and net neutrality has just started off from roots and require support in order to flourish in favour of customer and not lobbyists.

Let the market be open for content, operators and partners to provides their best services.

**Q.2 How should "Internet traffic" and providers of "Internet services" be understood in the NN context**
**(a) Should certain types of specialised services, enterprise solutions, Internet of Things, etc be excluded from its scope? How should such terms be defined?**
**(b) How should services provided by content delivery networks and direct interconnection arrangements be treated?**
**Please provide reasons.**

Any content be it services, enterprise connectivity, video, etc be seen as internet traffic and providers as someone who can provide internet services over wireless(through partnership, or by directly by operator, etc)
Some of emerging services like IoT, enterprise services can be kept out of NN since they require particular defined threshold for best results and SLAs.

**Q.3 In the Indian context, which of the following regulatory approaches would be preferable:**
**(a) Defning what constitutes reasonable TMPs (the broad approach), or**
**(b) Identifying a negative list of non reasonable TMPs (the narrow approach).**
**Please provide reasons.**

In Indian context, broad approach (a) is recommended. By defining TMPs, there will be larger clarity on what is defined as NN and TMPs around it.
In case (b) is adopted, then players will look out for loopholes and define how their service is out of ambit of NN
There is large space for innovation and early entrants should not get dominance to define what is seen as TMPs and kill new innovations, ex setting up walled garden approach.

**Q.4 If a broad regulatory approach, as suggested in Q3, is to be followed:**
**(a) What should be regarded as reasonable TMPs and how should different categories of to be objectively defined from a technical point of view for this purpose?**

**(b) Should application-specific discrimination within a category of trac be viewed more strictly than discrimination between categories?**

**(c) How should preferential treatment of particular content, activated by a users choice and without any arrangement between a TSP and content provider, be treated?**

Application specific discrimination is core reason for NN debate today. Defining TMPs for each of categories is detailed exercise and require an understanding complete strategic landscape for the same. TRAI need to take it up along with other players after defining the approach

Application specific discrimination is something which definitely require strict attention to detail in today's scenario. There have been attempt through new products to kill the competition which triggered the NN debate in first place.

There have been instances where even telecom players are looking at throttling , blocking tactics to introduce void for new products.

There is a need to actively track and avoid any such techniques

Differential pricing is one area which might become an issue to net neutrality. I would equate differential pricing scenario with our existing road infrastructure in India. Not long ago, state of our roads including national highways was in dismal shape. Obviously, Indians and tourists were not happy with experience driving on roads. Then came concept of Toll roads, wherein highways were widened(read mobile data). Indians were happy to see improvement of road conditions of course at a cost known as Toll. Things were fine till Toll continued but there were many highways which were in bad state despite of Toll been charged. The point is that customer was still charged but getting poor under-maintained highways and roads. Now, govt has asked many such road players to first improve/widen the road condition and then only increase Toll charges.

Same is true with our telecom landscape in India. Opening of wireless industry in India obviously made consumers happy wherein at a little higher cost they could make voice calls and at extra charges access data on mobile too. However, with time, QoS of wireless services has started getting deteriorated, but consumers are still been charged. Data QoS is in worse shape despite of high 3G service charges wherein many 3G subscribers are mostly latched on EDGE network.

These same subscribers are expected to access data heavy apps over so called dismal 3G data connections not to mention 2G/Edge network. How fair will it be for TSPs to ask an additional cost from subscribers for accessing data applications? There has to be controlled mechanism with defined SLAs for TSPs in case they want to provide differential pricing else TSPs will stream bandwidth for Apps for which they are getting more money and imagine the fate of other platforms been run on data.

Lets face the truth, the reality is TSPs are looking for differential pricing only for Next Gen Apps and not for other Websites or platforms.

Traffic management practices herein TSP may be blocking OTTs merely due to competition it face from them. Providing slower bandwidth speed to competitive OTT is another area of concern.

TSP need to adhere to approved policies when it comes to check what is permitted in terms of content and what is not. This is where TSPs need to play self-regulation hat and act what is in best interest of its subscribers. With Full MNP rolling out soon, customer will be happy to switch to TSP which provide them with more transparent data platform.

It is also observed that when it comes to customer centric regulations then TSPs submit their view about their helplessness due to 'technical challenges' but when it comes to areas where they faces competition they have 'all technical solutions' to block/regulate any competition. Lately, poor Indian mobile consumer was told

through consultation paper on Mobile Broadband QoS that TSPs can't commit on minimum speed which subscriber can expect after paying high price for 3G pack.

Indian consumers are smart enough to find out themselves about smart traffic management techniques which TSP may apply to control competition. However, fair and transparent published techniques will provide better connect with its customers.

Free Internet is another campaign which is a challenge to net neutrality. Indian wireless industry has grown from Zero to more than 100% mobile density without single free minute (please note there was always minimum amount required to keep SIM active and continue free incoming). With growing Indian economy and mobile been an important catalyst for the same, Indian users including rural areas are more than happy to pay for 'Quality' data services. Supporting fact exists is growth of data usage due to likes of WhatsApp, etc even in Tier 3 towns, interiors and villages. This also grew without any Free internet.

Today, TSPs are looking to stop Net Neutrality by using concept of 'Free Internet' and then partnering with profit making listed entities who will introduce their business objectives in disguise of free internet by making profits and denying competition a fair chance. This is also expected to impact innovation in Apps eco-system.

We also need today is an environment to enable more 'Make in India' OTT apps. This new Apps eco-system should be used to provide economic solution to India specific problems be it education, travel, finance and so on. Ex Ola Cabs, Autowale wherein they created an App simply riding over data services which help commuters today with cabs/autos at their door step increasing employment and customer convenience and also increasing data usage of telcos.

For ex, our agricultural industry is so much in dire need to connect farmers with best technology for farming and mobile is only medium to enable them with information. There exists a huge opportunity for TSPs to partner with other industry players and become backbone of data connectivity and also become preferred TSP for the end customer due to differentiating services and therefore not need any differential pricing.

TSPs need to 'partner' rather than 'compete' with anyone and everyone who rides on their network. It is an open field for TSPs to capture huge opportunity since they have much higher edge in terms of network ownership and technical expertise to increase revenue from the Bottom of the Pyramid in India.

Let innovation by Apps create new means for utilizing data for betterment of consumer. Imagine a scenario, TSPs go ahead with heavy investment with 3G and 4G and there are not many appealing Applications for consumer to utilize data for, these data investment of TSPs might be struck by slowdown.

Market forces are strong enough to control the price of services, therefore regulating at this point of time is not recommended especially for fast changing and growing OTT space. New innovation will itself fuel data usage therefore providing ample space for TSPs to play profit with regular data plans. However, regulator need to keep vigilance to ensure no violation of net neutrality happens

**Q.5 If a narrow approach, as suggested in Q3, is to be followed what should be regarded as non reasonable TMPs?**

Broad approach has been recommended

**Q.6 Should the following be treated as exceptions to any regulation on TMPs?**
**(a) Emergency situations and services;**
**(b) Restrictions on unlawful content;**
**(c) Maintaining security and integrity of the network;**
**(d) Services that may be noticed in public interest by the Government/ Authority, based on certain criteria; or**
**(e) Any other services.**
**Please elaborate.**

Any act of emergency or national security is of utmost importance and require dedicated TMPs. It is infact a better idea to start TMPs by excluding these parameters and it will help in more ideas foraying due to TMPs exceptions and will help in mushroom more social related products and partnerships

It is important to define security related regulations for net neutrality framework in Indian market. Data and Content provider need to adhere to policies like one which was told to Blackberry in order to avoid any challenges in case CPs and OTTs are misused during act of terrorism, etc. Second are is around customer privacy, wherein customer need to be empowered with optional way to share their data with apps.
Data can also turn as two edge sword which can also negatively impact through misuse by anti-national elements.
As part of the framework, Security and Compliance is something which should be addressed on immediate basis. Content and Data provider need to be made accountable for data which should be accessible in India based servers and be analyzed at short notice, if needed. Customer information should be secured with right policies which providers need to adhere to in case they want to operate in Indian market. Effective censorship by authorities and points around them be formulated to ensure right usage of applications

**Q.7 How should the following practices be defined and what are the tests, thresholds and technical tools that can be adopted to detect their deployment:**
**(a) Blocking;**
**(b) Throttling (for example, how can it be established that a particular application is being throttled?); and**
**(c) Preferential treatment (for example, how can it be established that preferential treatment is being provided to a particular application?).**

In case there are tools deployed for blocking, throttling , etc there is practically lot of challenge to detect it since it require deep and time bound system audit which looks tough and impractical.

It is bit early in India to even start such audit since this will lead to more of Inspector Raj than any regulation implementation. Let market force decide which application or operator is best for the consumers

Talking in terms of operator technical eco-system, there are network related issued which TSPs face due to new OTT Apps getting added in IT eco-system. Some of these Apps cause network outages also due to excessive data usage in network. TSPs need to put smarter network analytics in place in order to identify such apps and stop/reset them in order to provide enhanced customer experience and data usage.

Traffic management practices however, have scenario beyond the above, wherein TSP may be blocking OTTs merely due to competition it face from them. Providing slower bandwidth speed to competitive OTT is another area of concern.

TSP need to adhere to approved policies when it comes to check what is permitted in terms of content and what is not. This is where TSPs need to play self-regulation hat and act what is in best interest of its subscribers. With Full MNP rolling out soon, customer will be happy to switch to TSP which provide them with more transparent data platform.

While one may mandate TSPs to publish various traffic management techniques used for different OTT applications, Indian consumers are smart enough to find out themselves about smart traffic management techniques which TSP may apply to control competition. However, fair and transparent published techniques will provide better connect with its customers. Instead of competing head-on, TSP today need to partner with OTTs to ensure revenue maximization of their network expenses. Ex, today customer has to take full data plan even for accessing only WhatsApp, why not TSP provide only WhatsApp pack to customer at less cost (or free for particular recharge pack) and still make money.

**Q.8 Which of the following models of transparency would be preferred in the Indian context**
**(a) Disclosures provided directly by a TSP to its consumers;**
**(b) Disclosures to the regulator;**
**(c) Disclosures to the general public; or**
**(d) A combination of the above.**
**Please provide reasons. What should be the mode, trigger and frequency to publish such information?**

We need to achieve combination of above in order to really make NN successful whenever implemented.

Disclosures to consumers by TSP will help maintain trust of playing fair game being played, it will only increase people interest in adopting NN.

Disclosure to regulator is necessary since it is playing neutral role and has power of monitoring any deviation from rule of the game. They are also expert in technical field and empowered with authority to ensure NN principles are not violated

Disclosure to general public will help in spreading awareness about NN and it will also help in removing any myths around NN

Disclosures to consumer by TSP should be made quarterly along with results to show NN principles are followed

For regulator, it can be Bi-annually supported by an audit

Disclosure to public can be on need basis whenever any new major change is expected to take place, for ex, merger, new launch , etc

**Q.9 Please provide comments or suggestions on the Information Disclosure Template at Table 5.1?Should this vary for each category of stakeholders identifed above? Please provide reasons for any suggested changes.**

Disclosure to consumers should be simple and not contain more 5 fields since they don't really understand beyond that. Parameters like speed, throttling speed, peak load, etc can be looked at.

Disclosure to Regulatory can be in said format and for general public intent is to provide an understanding of playing fair in NN game which can show some past reports

**Q.10 What would be the most effective legal/policy instrument for implementing a NN frame- work in India?**
**(a) Which body should be responsible for monitoring and supervision?**
**(b) What actions should such body be empowered to take in case of any detected violation?**
**(c) If the Authority opts for QoS regulation on this subject, what should be the scope of such regulations?**

TRAI should be provided the power to monitor and supervise it along with neutral Audit firm providing input for the same.

There should be strict action, for ex suspension of product in case it violates NN principle. Any pointers on throttling, blocking etc should be supported with heavy fine and resulting in temporary suspension of license of said operator

**Q.11 What could be the challenges in monitoring for violations of any NN framework? Please comment on the following or any other suggested mechanisms that may be used for such monitoring**
**(a) Disclosures and information from TSPs;**
**(b) Collection of information from users (complaints, user-experience apps, surveys, questionnaires); or**
**(c) Collection of information from third parties and public domain (research studies, news articles, consumer advocacy reports).**

Key challenges in monitoring will be authentication of information provided by TSPs. Mandatory disclosure might help to capture trends, however any actionable outcome is unlikely. For ex, there are lot of tracking for QoS, but in reality what actionable approach is taken on operators.

TSPs are today in highly competitive Indian landscape and therefore any innovative model which helps them gain ground is seen as lucrative solution. Authority need to play a role to ensure that such innovations are taking place in fair manner under ambit of NN.

Active collections of information and strict actions based on the same is required.

Third party data is equally important since there are multiple players besides TSPs which are bound to impact by any defined guidelines on NN.

**Q.12 Can we consider adopting a collaborative mechanism, with representation from TSPs, content providers, consumer groups and other stakeholders, for managing the operational aspects of any NN framework?**
**(a) What should be its design and functions?**
**(b) What role should the Authority play in its functioning?**

As a follow on answer from above point, design and function has be based on how market force perceive as fruitful for consumers. There is lot of co-ordination required to include lot of third party players , for ex m-wallets, content providers, likes of Netflix and Amazon primes of the world , etc and require active participation from industry to look at core concept of NN.

TRAI as usual has crucial role in ensuring that demand of market forces is not overshadowed by ambitious business plans of selected players.

**Q.13 What mechanisms could be deployed so that the NN policy/regulatory framework may be updated on account of evolution of technology and use cases?**

Without a well established NN framework, it might be too early to look at updation framework specially when whole data landscape changing so fast with new innovations. Doing an updation with reference to use cases might be a challenge since there can be hundreds of them, it has be based on NN principle whenever such a decision is being taken.

**Q.14 The quality of Internet experienced by a user may also be impacted by factors such as the type of device, browser, operating system being used. How should these aspects be considered in the NN context?Please explain with reasons.[See Chapter 4]**

Whenever any product is launched, it is always done keeping in mind mentioned parameters, therefore there is no dire necessity to really start modeling outcomes from these parameters. That is whole debate around NN and to ensure that selected players don't play unfair game by changing market forces due to hidden factors like QoS and making consumers get tilted towards one particular walled garden

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