Response to the TRAI Consultation Paper on 'Traffic Management Practices (TMPs) and Multi-Stakeholder Body for Net Neutrality' released on January 02, 2020

At the outset, COAI welcomes the opportunity to comment on the TRAI Consultation Paper on 'Traffic Management Practices (TMPs) and Multi-Stakeholder Body for Net Neutrality'.

Preamble:

1. Traffic Management Practices (TMPs) are essential to ensure that the Internet can function effectively, efficiently and successfully which is extremely significant in a mobile environment. Therefore, we would like to submit that any approach towards TMPs should be principle based approach, which is already in place on account of the current regulatory framework on Net Neutrality.

2. It is pertinent to mention that India's Internet & Broadband penetration is 52.08 % while rural penetration is only 27.57%[1]. Also, the Internet speed in India is far less in comparison to other countries. As per Ookla's December 2019 Speed test Global Index, India is ranked 128th (out of 140 countries) in the Mobile Internet Speed and 67th (out of 177 countries) for fixed broadband speed.

3. Thus, in order to enhance Internet and Broadband Penetration, instead of creating any hindrance to achieve the 'Digital India' vision, no additional rules or guidelines should be adopted by the Government for TMPs. Hence, TRAI should not adopt an "innovation by permission" approach on TMP as it could potentially stifle the use of quality differentiation.

4. **In order to increase the internet and broadband penetration and speed, the Indian TSPs/ISPs require investments in their networks along with innovative service offerings to cater to the requirements of all categories of consumers; India should continue with the existing regulatory framework on Net Neutrality as enunciated in the licence amendment of 26.09.2018, while permitting TSPs to employ various traffic management practices as per the varying needs of traffic types, services and users**. This is particularly important for mobile operators as mobile networks have limited network resources and capacities (such as spectrum) thereby requiring greater use of TMPs to efficiently manage the network resources and capacities.

5. We would further like to submit that many of the 5G applications will have stringent data communication requirements, such as high reliability or minimal delay which can be used through traffic management techniques.

6. 5G networks are envisaged to accommodate Applications and Services with different Latency, Reliability and Bandwidth. This would require effective sharing of network resources and network management techniques to achieve the requirements e.g. <1ms

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[1] TRAI Performance Indicator Report for Quarter ending September, 2019

radio latency for critical machine type communication, 100Mbps speed for massive broadband etc.

7. Technologies like Software Defined Network (SDN), Network Function Virtualization (NFV) would be implemented for the effective sharing of the network to support the 5G use cases. Various network functions such as network slicing, Mobile Content Delivery Network as Service can be implemented through these technologies to support various 5G use cases while ensuring that this does not violate any of the provisions of the UL.

8. Further, 5G needs QoS management, not only for traffic prioritization to support mission-critical applications, but also to enable a fundamental capability in its architecture i.e. network slicing which allows an operator to provide different services with different performance characteristics to address specific use cases.

9. Given the significant changes envisaged in the future networks, which will require greater and more sophisticated traffic management, we recommend that the current regulatory framework on Net neutrality be continued without the imposition of additional rules/regulations so that these technological initiatives and innovations are not hampered by such additional regulations on TMPs.

10. The existing Net neutrality regulatory framework already ensures that internet is open i.e. accessible to all based on sender/receiver, protocols used or user equipment and non-discriminatory on the basis of content, regardless of the TMPs employed by TSPs. Any additional regulatory rule/regulation carries the risk of restricting the TSPs from flexibly and dynamically managing the networks in the most efficient manner possible, which could result in an adverse impact on the customer experience of internet services.

11. TSPs need the continued flexibility to manage the traffic in order to deliver a good customer experience, just like any other player in the internet ecosystem/value chain which also employs traffic management for their respective internet based offerings (such as content providers, web browsers, device players etc.). It would be unfair to have regulatory restrictions in terms of traffic management practices on only one set of players of the internet value chain which could potentially reduce the TSPs' ability to maintain a consistent customer experience.

12. In fact, we are of the view that similar regulatory framework, as applicable to the TSPs, to enforce the Net Neutrality principles, should be prescribed for all stakeholders, so that all stakeholders in the Internet ecosystem can be brought under the ambit of the Net Neutrality Principle. **This will ensure the Neutrality in the whole ecosystem and not just at the network level (access providers).**

13. Further, since the issuance of the licence amendment on net neutrality, there have been no evidences of non-compliance thus pointing to the fact that the current regulatory framework on net neutrality is adequately managing all aspects/concerns around net neutrality including traffic management practices.

We would like to make following submissions on the issues raised by TRAI in the consultation paper:

Q. 1: What are the broad types of practices currently deployed by the Access Providers (APs) to manage traffic? Out of these practices, which ones can be considered as reasonable from perspective of Net Neutrality? Whether list of Traffic Management Practices (TMPs) can be prepared in advance or it would be required to update it from time to time? If later is yes, then what framework would be required to be established by Multi-Stakeholder Body to keep it up to date? Please suggest with justification.

COAI Response:

1. Traffic management is essential to - manage volumes, manage emergency and time critical services, protect against malware, control in case of data usage exceeding the threshold, congestion control etc. Even the DoT Committee has recognized this legitimate requirement.

    "By treating different types of data traffic differently, traffic management allows the performance of services to be managed individually so that the most Quality of Service (QoS) sensitive services receive the better QoS from the network. In an unmanaged situation, consumers would not understand and predict the factors that affect their experience, whereas in traffic managed situation there is potentially more certainty and more transparency, and a better overall quality of experience for the majority of customers"

2. Traffic management encompasses a range of techniques used by network operators, ISPs to ensure the smooth flow of data traffic across the networks between the end users and content /service providers. Network operators and ISPs use traffic management to minimize the incidence and impacts of congestion, ensuring that as many users as possible get the best online experience possible. Examples of current and anticipated network management practices include:

    a. Management of congestion
    b. Fair Usage policy implementation
    c. Blocking spam, malware, denial of service attacks and other security threats to the network or to user devices
    d. Ensuring that time sensitive services such as voice, video, online gaming and enterprise services can be delivered in a way which ensures optimal performance of those applications (without the calls dropping, buffering videos and time lags in games)
    e. Network Performance: Network Management practices
    f. Peak Load Management
    g. Lawful restrictions directed to be imposed by the Government/ Legal court orders/LEA agencies.
    h. Prioritization for communications for emergency and disaster management services

Reasonable Traffic Management from the perspective of Net Neutrality:

3. The Internet is a best-effort based service. Traffic management of different types of traffic is a core aspect of internet technology right from its earliest days and different types of services have different QoS and speed requirements, thus, reasonable traffic management is required to be employed to provide the desired end-user Quality of Experience.

4. Thus, Traffic management is a tool for consumer benefit and not for consumer harm and should be permitted to maintain and improve the quality of service provided to end users. The absence of reasonable traffic management could lead to an overall degradation in the quality of customer experience.

5. Further, mobile network operators in India face capacity constraints due to spectrum scarcity and the high costs of infrastructure investment including backhaul networks. Any principles governing traffic management should take into account the challenges faced by mobile operators and should be sufficiently flexible to accommodate them.

6. Thus, the service providers should be allowed to take the measures or actions necessary for the traffic management and network management, provided that the same does not affect the free competition and impede user choice.

7. We are of the view that the existing regulatory framework is well laid and capable to address any concerns on issues related to TMPs and that TSPs should continue to have flexibility to manage traffic within this framework, given that such flexibility is also available to other players in the internet value chain, where traffic can get impacted too and which are not in the control of the TSPs. The existing regulatory framework permits TSPs to dynamically manage their networks for harnessing technological and service innovations and to that extent, it is future ready and forward looking. A regulatory prescriptive or case-by-case based approach would dampen innovation and adversely affect TSPs from achieving efficient network management.

8. **Thus, we submit that the Government should continue with the existing regulatory framework on Net Neutrality as enunciated in the licence amendment of 26.09.2018, while permitting TSPs to employ various traffic management practices as per the varying needs of traffic types, services and users and not issue any further rules/regulations on TMPs.**

9. On the issue of preparation of the list of Traffic Management Practices (TMPs) in advance, it is submitted that traffic management depends on the type of ICT network being in use which is dynamic in nature. As rightly mentioned by TRAI in para 2.3.2 of the consultation paper that ICT networks are in a permanent change of state with devices, application, other unknowing things connecting/disconnecting, with network functions being virtualised, services being added/segregated/discontinued etc. Thus, the TMPs adopted by the service providers are also dynamic in nature and it is not feasible to list down the TMPs in advance. Hence, TRAI should not ask the service providers to list down the traffic management practices.

Q.2: Whether impact of TMPs on consumer's experience can be interpreted from its name and short description about it or detailed technical description would be required to interpret it in objective and unambiguous manner? In case of detail technical description, what framework need to be adopted by Multi-Stakeholder Body to document it. Please suggest with justification.

COAI Response:

1. As suggested in our response to Q1, TRAI should only intervene where there is evidence of non-compliance to license conditions on net neutrality post engagement with the relevant TSP.

2. The above approach would suffice the requirement of detection and correction of violations. We would also like to suggest that TRAI should publish a list of the factors which affect the internet and broadband connections of end users and over which the TSPs have no control. This information for the end users would help, not only to create awareness and educate the customers, but also encourage the customers to have the right kind of devices to access the services.

Q.3: What set up need to be established to detect violations of Net Neutrality, whether it should be crowd source based, sample filed measurements, probe based, audit of processes carried out by access providers or combination of above? How to avoid false positives and false negative while collecting samples and interpreting Net Neutrality violations? Please suggest with justification.

COAI Response:

1. We are of the view that investigation based on complaints or reports i.e.an evidence based approach should be adopted to detect and correct any violations of Net Neutrality.

2. We are of the view that crowd source based mechanism to detect violation of Net Neutrality is not a valid mechanism in order to arrive to a conclusion since crowd sourcing mechanism is based on perceived experience without the knowledge of the specific element in the internet ecosystem (devices, client/content site, web browser etc.) due to which the user has such a perceived experience.

3. The methodology, objective and details of the investigation should be finalized after consultation with the service providers and the same should not be a burden on the service providers.

Q.4: What should be the composition, functions, roles and responsibilities of Multi-stakeholder Body considering the decision of DoT that Multi-stakeholder body shall have an advisory role and formulation of TMPs and Monitoring and Enforcement (M&E) rest with DoT? Please suggest with justification.

COAI Response:

1. With respect to formation of a Multi-Stakeholder Body (MSB), we would like to make the following submission:

a. TRAI had recommended that the Principles of Non-discrimination should be made part of the License Conditions through an amendment in the License as DoT and its TERM Offices are well equipped to ensure the compliance with the various provisions of the license. DoT, vide its notifications dated September 26, 2018, has amended the telecom licenses and has made the Net Neutrality principles a part of the license.

b. Net Neutrality principles, being a part of license, would automatically be monitored by the DoT and the requirement of establishing a multi-stakeholder body to monitor the same does not arise. Having multiple monitoring and enforcements bodies may lead to chaos and inconsistency in the decision making process.

c. The telecom sector is a heavily regulated and highly competitive sector. DoT as the licensor is fully competent and empowered to monitor and enforce the Net Neutrality Principles.

d. Concept of Multi stakeholder body (MSB) will only add to organizational and decision making complexity for a subject that may not need such a requirement. This will also not aligned with the 'Minimum Government, Maximum Governance' theme of the Government of India. This will also add further cost to the industry which is reeling under substantial sustainability pressure.

e. Any issues on the matter can easily be taken care of by the existing structure (DoT/TERM/TRAI) on case to case basis.

f. **Thus, we are of the view that there is no need for the establishment of multi-stakeholder body for monitoring and enforcement of non-discriminatory principles is an unnecessary requirement.**

2. We recommend that self-regulatory mechanisms are adequate to ensure compliance with the existing regulatory framework instead of additional regulations or constitution of any new bodies. We note that in UK, Ofcom has adopted a self-regulatory approach to TMPs.

Q.5: Whether entry fee, recurring fee etc. for membership need to be uniform for all members or those may be on the basis of different type or category of membership? What may be these categories? What policy may be adopted for initial set up of Multi-Stakeholder Body. Please suggest with justification.

And

Q.6: What mechanism may be prescribed to determine fee and other contributions from its members towards expenditure in a fair and non-discriminatory manner? Please suggest with justification.

COAI Response:

1. As suggested in our response to Q4, we do not find any justification for forming an entirely new body when industry associations and industry-led initiatives can lead to a strong self-regulatory and self-monitored regime for the implementation of TMPs. Also, since, the role of

such committee/body would be limited to advisory; we don't see the requirement of functioning of such committee/body like an association.

2. In the event that a dedicated advisory body is found to be imperative, the formation of any association through a Regulation on which the fees/memberships etc. would be defined, may not be feasible. The membership fees etc. are mostly based on various parameters such as the volume of business, revenue, number of customers, etc. which are subject to constant change. Such parameters would be unreliable and result in the exclusion of small and medium enterprises or monopoly by a few large players.

3. **Therefore, no MSB should be set up.** Instead, as suggested earlier, the industry/TSPs should be allowed to self-regulate, with necessary enforcement action by DoT.

Q.7: What should be the guiding principles and structure of governance of Multi-stakeholders Body? What may be the roles and responsibilities of persons at different positions such as chairing the organisation or working groups, governing the functioning, steering the work etc. Please suggest with justification.

COAI Response:

Please refer to our response to Q. 4, 5 and 6.

It is reiterated that there is no requirement for formation of any multi-stakeholder body.

Q.8: Any other issues which is relevant to this subject?

No Comments.

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