IAMAI answers on the Net Neutrality Consultation Paper

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

In the present consultation paper, TRAI has relied on the definition of net neutrality as given by Tim Wu, which states that net neutrality was best defined as "*a network design principle, based on the idea that a maximally useful public information network aspires to treat all content, sites and platforms equally*.[1] The consultation paper has also made reference to regulations followed in other regions of the world to derive and analyze regulatory best practices. This specifically includes, the FCC regulations that emphasize the importance of maximizing end-user control and have noted that "*letting users choose how they want to use the network enables them to use the Internet in a way that creates more value for them (and for society) than if network providers made this choice for them.*"[2] The paper also cites EU regulations and emphasized the importance of the rights of the end-users, and that providers of all internet access services should treat all Internet traffic "*equally and without discrimination, restriction or interference*".[3]

It may be relevant to recount the experience and observations of past consultations and government studies on this very issue. Several government committees including the TRAI have looked at defining, "network neutrality" from which it can derive principles of regulation. Some of them are reduced for the convenience of the authority in a tabular form given below:

Date	Department/Authority	Name	Definition of Net Neutrality
May, 2015	DOT	Net Neutrality – DoT	No standard definition. Globally understood as a network principle of equal treatment of

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[1] Tim Wu, Network Neutrality FAQ, available at http://www.timwu.org/network_neutrality.html, as cited in Telecom Regulatory Authority of India, Consultation Paper on Net Neutrality, 4th January 2017, *available at* http://trai.gov.in/sites/default/files/CP_NetNeutrality2017_01_04.pdf, Pg. 6.

[2] Federal Communications Commission, "Preserving the Open Internet, Report and Order",2010, *available at* https://apps.fcc.gov/edocs_public/attachmatch/FCC-10-201A1_Rcd.pdf, P.71.

[3] Telecom Regulatory Authority of India, Consultation Paper on Net Neutrality, 4th January 2017, *available at* http://trai.gov.in/sites/default/files/CP_NetNeutrality2017_01_04.pdf, Pg. 31.

		Committee Report [4]	data packets moving across the IP networks.
30th May, 2016	TRAI	Pre-Consultation Paper on Net Neutrality[5]	The term "network neutrality" generally refers to the principle that TSPs must treat all Internet traffic on an equal basis, without regard to the type, origin, or destination of the content or the means of its transmission. It therefore implies that all points in a network should be able to seamlessly connect to all other points, without any discrimination by the TSP on aspects of speed, access or price. Adherence to this principle of net neutrality is arguably necessary for maintaining the open and non-discriminatory character of the Internet, features that are responsible for the phenomenal growth of the Internet in the past decades.

Based on the pre-existing analysis of the TRAI and the background provided in the consultation paper, IAMAI recommends the following, three broad principles to be expressly adopted as core constituents of network neutrality regulation in India:

1. **No Blocking and filtering:** All sites, web services and applications on the internet must be equally accessible; there must be no attempts to blocking of sites or apps except by way of a statutory provision, legal order by a Court or a government authority.

2. **No throttling:** All sites (specific internet services or different classes of internet services) must be accessible at the same speed to the user; there must be no speeding up or throttling of speed of sites.

3. **No fast lanes or slow lanes:** All sites and web services should be accessible as per the speeds of the connection as desired by the end user and

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[4] Department of Telecommunications, Net Neutrality DoT Committee Report, May 2015, *available at* https://www.mygov.in/sites/default/files/master_image/Net_Neutrality_Committee_report.pdf, Pg. 12.

[5] Telecom Regulatory Authority of India, Pre-Consultation Paper on Net Neutrality, 30th May, 2016, *available at* http://www.trai.gov.in/sites/default/files/Net_Neutality_Preconsultation_30_may_2016.pdf, Para 11.

preferential network treatment to certain data streams based on business agreements among Internet operators should be prohibited.

We believe these principles protect the end-to-end principle of internet communications; in turn decreasing entry barriers and in effect spurring innovation. These are hallmarks of the internet growth story in India which requires urgent regulatory intervention by the TRAI. Internet service providers and telecoms should not provide competitive advantage to certain individual apps or services over similarly placed apps or services.

2. **How should "Internet traffic" and providers of "Internet services" be understood in the NN context?**
   a) **Should certain types of specialized services, enterprise solutions, Internet of Things, etc. be excluded from its scope? How should such terms be defined?**

   Specialized services, as defined in the DoT's paper on Net Neutrality, are tailor-made services provided to enterprises or big business concerns for increasing business productivity. Hence, the specific purpose for these are enterprise services meant for business use. In terms of the technical architecture such services would not include content or terminate on the open internet. These services are also known as managed services, and may include a wide variety of services in the area of telephony, domestic/international data connectivity, video, internet services. [6]

   To restate, such enterprise solutions may be exempted from the any network neutrality rules, as they are based on private networks and do not affect the public internet. Further, the authority may consider appropriate language in its regulations to prevent any regulatory circumvention by ISPs by designing services specifically within large private networks or intranets that are otherwise deployable on the public internet, with the sole purpose of evading the applicable NN principles.

   Carving broader categories and further exemptions may undermine the network neutrality regulations. For instance the, Internet of Things merely means devices connected through the internet. This definition is so wide that it can be construed to mean anything, therefore it is recommended unless a very specific definition can be attributed to the Internet of Things, it should come within the NN rules. Any exceptions to network neutrality

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[6] Department of Telecommunications, Net Neutrality DoT Committee Report, May 2015, *available at* https://www.mygov.in/sites/default/files/master_image/Net_Neutrality_Committee_report.pdf, Pg. 63.

will affect the competitiveness of the market, therefore it is suggested that all such exceptions need to be as narrow as possible.

b) **How should services provided by content delivery networks and direct interconnection arrangements be treated?**

Content Delivery Networks (Content Distribution Networks) help to deliver the content faster to the end-user. When consumers request content, it can be delivered from a local server operated by the CDN provider, rather than a remote internet server. As the information is not delivered over the internet core, there is less traffic congestion and the quality of services is higher. It is our recommendation that TRAI should collect more data about CDNs specific to India, and a separate consultation paper to this effect would also help. There should also be a reporting requirement for Telcos whenever they exempt a particular service from the NN framework so as to understand how exactly the exemptions are being applied and in what context.

Thus, we would suggest that currently no regulation should be introduced by the TRAI. In the event the TRAI deems it necessary at a later stage, it may introduce a separate consultation paper to address issues (*if any*) that arise in the future.

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

The consultation paper provides an assessment of both risks and benefits of such a broad or narrow approach. However, at the very outset we wish to submit that TMPs may only be deployed in either form of regulatory principle as an exemption. Such an exemption should only be made applicable for an ISP at times of network congestion and not be deployed to tether or monitor or differentiate between internet applications or services, or even classes of internet applications or services.

We suggest a positive principle which defines what the reasonable TMPs are, given it would provide a bright line principle and provide a fair, advance notice

to innovators and ISPs. Specifically we would suggest that this may proceed on two grounds, first, that it should be technically motivated to address network congestion or the security or integrity of the network, and must follow certain guiding principles like proportionality and non-discrimination and secondly, that it should not be based on commercial considerations or practices.[7] Such an approach is preferred because it is more flexible than a narrow one, and can easily be adapted to changing technological conditions.

We recommend that along with the laying down the principles, we should also suggest provisioning of an illustrative list as was pointed out during the discussion round. Provisioning of such examples will help ensure that NN framework is not exploited by far-fetched interpretation of the principles. We wish to again submit that the regulation must ensure that ISPs don't use the broad nature of the approach to devise means to exploit the NN framework.

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 traffic be objectively defined from a technical point of view for this purpose?**
   b) **Should application-specific discrimination within a category of traffic be viewed more strictly than discrimination between categories?**
   c) **How should preferential treatment of particular content, activated by a user's choice and without any arrangement between a TSP and content provider, be treated?**

As stated earlier, there are clear benefits which arise from treating all categories of traffic in the same manner, and providing access to them equally. Discrimination even based on technical protocols where ISPs discretion is limited will lead to, "gaming" of the protocols. For instance, a video streaming service may use the protocols of a video conferencing. Also, to implement such traffic based discrimination packet based inspection will be necessary that will disincentive encrypted or secure certificate communications.

We wish to submit that preferential treatment of particular content activated by a user's choice should be encouraged depending on the development of technical tools which permit users to make such an educated, conscious choice and further vary it as per their needs. Even the EU and the FCC regulations have focused on the importance of the end user's choice. It is necessary to

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[7] Telecom Regulatory Authority of India, Consultation Paper on Net Neutrality, 4th January 2017, *available at* http://trai.gov.in/sites/default/files/CP_NetNeutrality2017_01_04.pdf, Pg. 21.

ensure that the end-user is making a conscious decision, and is fully aware of the ramifications of her choice. At the same instance we are given to understand that such tools are still under development. Hence, at this stage it was too early to permit any sort of preferential treatment of any content, including that activated by user's choice.

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

Not applicable.

6. **Should the following be treated as exceptions to any regulations 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 notified in public interest by the Government/Authority based on certain criteria; or**
   e) **Any other services.**

Comments with respect to each class of exemption are given below:

a) Emergency situations and Services – Such services should be exempt from the NN framework for a temporary period when there is a disaster. Furthermore, the exemption should only be in the areas affected by the disaster, and therefore this exemption can only be granted after the incident has been declared as an emergency by the National Disaster Management Authority (NDMA) or it's state of district equivalents as per existing law.

b) Restrictions on unlawful content – such restrictions should be imposed after being notified by the relevant government authority or as per court order in a manner which makes them inaccessible to every person.

c) Security/Integrity of the network – A notification from the National Critical Information Infrastructure Protection Centre must be obtained before a service is exempt from the NN framework.

d) Public interest and other services– These two categories are too broad to be exempt from the NN framework as anything can come under these two

categories. Broad ranging exemptions will severely undermine NN, and therefore, cannot be allowed. It is noticed there is no definition of, "public interest" and no qualification criteria has been suggested in the consultation paper.

7. **How should the following practices be defined and what are the tests, thresholds and technical tools than 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 provide to a particular application?).**

To ensure their flexibility yet adequate safeguards against any sort of misuse, an investigative and audit based approach has been suggested. Certain indicative approaches have been suggested below.

a) A Public Complaint process should be set up for reporting breaches of the NN regulations. The public report form and the threshold after it constitutes a complaint by a "class of consumers" may be determined by the authority.

b) In addition to this the TRAI may develop technical means (such as the M Lab Network Diagnostic Tools) to create quarterly, detailed diagnostic reports across ISPs.

c) It may even consider deploying and creating network probes. This may be similar to the EFF (Electronic Frontier Foundation) Network probes and should be set up so as to monitor network traffic in real time. Such probes are highly effective in finding the reasons for the slowdown of the network.

d) To augment this, ISPs may also be required to furnish data as to adherence with network protocols that is audited and then provided to the TRAI.

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?

There should be a combination of all the above procedures. Whenever disclosures are made to the general public, the disclosure must be in simple language that is easily understandable by the general public who do not possess an advanced understanding of the NN framework. This information should generally be published on the DoT/TRAI website and the leading newspapers. The information on the websites must be updated regularly, whereas the publication in the newspapers can be monthly, in the form of a list.

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

No comments.

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?**

The TRAI should be responsible for monitoring and supervision because of its powers under the UL as well as enforcing the quality of service obligations under the TRAI Act. In case of a violation, in the first instance, a fine should be levied. In case of further repeated violations, the complaint should be forwarded to the DoT which would be empowered to cancel the UL of the service provider.

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).**

No Comments.

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?**

    An advisory working group should be set up containing all of diverse stakeholders. They should not be allowed to manage the aspects of the NN framework. However, they should give their opinions on the NN framework which should be taken into consideration. The functions of this body should be limited so as to ensure that the interests of these entities do not negatively affect the NN framework.

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?**

    There should be a biennial review of the NN framework so as to ensure that it remains up to date and can cope with any technological changes. There should be a broad monitoring to ensure Interconnections between ISPs/CP/APs as per the need and regulations. [8] The NN framework should also be adaptable to any changes in the UL or fundamental changes in the regulatory structure of telecom and internet businesses.

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.**

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[8] Department of Telecommunications, Net Neutrality DoT Committee Report, May 2015, *available at* https://www.mygov.in/sites/default/files/master_image/Net_Neutrality_Committee_report.pdf, Pg. 102.

The type of device, browser, operating system being used come under the classification of software and internet services and may even qualify under the nomenclature, "OTT services" as used by the TRAI in the past. As per Chapter 2 of the present Consultation paper it has expressly been stated that it concerns core areas on Network Neutrality and not on the OTT services. Therefore, this question is outside the purview of this consultation paper and it is under consultation of the the earlier consultation paper dated 27th of March, 2015.[9]

[9] Telecom Regulatory Authority of India, Consultation Paper on Net Neutrality, 4th January 2017, *available at* http://trai.gov.in/sites/default/files/CP_NetNeutrality2017_01_04.pdf, Pg. 5.