iCTrobot/TRAI/2017-18/01

26th April 2017

Shri Asit Kadayan
Advisor(QoS)
Telecom Regulatory Authority of India
Mahanagar Doorsanchar Bhawan
Jawahar Lal Nehru Marg
New Delhi 110002

Subject: Counter Comments on TRAI's Consultation Paper on Net Neutrality.

Dear Sir,

It is with the reference to the aforesaid TRAI's Consultation Paper on Net Neutrality.

We would like to introduce **"advisory@iCTrobot"** as a consulting and market research entity in Telecom, Media and Technology space primarily focused on advising telecom and digital service providers and eco-partners on their techno-business needs, powered by tenets of innovation, creativity and transformation.

Please find enclosed the Counter Comments on the Consultation Paper on Net Neutrality.

Thanking You,

Yours Sincerely,

For **advisory@iCTrobot**

(S S Sirohi)
Founder & CEO

Encl: As above

At the outset, we would like to submit that the TRAI consultation paper on Net Neutrality is focussed on issues related to net neutrality and brings out its all important aspects presently crucial and relevant in the Indian context.

Most of the stakeholders have essentially furnished responses to the Consultation Paper addressing most of the points. The stakeholders have expressed hope that outcome of this consultation on Net Neutrality would allay their fears, remove possible impediments to the unfettered access to internet and broadband in India with a view to leapfrog the levels of penetration in the masses in order to realise the dream of Digital India with minimum regulatory intervention and burden. Stakeholders have also made references to the DoT committee report on Net Neutrality which we hope would also be suitably considered by TRAI before finalising the recommendations.

Our Counter Comments to the Responses of various stakeholders submitted to TRAI are as below:

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

COUNTER COMMENT

The non –discriminatory access to content on internet envisages that one is able to access the legal internet *content, applications and services* without any restriction or impediment to get equal treatment in all respect vis- a- vis all others similarly placed. There should be no blocking of any lawful content, no degradation of internet traffic based on content, application, services or end user and no paid prioritisation which creates discrimination. However, reasonable and legitimate traffic management subject to ensuring non-discriminatory access to content on the internet is accepted.

India being a developing country and internet a very important service affecting the businesses, economy and the social life of the people, all-out effort and action is required to make access to the internet non-discriminatory. Therefore, a balanced, calibrated approach to Net Neutrality to achieve this objective of non-discriminatory access is the need of the hour. While deciding on regulatory frame work for Net Neutrality in India, it is worth looking at other jurisdictions to draw upon their experience so that it is not too rigid, out of sync with a rapidly changing environment and does not result in un- intended adverse effect.

The uniqueness of Internet that no body owns it but everybody has equal right to use it and its openness is the founding principle that has grown it to a level that everyone needs it because there is lot for him in the internet. Therefore, any regulation to this unique service is solicited to be light touch and on forbearance.

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We strongly feel that same service same principle rule in the context of Net neutrality does not mean that OTT services should be brought under licencing regime. We recommend that the services provided by OTT players which are also included in the scope of services of TSPs/ISPs should be suitably brought under regulatory oversight for Lawful interception only.

Some of the stakeholders have sought the whole internet eco system –not limited to TSPs/ISPs under the ambit of Net Neutrality. We would like to mention that, the countries who have gone for prescriptive regulation on Net Neutrality are still grappling to settle the related issues, one of them reported to be having second thought on certain issues, it will be onerous for India to widen the ambit of proposed Net Neutrality regulation. Let us concentrate on the non –discriminatory access to internet first.

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.

COUNTER COMMENT

Various stake holders have provided the proposed definition of Internet Services in The Net Neutrality context.

However, any new formulation than the existing ones in the present licensing is fraught with the danger of unsettling the regulatory issues which have been settled with great efforts. The definitions in the respective licenses adequately define the Internet Service and the Internet Traffic. It is not advisable to contemplate changing definitions of Internet Services in our scheme of licensing framework for the sake of Net Neutrality.

The scope of Internet service in the relevant authorization of Unified License is defined as follows:

"2. Scope of Internet Service: Scope of this Authorization covers the following:

2.1 (i) The Licensee may provide Internet access including IPTV. The subscriber shall have unrestricted access to all the content available on internet except for such content which is restricted by the Licensor/designated authority under Law. The Licensee shall not offer .... *"*

Thus the "Internet service" is unrestricted access to all the content available on internet except for such content which is restricted by the Licensor/designated authority under Law and the

associated traffic is the "internet traffic". The Internet Service is so defined is confined to mass retail market only in the context of Net Neutrality. This provides a clear understanding.

2(a) There lies a basic difference in access to the internet and making use of Internet to serve/provide specialized services or managed services which has been made possible due to march or advancement in the IP Technology. These services are bound to grow further and new ones would appear sooner or later. Managed services also known as specialised services are customised tailor made to serve specific needs and demands of enterprises for increasing business productivity. These services may include services in the area of Telephony, data connectivity-national and international, video etc. Further these services are contracted on predefined SLA and one to one commercial arrangement between TSP/ISP and the enterprise.

We therefore, strongly feel that managed services are a necessary requirement for business and enterprise and suitable exceptions may be made for treatment of such services in the Net Neutrality context subject to the proviso without affecting minimum guaranteed QoS of "Best Efforts Public Internet"

Creating definitions and listing these services run the risk of becoming obsolete given the fast pace of IP Network Technologies.

2(b) The content delivery networks offer the consumers better performance and a higher quality and user experience by locating the internet content applications and services close to the customers. Secondly, the content providers are able to serve their content to consumers more quickly and thirdly, by identifying the least congested path of internet traffic to reduce the congestion. They also reduce the network capacity requirements by caching content close to the end users which does not require content to make multiple transit. In line with DoT views on NN, CDN is an arrangement for management of content as a business strategy. Making available one provider's CDN to others on commercial terms is a normal business activity. Discrimination in access or adoption of anti-competitive practices by them is best left to be covered under the law related to unfair trade practices. This issue has been raised by one of the stakeholders.

A few stakeholders have differing views on the CDN and direct interconnection. One of them maintains that they should not be treated as specialised service and the other desires that peering of foreign content providers should be regulated. Expressing all the due regard for their views, we would submit to differ and maintain that these should be outside the ambit of Net Neutrality.

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.

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COUNTER COMMENT

The stakeholders have given a mixed response while giving their opinion on broad approach or a narrow approach. However, in both the cases the principle of reasonableness of TMP has to be established. Then comes the task of listing out all the TMPs who are un- reasonable as indicated in the second part of the question.

(a) **TMP Reasonableness**

To fix the reasonability of TMP, attention is drawn to the DoT committee report. The relevant para of which is quoted below

"There is a delicate balance between ensuring the openness of the Internet and reasonable and responsible use of traffic management by TSPs/ISPs for legitimate needs. To draw a line between these two objectives is challenging and is the crux of the matter surrounding the Net Neutrality debate. Due to many reasons, network operators differentiate and manage the traffic. Some are essential and some can be avoided not being in tune with Net Neutrality principles. Operators may be prohibited from practices considered as contrary to Net Neutrality principles."

We therefore, feel that TMP may be considered reasonable or legitimate if they test positive to the followings tests of core principles of NN

(i)   Full disclosures to the users by TSPs/ISPs about their traffic management policies, tools and intervention practices to maintain transparency and allow users to make informed choices,

(ii)   Traffic management, which is non- exploitative and non anti-competitive in nature,

(iii)   For legitimate network management, application agnostic control may be used. However, application specific control within the "internet traffic" class if applied, may be permitted, provided it is technically justified, non anti-competitive, transparent, proportionate and temporary in response to exceptional circumstances,

(iv)   No Improper (paid or otherwise) prioritization.

(b) TMPS who test negative to the aforesaid tests of core principles of Net Neutrality can be termed as **non- reasonable TMPs.**

(c) **Rationale behind following a narrow approach**

As set out in the answer to the previous questions, the whole exercise of ensuring Net Neutrality through various means around the world is undergoing a testing, evolutionary and trial phase and hits and misses are yet to be evaluated fully. The telecom market in India is very competitive and price sensitive. Big investments are required to proliferate internet and broad Band services in the country to realise the dream of Digital India. Therefore, the TSPs/ISPs in the present day circumstances will not invest until there is absolute regulatory

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certainty. The Net Neutrality implementation is yet to mature, and it is worth mentioning that we are also contemplating to introduce it in our country. It is a fact that there is no clarity on many of the issues concerning NN. Therefore, the broad approach of NN principle will result in many far-fetched interpretations, multiplicity and plurality of definitions to surface and there is every likely hood of its exploitation. This would impede the growth of internet in the country and the India may miss the bus.

In order to completely eliminate this uncertainty, arbitrage and discretion it is suggested that we first make out a list of non -reasonable TMPs in the first instance to ask TSPs/ISPs to abide by.

The narrow approach would negate any such activity of far-fetched interpretation and the TSPs/ISPs would feel assured to go ahead with their expansion plans and innovations along with implementation of NN. The narrow approach will imply minimum, definite, unambiguously clear and implementable regulatory obligations which TSPs/ ISPs may be required to meet.

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 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?

COUNTER COMMENT

(a) There are no fixed or standard definitions of internet traffic in the NN context. The subject matter being new, different people or geographies are defining in their own way, convenience and considerations. Broadly speaking we can categorise the traffic as content, application and services.

We suggest that narrow approach for regulation should be followed.

(b) Application specific discrimination should be based on principles for proper management of network traffic and QoS and the TSPs/ISPs employing application specific discrimination should be in a position to properly explain that such discrimination is not un reasonable.

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(c) Any preferential treatment of particular content activated by user's choice should be permitted depending on availability of such technical tools which permit users to make conscious choice as per his needs. Even EU and FCC regulations recognise importance of end user choice. However, we wish to further submit that any such technical tools used by end user should not in any manner affect network integrity and security.

However, two stakeholders have suggested that all the players operating within the internet eco system including TSPs/ISPs, content providers, handset manufactures and other stake holders should be brought under the purview of Net Neutrality framework. In our counter comment there upon we wish to submit that the understanding of these stakeholders is not convincing because (a) content and application providers work on the periphery of the network and are not gatekeepers. They add value to the usefulness of the internet without affecting the traffic. Therefore, they may be kept outside of NN. (b) similarly handset manufacturers etc cannot be controlled by licencing principles on regulation because the availability of diverse handsets in different price segment with varied specifications is chosen by the customer as per their own need.

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

COUNTER COMMENT

Those TMPs which are on the opposite side of the reasonableness should be termed as non-reasonable.

They are:

Such TMPs which block, Throttle, provide preferential treatment anti-competitively and discriminately other than required for genuine Traffic and Network Management purposes. Any TMP whose actions provide differential treatment including QoS, to any legal content, services and applications on internet for commercial and non-commercial consideration is non reasonable.

Kindly refer to counter comment in respect of Q No 3.

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 notified in public interest by the Government/ Authority, based on certain criteria; or

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(e) Any other services.

Please elaborate.

COUNTER COMMENT

We agree with most of the stake-holders in their comments that services mentioned in Q6 (a) to (d) should be kept out of the purview of Net Neutrality and therefore any regulation on TMPs should not apply on them. Additionally, Digital Payment Services and Financial transactions should also be excluded from any regulation on TMPs, as delays will mostly lead to failure of transactions which will be a setback to Government's objective to move to a cashless society. Access to customer's self-care services/portals should also by excluded from any regulation on TMPs to facilitate customers to maintain their services, recharge etc.

However, a very small number of stake-holders have also reservations on services covered under Q6(d) stating that it is very broad category and as per them, the term Public Interest is not defined. We submit that this impression is not convincing as the term 'Public Interest' in very well understood and Government decisions taken in Public Interest is respected by Hon'ble Courts and Quasi-Judicial Forums. The Government and Sector Regulators are empowered to take decisions in Public Interest in fair manner based on Principles enunciated in the Constitution /Acts passed by Parliament.

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?).

COUNTER COMMENT

There are no standard definitions for Blocking, Throttling and Preferential Treatment and various jurisdictions have adopted of their own definitions with underlying concepts remaining same. Some of the Stake-holders in their responses to the Consultation Paper have attempted to define these terms in Indian context which mostly resemble with each other in essence. DoT Committee has also framed definition of these terms. We suggest that by taking them into consideration, we should choose the best ones suiting our Indian requirements.

So far the tests, thresholds and technical tools that can be adopted to detect instances of Blocking, Throttling and Preferential Treatment by Internet Access Service providers are concerned, it is understood that globally as at present, there is no such single best tool available for monitoring Net Neutrality violations. We agree with the response of some stake-holders that first the Net Neutrality Principles and Policies should be in place and thereafter the availability of

technical tools should be explored for required tests and thresholds. As when such tools get developed may be adopted in India drawing the benefits of global best practices.

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?

COUNTER COMMENTS

We agree with the responses of majority of stake-holders that for the purpose of transparency and making informed choices, the direct disclosure of information to existing customers and at point of sales (PoS) for perspective customers should be made with sufficient details including the principles of NN followed and details of TMPs deployed and their advantages including other details as would be prescribed by TRAI, such as minimum assured QoS on best effort basis, etc. The information so provided should be in a simple and easy to understand language avoiding complex technical details to avoid confusion. Also, the information on the website of the service providers should contain the details of broad principles of traffic management. The Authority may seek any further details. However, Service Providers should not be insisted upon for detailed technical, proprietary and competition sensitive information.

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.

COUNTER COMMENTS

We agree with the responses of the stakeholders that for the present, the broad principles of Traffic Management Practices should be published on service provider's website. There is no requirement of prescribing a separate information disclosure template, which will only confuse the users/general public and would be a regulatory burden.

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?

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

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

COUNTER COMMENT

The TSPs/ISPs are authorized to provide Internet Services to their subscribers using any device and any digital technology in a technology neutral environment. The terms and conditions of ISP Licenses and Internet Service Authorization under Unified License (UL) adequately define the scope of Internet Service. These definitions along with Regulatory frameworks as would be prescribed by the Authority from time to time would adequately define the legal and policy instrument for implementing a Net Neutrality framework in India. Keeping in view the responses of stakeholders and our considered view, we would strongly recommend a very light touch, wait and watch approach. However, a collaborative approach is the preferred one with an advisory group with representation from stakeholders viz. service providers, content providers, edge providers, consumer groups. Such a mechanism exists in USA viz. Broadband Internet Technical Advisory Group (BITAG). This group will keep on reporting TRAI afters inputs from experts and ensuring that all stakeholders are represented for Net Neutrality. For Net Neutrality they need to be on same page and are taken on board since we are dealing with internet and the fact that TRAI has issued regulations on differential pricing and free data in rural area. The proposed group should submit its report to the Authority consideration and appropriate actions. QoS is the subject matter of TRAI for regulation and it is recommended that TRAI should issue these for internet services in the context of Net Neutrality to benefit the consumers. Any violations of which should be dealt by TRAI within the assigned authority for such purpose under the Act. However, if authority concludes that certain extreme action is warranted under the terms and conditions of the licences(s), then a recommendation in this regard may be sent to the licensor, DoT.

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).

COUNTER COMMENT

There will be challenges in monitoring of the NN violation as well for the mechanism to detect these violations. This is complex matter for which we do not have any prior sufficient knowledge

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or expertise. Information mechanism is one of the logical tools for its detection. As suggested in Q 10 and 12 the proposed standing advisory group consisting of stakeholders/experts shall also suggest an optimal mechanism for the same using 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?

(a) What should be its design and functions?

(b) What role should the Authority play in its functioning?

COUNTER COMMENT

Kindly refer to the counter-comments in response to Q10.

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?

COUNTER COMMENTS

The Government and Authority always endeavour to support innovation and advent of new technologies in the best interest of consumers and growth of the internet. Therefore, it is desired that the Standing Advisory group as proposed in counter-comments of Q10 may keep open the channel for dialogue with stakeholders and experts, also in other jurisdictions to keep itself abreast with trends in technological development in the related area of Net Neutrality and appropriately keep on submitting its Recommendations to the Authority to enable it making timely mid-course corrections in the Net Neutrality policy/regulatory framework.

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.

COUNTER COMMENT

We agree with the responses of stake-holders that although these factors such as the type of device, browser, operating system being used by users may impact their quality of Internet experience, but the users have choice and full liberty to choose them. There is full freedom to select amongst the devices, OS and browsers as per their best understanding and to make informed choice. Hence, the question is out of the context of Net Neutrality.

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