

ISPAI Response to Consultation Paper on Net Neutrality

At the outset we thank the authority for coming up with a consultation paper on Net neutrality and for inviting views of all the stake holders on this important topic.

Before making any further submissions on this issue, we would like to respectfully submit that the principles of net neutrality should be made applicable on stakeholders operating in Internet eco-system instead of merely TSPs. The OTT players, content service providers, websites, OTT communication service providers, handset manufacturers, etc. are critical part of internet eco-system and influence the customer's choice and thus, any principle of net neutrality should be made applicable on all these players. Further, we also request TRAI to review the issue of 'same service, same rules' and discriminatory tariff while making the recommendation on this consultation paper so that the principles of net neutrality and same service, same rules can holistically be dealt with.

Now we would like to respond to each of the queries raised by the Authority in the consultation paper.

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

ISPAI Response: We are of the view that current legitimate traffic management practices should continue subject to the core principles listed below.

- Adequate disclosure to users about traffic management policies and tools to allow them to make informed choices.
- Application-agnostic controls may be used but application-specific control and discrimination within the Internet traffic" class may not be permitted if that particular application is found to affect the integrity of the network or impair the overall QoS requirements by creating network congestion

Q.2. How should "Internet traffic" and providers of "Internet services" be understood in the NN context? [See Chapter 3]

ISPAI Response: A publicly available electronic service that provides access to the Internet, and thereby connectivity to virtually all end points of the Internet, irrespective of the technology or the terminal equipment used.

Our definition of Internet Services would be any service that provides generic connectivity to all Internet public IPs.

a. Should certain types of specialized services, enterprise solutions, Internet of Things, etc be excluded from its scope? How should such terms be defined?

ISPAI Response: We are of the view that it would be prudent to exclude some services from the NN purview.

Enterprise Solutions: Enterprise solutions are very dependent on guaranteed QoS towards certain services and servers. Hence it might be prudent to exclude enterprise solutions from NN purview. We believe that any service that is not a public Internet service should be considered a specialized service. Such services include Virtual Private Networks (VPNs), enterprise solutions, Internet-based video, Internet of Things (IoT), M2M and a whole range of innovative services for enterprises and consumers, such as remote healthcare/surgery, distance learning, and connected vehicles. The ability to offer specialized services with assured QoS will be critical in promoting consumer interests and national policy priorities. For example, M2M services require the creation of a differential quality of service network to meet the technical requirements of M2M/IoT.

b. How should services provided by content delivery networks and direct interconnection arrangements be treated? Please provide reasons.

ISPAI Response: It is our view that content from CDN networks and direct interconnection arrangements be treated as Network optimization solutions, this will improve the QoS to the customer.

Network optimization solutions such as interconnection arrangements, caching or content delivery network (CDN) services that offer a benefit by reducing the total distance of travel, not only improve the quality of service for those using the solution but also for other users that share the same local network of the ISP/TSP. This is because such solutions decongest the existing access network. Therefore, offering a benefit of improved performance through network optimization solutions (such as faster interconnection, caching or CDN services), rather improves their experience. In this context, improving overall performance through network optimization should be welcome.

Hence, provisioning of services by network optimization solutions by establishing CDN networks and direct interconnection agreements are in the right direction since it enhances the end user experience. These should be allowed and no restrictions should be applied for these. Such arrangements should be permitted based on mutual agreement without any regulatory oversight.

Q.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.**

ISPAI Response: In our view it would be good to have the narrow approach regulations of explicitly stating what is not acceptable. This would allow the ISPs/TSPs to frame their own policies for network optimization and market innovation.

Q.4. If a broad regulatory approach, as suggested in Q3, is to be followed: [See Chapter 3]

- 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?**

ISPAI Response: It is our view, as indicated in Q.3 that a narrow approach should be followed for TMP.

- b. **Should application-specific discrimination within a category of traffic be viewed more strictly than discrimination between categories?**

ISPAI Response: We believe that any discrimination should be evaluated objectively and proportionately. Application-specific discrimination should take into account the reason for implementing such a practice.

For example, certain applications related to file-sharing systems, including torrent applications, may bring down the network by sharing copyrighted content illegally. To prevent network break-downs, application-specific discrimination would be needed and TMPs have to be implemented in order to completely block or throttle such applications. Therefore, Net Neutrality principles should allow operators to utilize such application-specific TMPs.

- 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?**

ISPAI Response: We are of the view that preferential treatment of any particular content should not be allowed. Thus, we believe that all the players operating within the Internet ecosystem, including Telecom Service Providers (TSPs), content providers, handset manufacturers and other stakeholders, should be brought under the purview of the Net Neutrality framework.

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

ISPAI Response: The following may be considered as non-reasonable Traffic Management Practice:

- i. Providing differential QoS toward a certain CDN, IP Pool for internet traffic.
- ii. Giving preferential QoS to specific applications basis commercial arrangements
- iii. After application identification giving preferential QoS to an application of Vendor A and retarded QoS to an application from Vendor B.

Q.6. Should the following be treated as exceptions to any regulation on TMPs?

a. Emergency situations and services;

ISPAI Response: Yes, but these exceptions need to be clearly defined and unambiguous.

b. Restrictions on unlawful content;

ISPAI Response: Yes as per prevalent laws and constitutional rights.

c. Maintaining security and integrity of the network;

ISPAI Response: Yes, narrowly tailored on a nondiscriminatory non-interference basis for a limited time in the area or portion of network effected.

d. Services that may be notified in public interest by the Government/ Authority, based on certain criteria; or

ISPAI Response: Yes. Here again the services will have to be narrowly tailored and criteria be made specific. The public interest be specified and be publicly announced. The notified public interest should stand the test of freedom of speech and constitutional rights.

e. Any other services. Please elaborate.

ISPAI Response: No Response.

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;

ISPAI Response: Blocking is currently being done based on directives that the ISP/TSP's receive from the DOT/ Licensor, competent court order and Law Enforcement Agencies. Apart from the above requirements TSPs/ISPs should not carry out any blocking themselves unless it is required for legal/congestion-management purposes or to provide parental controls.

b. Throttling (for example, how can it be established that a particular application is being throttled?); and

ISPAI Response: There should be no intentional impairment or degradation of Internet traffic basis commercial arrangements other than traffic management.

c. Preferential treatment (for example, how can it be established that preferential treatment is being provided to a particular application?).

ISPAI Response: The licensor/ regulator should appoint an independent neutral agency to carry out this testing.

In principle, Preferential treatment is almost similar to what has been stated in point 7(b) above where one looks for applications with higher performance/throughput compared to others.

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?

ISPAI Response: In our view a combination of 'a' and 'b'; would be preferable in the Indian context. Disclosure to the general public might not be necessary as the disclosure sought here are more technical in nature and it may not be necessary for a TSP to disclose its TMP etc., if any to general public at large who is not its subscriber per se.

We are of the view that positive assurance by way of declaration or disclosures by TSPs to Authority/Regulator shall be made mandatory. Disclosure to a subscriber shall be provided upon specific request being made by the Subscriber in writing. While considering the above, we would also request the Authority to take into consideration the provision of safeguards for trade secrets and information that might give a competitive advantage to a TSP over another.

Q.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.

ISPAI Response: The information disclosure template is exhaustive and covers all aspects well. In our view it would be difficult to mention typical latency and packet loss unless a standard endpoint is defined.

In our view the template is good for the regulator and some aspect can be shared with customers on request. Items like application specific/agnostic data should be shared only with the regulator as this information might be used for competitive advantage or generating application specific DDOS attacks.

Q.10. What would be the most effective legal/policy instrument for implementing a NN framework in India?

a. Which body should be responsible for monitoring and supervision?

ISPAI Response: Existing framework of licensing authority and TRAI are adequate. For monitoring and supervision a multilateral empowered agency should be created having representatives of Licensor, TRAI and industry experts.

b. What actions should such body be empowered to take in case of any detected violation?

ISPAI Response: We believe that the exiting regulatory framework is sufficient to address any concern on violation of net neutrality principles. Furthermore, we believe that TRAI and DoT should first introduce the principles of net neutrality and framework and thereafter the operational aspects of monitoring should be deliberated. The agency as mentioned in 10 (a) should make a factual report to the Authority.

c. If the Authority opts for QoS regulation on this subject, what should be the scope of such regulations?

ISPAI Response: As per the standard practices followed by TRAI on QoS of other services.

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:

ISPAI Response: As we recommended in Q. 10(a) and (b), the existing licensing framework is adequate. That an empowered and competent agency should be set up to investigate and monitor net neutrality by service providers. This agency should evolve its own best practices based on experience.

a. Disclosures and information from TSPs;

ISPAI Response: In our view the same empowered multilateral agency suggested above should monitor disclosures and information from TSPs and use this information to verify by testing.

b. Collection of information from users (complaints, user-experience apps, surveys, questionnaires); or Collection of information from third parties and public domain (research studies, news articles, consumer advocacy reports).

ISPAI Response: At this stage the net neutrality understanding by users is at a nascent stage and hence information from users may not be depended upon. The empowered agency should evolve its own best practices.

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?

ISPAI Response: Yes.

a. What should be its design and functions?

ISPAI Response: The primary functions should be to check for violations of net neutrality as defined by the Authority.

b. What role should the Authority play in its functioning?

ISPAI Response: The existing licensing framework is fine with us.

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?

ISPAI Response: As per existing practices, TRAI and DoT review various policies based on market and technology developments. The same is also relevant for net neutrality.

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.

ISPAI Response: The user experience based on end device, browser, OS, processing power should be outside the purview of NN. The network, TSPs or the content provider would not be able to influence this in anyway., Throttling can happen for several other reasons such as new IP ranges, incorrect routing by an international bandwidth provider, outages or overflows at caching/CDN, etc. Therefore, it is important that the principles of net neutrality is applied on all stakeholders.
