

Annexure A

IDEA CELLULAR RESPONSE ON TRAI CONSULTATION PAPER ON NET NEUTRALITY, JAN 2017

Preamble

At the outset, we would like to submit that Idea Cellular supports open internet and open access and believes that all measures should aim at giving customers the “freedom to choose”. At the same time, it is critical that the policy Direction also empowers the TSPs to be able to offer superior internet experience to their customers by continually improving the efficiency of their networks and contribute to realizing the Digital India vision of the Hon’ble Prime Minister of India. Towards the same, an enabling Regulatory environment that is permissive, which allows innovation and experimentation and permits reasonable Traffic Management Practices (TMPs) is necessary.

Idea Cellular also submits that the customers’ freedom of choice should span across content, devices, technology and access platforms in a non-discriminatory manner and lead to the most optimum quality of service experience. However, such non-discrimination should not be interpreted to denote lack of differentiation between specialized (business access customers) and retail customers, as the technical and QoS requirements are different in both the cases. Thus the regulatory guidelines on Net Neutrality (NN) must allow TSPs the freedom to offer specialized Services such as enterprise solutions, Internet of Things, Content Delivery Networks and interconnection arrangements, Virtual Private Network (VPN), and other services requiring a guaranteed level of QoS as well as a certain degree of discussion / collaboration between the Content / Application Provider and the TSP for guaranteeing the same.

Broadly, we suggest that the policy Direction should aim at ushering in:

- I. **“Internet for All”**: Benefits of Internet should be available to all strata of the society, especially the “Unconnected ones”. This requires huge efforts and investment by TSPs, OTT players and device companies.
- II. **“Freedom to Choose”**: This choice should span across content, device, technology and operators.

- III. **“Free Access to all Solutions”**: Consumers should have the access to the solutions which will make internet affordable such as toll free/sponsored Data.
- IV. **“Same Service, Same Rules”**: All stake holders should get to operate and offer their services under level playing field conditions and no one should be allowed to get any undue advantage. Thus there should be no scope for any segment to prosper at the cost of another due to any policy or regulatory arbitrage

Idea Cellular believes that a correct understanding of the concept of Net Neutrality is necessary for proper and unhindered proliferation of Internet. In this regard, Idea Cellular would like to highlight some of the major issues relevant for any discussion on Net Neutrality :

A. Need for comprehensive discussion and holistic view

- i. At the outset, we would like to submit that any discussion on the subject of Net Neutrality needs to be comprehensive with focus on all relevant issues including traffic management which it is just one part of the full Net Neutrality debate.
- ii. We recommend that the discussion needs to also look at all of the following issues, some of which are dealt by us in the following paragraphs:
 - Issues relating to OTT Communications providers : *“Same Service Same Rules”*
 - Economic Issues
 - Security and Privacy Related issues
 - Pricing aspects of traffic
 - Treatment of free data
- iii. **Further, we would like to express our concern regarding the piece-meal approach adopted by the Authority on the issue of Net Neutrality and re-commencement of de novo consultations on the issues related to Net Neutrality while confining the discussion to traffic management without even looking at the central issue related to the OTT Communications Players.**

- iv. It is also particularly surprising that the Authority has not been able to firm up its views on the earlier CP on “Regulatory Framework of OTT” even after over a year and a half and has issued this fresh CP that covers more or less same / similar issues as were covered in that earlier CP.
- v. **It is submitted that by adopting the piece meal approach and not addressing the issue holistically and completely, the TRAI is only adding to uncertainty and un-predictability in the regulatory framework.**
- vi. **Idea Cellular therefore strongly suggests that there needs to be an immediate conclusion of the earlier Consultation, that has already gone through the established process of stakeholder comments / counter-comments followed by Open House Discussions, along with this CP, so that there can be a meaningful conclusion on the overarching issue of Net Neutrality that has a significant role to play in shaping the course of Indian Telecom Industry and the vision of Digital India.**

We also submit that in order to achieve the above, it is essential that the NN Regulations support the TSPs ability to offer flexible and innovative tariff offerings while exercising legitimate traffic management practices.

B. Stable Voice Revenues are key for the future of Mobile data growth

In that context, it is submitted that the Indian telecom industry is currently at a critical juncture in its evolution. The sector is gradually metamorphosing from a pure voice market to a mix of both voice and data services. **Given the national imperative to rollout a ubiquitous broadband infrastructure in India, ensuring stable voice revenues for TSPs needs to be an absolute imperative for the Licensor / Regulator, who need to usher in suitable interventions to boost the steeply declining revenues and margins of the TSPs.**

C. TRAI Consultation not holistic in approach - Unaddressed issues of Unlicensed OTT Communication Providers & flawed approach on Discriminatory data tariffs.

- i. OTT services are welcome in keeping with the spirit of innovation and encouraging entrepreneurship. However, with the advent of OTT communication services (by Unlicensed Entities) riding free on data

networks of licensed TSPs, the voice business which was absorbing a significant part of the telecom operator costs, will no longer be able to do so.

- ii. It is important to prevent such communication applications by non-licensed entities from negatively impacting all other critical and beneficial internet applications, to support creative energy and innovative skills of new entrepreneurs and services arising out of the net. However till date, in spite of multiple rounds of submissions and consultations, no concrete view has been shared by the TRAI, while stakeholders are being asked to address other aspects of Net Neutrality. We reiterate that holistic discussion is necessary on all issues concerning Net Neutrality.**
- iii. Further, the recent TRAI regulation prohibiting discriminatory pricing by the TSPs on the basis of content needs to be revisited as it is based on an extreme view by the Regulator, which is detrimental to growth and proliferation of broadband services. We believe that an ex-post examination of the tariff plans on a case by case basis after giving a reasonable opportunity to the operators of being heard would have been a pragmatic and future-proof strategy, and would have allowed for the full evolution of the Internet market to take place. Such an approach would have also certainly led to a more positive outcome for competition and innovation across the internet ecosystem and would have been more aligned with the present tariff forbearance regime.**
- iv. It is pertinent to mention here that the TRAI needs to bear in mind that it is this strategy of offering customized plans and wide choice to the customer that has helped Indian consumers adopt mobile telephony at a fast pace making India one of the fastest growing telecom markets in the World. In the context of the particular market situation that Indian telecom is in and considering the specific circumstances, a review of the afore-mentioned Regulation might indeed be beneficial for the end-users in terms of enhancement of choice and reach.**
- v. Since the discussion on the core principles of the Net Neutrality is yet to be concluded by TRAI, we are of the view that the issue of the discriminatory pricing should be taken up again for discussion as an addendum to this consultation paper on Net Neutrality.**

D. Ensure Regulatory Neutrality between TSPs and OTT – Unlicensed OTT Communication Providers

- i. Some of the services being provided by OTT Communication players are a perfect substitute of PSTN/Internet Telephony services, but with lower QoS standards than offered by Licensed Telecom Service Providers (TSPs) in India and violate the basic principle of **“Same Service, Same rules”**.
- ii. Typically, TSPs are liable and responsible for a plethora of licensing provisions and regulations that include, regulatory levies and license fees, QoS, Tariff Regulations, KYC, confidentiality of customer information, Regulatory Audits, Consumer Protection Regulations, emergency services, privacy of communication and lawful monitoring and interception. However, these conditions are not applicable on unlicensed OTT players, and the resulting arbitrage allows OTT communication providers to offer Internet Telephony for free or for a greatly reduced price in comparison to the licensed TSPs. The TRAI has by not dealing with the issues arising out of OTT communication services has allowed this regulatory arbitrage to continue and cause loss to the Licensed TSPs leading in turn to distorted competition and to less incentives for network operators to invest and to innovate..
- iii. **Absence of any level playing field with TSPs is thus a source of unfair competitive advantage for OTT communication players; however, this also poses various social and economic risks:**
 - a) Lower consumer protection / data privacy and security approaches which do not mirror the national telecom policy;
 - b) Lower control on internet content which does not reflect national security standards;
 - c) Business models which depend on *“untaxed”* service revenues reflecting wide freedom available to OTTs to structure their businesses in a manner where it is possible to avoid license fee and general tax payments.

It is thus only appropriate that OTT players offering communication services be brought under a suitable Regulatory framework that results in creation of Regulatory neutrality and level playing field.

E. **Traffic management is an essential function of networks**

- i. **We would like to submit that in order to manage the growing volumes of data traffic and meet the performance expectations of the different traffic types translating to better experience for customers, traffic management is of paramount importance.** We hope TRAI will recognise the importance of traffic management and service delivery, and the increased need for such practices as networks and services become more complex.
- ii. It needs to be acknowledged that in a highly competitive telecom environment, such as India, TSPs will always have the incentive to provide products and services that are of interest for end-users in order to remain competitive, and such incentive should not be under-estimated when assessing the TSPs use of TMPs that are critical to be able to manage the growing volumes of data traffic and meet the performance expectations of the different traffic types translating to better experience for customers. Thus no TSP will take any steps that are detrimental to customer's access of his/her preferred applications or content residing on the internet. This is because it is most likely to result in customer dissatisfaction & resultant customer churn / loss of business through the use of MNP.
- iii. **Further, it is submitted that regulations that prohibit traffic management or prescribe a limited set of permissible cases are not future-proof, can stop the march of technology and have unintended consequences for innovation, investments and the quality of experience for the users of the services. We are of the view that TSPs should be permitted the flexibility to differentiate between different types of traffic to ensure the internet remains open and thriving.**
- iv. **It is also important to consider that different type of services need differing treatments and prioritization.** For example voice needs to be given instant priority for excellent experience, video needs to be delivered in packets and superior video compression techniques need to be applied for lowering consumer costs, while the search and social networking applications by design can work in a delayed environment. Also with massive growth in quality of smartphone technology, superior traffic management techniques are being applied on higher end phones along with latest version of browsers powered by global companies like Apple, Google, Microsoft, Nokia etc.

- v. Further, it needs to be understood that there are situations where the prioritization between traffics of different customers on a regular basis –i.e., apart from congestion and failures of the network – can be objectively necessary to serve specific needs - for instance, those of emergency services such as the police, fire, or hospitals with the urgent need to access information only available on the internet or to forward information of general interest to citizens through the internet. Such priorities may be required even for applications such as Education, tele medicine, disaster management etc. in near future and hence the operators would need flexibility on issues of traffic management etc.
- vi. **Thus, before defining what should be the right regulatory approach on TMPs, the Authority should bear in mind that excessive regulatory interference in this domain would negatively impact the efficient management of internet traffic, impede competition between service providers and ultimately harm end-users.** Essentially, the regulatory approach finalized by the Authority should clearly acknowledge the need and right for the operators to manage their networks, and any administrative interference should be avoided in order to allow the operators to keep operational traffic management efficient for the benefit of end-users. Further, the choice of technical options should remain in the hands of the network operators so that the country can have a fine balance between technology advancement and the neutrality principle.
- vii. Towards that end, we recommend that the Authority’s Guidelines should steer clear of prescribing or micro-managing traffic management practices as that would hurt the efficient management of internet traffic, stifle competition between service providers and ultimately harm end-users. It would be critical that the TRAI only focusses its attention on the outcomes rather than intervening on specific technical decisions and details which are best left to operators. It goes without saying that an environment that is permissive, which allows innovation and experimentation, will create major long term benefits for India and its consumers.

F. No Incentive for TSPs to Block Access / Throttle Speed / Prioritize one content over another:

- i. Smartphone Manufacturers, Mobile / internet service providers, application and content providers form the nucleus of the Digital ecosystem and one would fail to function without the other. Telecom service providers in India have currently extended the reach of **mobile and voice telephony to over a Billion users. They continue to play the most significant role in making India a digital economy by**

making heavy investments in spectrum and building large scale broadband infrastructure for internet access. Apart from these regular investments, they continue to add and adopt practices to improve quality of service for mobile internet users.

- ii. **Further, we feel that the TSP's do not have any intent or business benefit in blocking any internet access or providing poor experience to their customers under the existing competitive landscape. Yet, more often than not, the intentions of the TSPs are doubted on the back of unfounded fears like discriminatory pricing, speed throttling or blocking access, thus necessitating regulatory intervention.**
- iii. **It would be incorrect to assume that TSPs would Block access/throttle speed of one content or application provider to prioritize another application/content in the same class, thereby ignoring customer experience & choice. Any innovation in internet space has always been welcomed by TSP's in the past and will continue to be so in the future too, as it as it brings more value to its end customers and makes mobile internet more relevant & appealing.**

G. The DoT report on Net Neutrality released in May 2015

- i. DoT in its report on Net Neutrality released in May 2015 has outlined a few core principles of Net Neutrality. **We fully support those core principles with the changes as suggested by us under Question 1 to this CP and recommends that they be adopted as guiding principles while framing the definition of Net Neutrality.**
- ii. **Idea Cellular also subscribes to the Committee's following observation / recommendation, and request the TRAI to keep it in consideration when firming up its views on Net Neutrality:**

"The international best practices along with core principles of Net Neutrality will help in formulating India specific Net Neutrality approach. India should take a rational approach and initiate action in making an objective policy, specific to the needs of our country. The timing for this is apt, taking into consideration the exponential growth of content and applications on the Internet."

H. The Guidelines should support, not undermine, operators investment decisions:

- I. Over the last two - three years, the cost structures and the business models of the Indian telcos have undergone a significant shift. With increasing spends on spectrum acquisition and higher capital expenditure in form of network roll outs, much of the costs have shifted to below EBITDA levels. In such a scenario, ROCE, ROE, Return on Assets and Return on Investment are becoming more relevant metrics to measure profitability for all telecom investors. **Analyzing the Indian telecom industry with this comprehensive lens reveals that the overall industry continues to realize negative returns (as measured on ROCE & ROE).**

- II. **In that context, it is submitted that the Net Neutrality guidelines to be finalized by the Authority should support, and not undermine operator's investment decisions.** It cannot be the case that the TRAI ignores the massive investments made by the Industry under the specious logic of either March of Technology or Obsolescence. This sector requires large doses of capital investment; Investments in networks and spectrum that have been made, Investments that contribute huge revenues to the exchequer annually, but provide no adequate return on investment. Investors have the right to earn a return on their investment and TRAI being aware of the present condition should facilitate a competitive environment where all stakeholders stand to benefit.

In the light of points mentioned above, our comments on the queries raised by TRAI are as follows:

Query wise Response:

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

Idea Submission:

- A. Mobile internet penetration in India is around 30%. Hence the balance 70% of the Indian population have yet to experience the benefits of internet. The top priority from the Indian perspective should thus be to extend the benefits of the internet to the balance **"1 Billion Indians"**. However, the telecom industry

has been suffering from poor financial performance, mainly because of two factors - hyper competition resulting in low tariffs (lowest in the world) and multifold increase in spectrum prices.

B. **The realization of larger goal “Internet for All” requires a holistic approach and hence the importance of Net Equality**, which means:

- a. **“Internet for All”**: The benefit of Internet should be available to all strata of the society, especially the “Unconnected ones”. All the unconnected consumers have to leapfrog from their current world of isolation to the world of Internet. This requires huge demand generation, sales and marketing efforts including sampling, trials and education efforts and large scale network, service and sales and marketing investment by TSPs. Other stakeholders of ecosystem like OTT players and device companies have to also contribute to Government vision for Internet to All.
- b. Net equality means that the consumers should be **“free to choose ”**. This choice should span across content, device and operators.
- c. Consumers should have the **access to all possible solutions** which will make internet affordable such as Toll Free/Sponsored Data Plans etc.
- d. **“Same Service, Same Rules”** so that all stake holders are bound to offer same services under the same regulations and no one gets an undue advantage.
- e. There should not be any discrimination of legal content or application from any device as long as it does not impact the efficiency of TSP’s network and Quality of Service. The customer should be given unhindered access on a best effort basis.
- f. However while providing Net Equality, the Authority needs to ensure that operators are provided with flexibility to manage the increasing complexities in network arising out of growth in data and spectrum availability. With given spectrum availability and huge projected growth of data, the **networks require enhanced traffic management systems and it is essential that operators are given freedom to manage such complex situations.**

- g. All Internet traffic must be treated equally regardless of content, origin and destination, without any interference, restriction and discrimination. There must be reasonable and legitimate traffic management for all contents and applications.

C. Against the above backdrop, we support the following list of criteria (*to be used for testing the core principles of Net Neutrality*) outlined by the High Level Committee of DoT in its report on Net Neutrality released in May 2015:

Core principle	DoT Committee Recommended Criteria	Our Recommendation
1. User Rights	Subject to lawful restrictions, the fundamental right to freedom of expression and non-discriminatory access to the internet will apply	Subject to lawful restrictions, the fundamental right to freedom of expression and non-discriminatory access to the internet will apply
2. Blocking	No blocking of any lawful content	No blocking of any lawful content unless detrimental to and impacting the efficiency of networks and their QoS
3. Throttling	No degradation of internet traffic based on the content, application, services or end user	No degradation of internet traffic based on the content, application, services or end user unless detrimental to and impacting the efficiency of networks and their QoS
4. Prioritization	No paid prioritization which creates discrimination	No prioritization of internet traffic based on the content, application or services within the same category of internet traffic unless governed by any QoS Regulation. All TSP's may resort to prioritizing specific category of application as may be defined by standard bodies (like 3GPP) from time to time including specialized services.

5. Transparency	Transparent disclosure of information to the users for enabling them to make informed choice	Transparent disclosure of information to the users for enabling them to make informed choice
6. Competition	Competition to be promoted and not hindered	Competition to be promoted and not hindered
7. Congestion and Traffic Management	Reasonable and legitimate traffic management subject to ensuring core principles of Net-Neutrality	Reasonable and legitimate traffic management subject to ensuring core principles of Net-Neutrality
8. QoS	QoS to be ensured as per best practices and national regulations	QoS to be ensured as per best practices and national regulations
9. Privacy	Online privacy of the individuals to be ensured	Online privacy of the individuals to be ensured
10. Security	Scrupulously follow the extant security guidelines	Scrupulously follow the extant security guidelines
11. Data Protection	Disclosure of user information only with consent of the user or on legal requirements	Disclosure of user information only with consent of the user or on legal requirements
12. Content	Right to create and to access legal contents without any restrictions	Right to create and to access legal contents without any restrictions unless detrimental to and impacting the efficiency of networks and their QoS.
13. Applications and Services	Freedom to create and access any Application & Service	Freedom to create and access any Application & Service without any restrictions unless detrimental to and impacting the efficiency of networks and their QoS
14. Devices	Freedom to connect all kinds of devices, which are not harmful, to the network and services	Freedom to connect all kinds of devices, which are not harmful, to the network and services. Customer to be given unhindered access on a best effort basis.

We thus request that these criteria / principles along with the suggested changes be adopted as core principles of Net Neutrality.

- D. Further, we believe that the regulatory framework for Net Neutrality should not be just limited to the TSPs, but should instead apply to all other stakeholders such as Content and Application Providers and equipment manufacturers.

Question 2. How should “Internet traffic” and providers of ‘Internet services’ be understood from 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?

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

Idea Submission:

- A. As per definition of ‘Internet’ in Unified License – *Internet is defined as a global information system that is linked together by a globally unique IP address and is able to support communications using the TCP/IP suite or other IP compatible protocols.* Therefore the flow of information in terms of data packets which happens within this information system constitutes “Internet traffic”.
- B. Further, as pointed out in the CP, in European Union, the open Internet Access regulations define “*Internet access service*” as a “**publicly-available electronic communication services which provide access to the internet, and thereby connectivity to virtually all end points of the internet**, irrespective of the network technology (*e.g. fibre, cable, mobile*) used, and irrespective of the terminal equipment (*e.g. mobile phone handset, tablet, laptop*) used.
- C. **In the context of net neutrality, customers will have the right to access all Internet traffic irrespective of content, origin and destination on best effort basis – i.e., no blocking of legal content or apps or no tampering of speed.**

- D. However, in terms of internet traffic, the ‘applications’ should go through certain accreditation so that they do not create any kind of negative impact on the network and become a threat to the efficiency of mobile eco system.

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

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

- E. As also pointed out in the CP, BEREC (EU) uses the term ‘*specialized services*’ as a short expression for a longer term used in the Regulation: “*services other than internet access services which are optimized for specific content, applications or services, or a combination thereof, where the optimization is necessary in order to meet requirements of the content, applications or services for a specific level of quality*”. The BEREC Guidelines also provide a few examples of what may be considered specialized services, such as VoLTE (high-quality voice calling on mobile networks) and linear (live) broadcasting IPTV services with specific quality requirements. Another example would be real-time health services (e.g. remote surgery).
- F. Similarly, FCC has highlighted the general characteristics of services which as per them cannot be called broadband internet services :
- i. *These services are not used to reach large parts of the Internet;*
 - ii. *They are specific application-level services, and not generic platforms; and*
 - iii. *They use some form of network management to isolate the capacity being used from that used by broadband Internet access services.”*

- G. **In Indian context, It is suggested that along the lines adopted in US and EU, Net Neutrality rules in India should exclude Specialized Services such as enterprise solutions, Internet of Things, Content Delivery Networks and interconnection arrangements, Virtual Private Network (VPN), and other services requiring a guaranteed level of Quality of service, while at same time providing certain degree of discussion / collaboration between the Content / Application Provider and the TSP for guaranteeing the same. However, having said that, it is also critical that while dealing with such**

issues, the TSPs/ISPs are treated no less favorably than the other agents from the Internet value chain.

- H. It is also pertinent to mention here that specialized services such as IOT etc. are currently undergoing major standardization drive so that effective services can be rendered. There are many techniques being mooted by various standardization bodies to guarantee delivery of such services over mobile network. **Any attempt to bring them under the ambit of a regulation such as NN is likely to have a detrimental effect on the standardization practices being attempted by various bodies, and is thus best avoided.**
- I. Further, **Content delivery networks (CDN) are designed to bring content as near to the end-user as possible and hence this should be encouraged.** This not only reduces latency and thus improves network efficiencies, but also drives major improvements in the end-customer experience. Additionally, the bandwidth requirement between the Origin of content and TSP's or the ISP's is reduced substantially. It is a practice that is increasingly being adopted by the internet world, and all major content providers are resorting to this practice. For E.g., in India Google has implemented their Google Cache in the premises of all major operators. Similarly Akamai and Limelite have also implemented their CDN's in operator's premises. Such an arrangement results in a win-win situation for all the players in the value chain, such as the content providers, TSP's and consumers, and thus needs to be encouraged further without being regulated in any way, based on mutual commercial arrangements.
- J. **Similarly direct peering also helps in reducing latency and should be encouraged.** However in India certain large TSP's and ISP's also hold major chunk of data center business and do not allow other players to connect without a large fees and this is the area which is required to be addressed but it does not have any relevance to be included under NN, which we feel should be related only to freedom to access internet without any discrimination.

Question 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)

Idea Submission:

- A. **Traffic management is an essential function of networks** to manage the growing volumes of data traffic and to meet the performance expectations of the different traffic types to ensure better experiences for all consumers. The TRAI CP recognises, the importance of traffic management and service delivery, and the increased need for such practices as networks and services become more complex.
- B. Further, the Authority would appreciate that considering the hyper-competitive intensity in the Indian market, Indian TSP's do not have any reason to discriminate against any content or application or resorting to any of the discriminatory practices that their customers are likely to find questionable, as that could easily lead to their customers walking away to any other competing TSP. On the contrary their only incentive is to ensure management of their networks in a manner that offers the best possible experience to a large number of users using different categories of content.
- C. **It is submitted that Traffic management, as generally understood, 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 network management practices include:**
- a. Management of congestion:
 - b. Blocking spam, malware, denial of service attacks and other security threats to the network or to user devices
 - c. Ensuring that time sensitive services such as voice, video, online gaming and enterprise services are delivered in a way which ensures optimal performance of those applications (without calls dropping, buffering videos and time lags in games)
 - d. Network Performance : Network Management practices
 - e. Peak Load Management
 - f. Lawful restrictions directed to be imposed by the Government/ Legal court orders/LEA agencies.
 - g. Prioritization for communications for emergency and disaster management services

- D. If all traffic/packets of data, whether video, voice, email or message are treated equally, it implies that the service provider will not be able to distinguish between a video or voice packet, which is more sensitive to delay, and an email or message, which is less sensitive to delay. In practice, this would mean that there would be call drops and videos will buffer, as both the services require higher priority to work effectively, as embedded in telecoms standards on a worldwide basis.
- E. Idea Cellular submits that priorities will be required even for applications such as Education, Tele Medicine, Disaster Management, etc. TSPs need to have the freedom to apply traffic management for giving preferences of mission critical, important and urgent applications such as health, IT services, Issues of National Importance, Emergency applications, etc. over other applications.
- F. **It is also submitted that traffic management is a critical requirement of networks to manage the growing volumes of data traffic and to meet the performance expectations of the different traffic types to ensure better experiences for all consumers. It has for long been an important tool in meeting the needs of users of internet services and will become increasingly important with the development of new technologies such as LTE. Further, since the capacity in the wireless telecom networks is not unlimited, TSPs need to be able to apply traffic management and optimization techniques for improvement of customer experience and network yield.**
- G. **Rapidly evolving wireless networks, dynamic nature of the radio environment, explosive growth in wireless data traffic, and the scarcity of wireless network resources pose non-trivial challenges to the implementation of TMPs. Given the varied and evolving nature of wireless networks, network management practices often need to be customized to address particular situations. We thus feel that TSPS need to have the flexibility to manage their networks in an efficient and reasonable manner to ensure the internet remains open and thriving.**
- H. **Towards that end, Regulations that prohibit traffic management or prescribe a limited set of permissible cases are not future-proof and will have unintended consequences for innovation, investments and the quality of experience for the users of the services.**

- I. **We thus feel that traffic management should be guided by broad based Regulatory approach so that reasonable TMPs are encouraged and operators are given flexibility on traffic management issues. We would like to suggest a framework which should constitute the following:**
 - i. “All legal services and content over the internet should be mandated to be accessible by the customers of a TSP at minimum on best effort basis and no specific services should be blocked or throttled deliberately until unless it proven to be detrimental to and impacting efficiency of the network”
 - ii. “All TSP’s may resort to TMPs to prioritize specific category of application as may be defined by standard bodies (like 3GPP) from time to time and not within the category of service until and unless the services are governed by certain QoS related regulations”.
 - iii. “TSP’s should be allowed to deploy systems & solutions (including CDN , direct peering, optimization technique) which can improve both customer experience and network efficiencies but in such a manner so that no other applications are deprived of network accessibility on best effort basis and the customer should be able to avail all services on a continuous basis” .

We strongly feel that above framework should be sufficient and ensure that all customers continue to get accessibility to internet based services on best effort basis while also leaving sufficient room for TSP’s and application providers to collaborate and innovate.

Question 4. If a broad regulatory approach, as suggested in Q3, is to be followed:

- (a) What should be regarded as Reasonable TMPs? Whether 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?**

Idea Submission:

A. As highlighted above, we recommend that traffic management should be guided by broad based Regulatory approach so that reasonable TMPs are encouraged and operators are given flexibility on traffic management issues. We would like to suggest a framework which should constitute the following:

- i. “All legal services and content over the internet should be mandated to be accessible by the customers of a TSP at minimum on best effort basis and no specific services should be blocked or throttled deliberately until unless proven to be detrimental to and impacting efficiency of the network”
- ii. “All TSP’s may resort to practices to prioritize specific category of application as may be defined by standard bodies (like 3GPP) from time to time and not within the category of service until and unless the services are governed by certain QoS related regulations”.
- iii. “TSP’s should be allowed to deploy systems & solutions (including CDN , direct peering, optimization technique) which can improve both customer experience and network efficiencies but in such a manner so that no other applications are deprived of network accessibility on best effort basis and the customer should be able to avail all services on a continuous basis” .

B. We strongly feel that above framework should be sufficient and ensure that all customers continue to get accessibility to internet based services on best effort basis while also leaving sufficient room for TSP’s and application providers to collaborate and innovate.

C. It is submitted that no application specific discrimination should be allowed as long as they are competing on the premise of “Same Service Same Rules”. However incase certain services within a category are under the purview of regulations related to QoS then same may be allowed to collaborate with TSP’s to ensure the desired QoS as per the Regulations.

D. As far as preferential treatment of particular content, activated by a user’s choice is concerned, it is submitted that since the trigger for the same is user activated, this can be allowed / permitted provided there is no discrimination and rules of Net Neutrality are upheld.

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

Idea Submission:

- A. We do not favor any narrow approach.**

- B. However incase Regulator intends to do the same then a proper deliberation should be done on each point coming under narrow approach to ensure that end user is not deprived of good data experience, TSP's are not deprived to build network efficiencies and startups are not deprived of innovations which they might do in collaboration with TSP's.**

Question 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**
- (e) Any other services**

Idea Submission:

- A. We fully support the treatment of the afore-mentioned cases as exceptions to any Regulation on TMPs as these are part of social as well as licensing obligation which TSP's has been providing all these years without fail .**

- B. However, we would like to bring to the Authority's notice that to support the above requirement TSP's will need to invest in special techniques and features, thereby entailing a financial cost.**

- C. Our category-specific comments are as follows:**

- i. **Emergency situations and services** – Services being used during emergency situations like natural calamities, terrorist attacks etc. must be treated as an exception from any regulation on Traffic Management practices (TMP) as such content or communications might have to be prioritized on an urgent basis. However, for such prioritization, it is critical that a clear definition of services which will fall under this category be identified and the mechanisms through which such exception will be triggered.
- ii. **Restrictions on unlawful content** – The requirements of Net Neutrality are only applicable with respect to access to lawful content. Hence, a TMP for blocking content pursuant to direction from authorities authorized by law which is issued after following due process should not be considered unreasonable.
- iii. **Maintaining security and integrity of the network** – In order to protect networks from viruses, spam, denial of service attacks , hacking attacks against network/terminal equipment, malicious software etc, TMPs will need to be deployed and updated on an ongoing basis. This should invariably be treated as an exception to any regulation on TMP.
- iv. **Services that may be notified in public interest by the Government/ Authority, based on certain criteria** – Government services meant for Public interest will be given the best possible service and need not to be exempted from normal practices.

Q7. How should the following practices be defined and 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)?

Idea Submission:

- A. It is re-iterated that any blocking or throttling of services that can lead to poor experience for the end customers is likely to be detrimental to the TSPs business and currently there is no evidence of operators resorting to such a practice as every additional byte consumed by the customer is a revenue for the operator.
- B. The QoS Regulation already lays down extremely stringent QoS parameters, and we feel that in case of any negative or poor experience with an application, the customers can easily complain to the operator for resolution. Further, the QoS parameters related to consumer complaints are already stringent thereby necessitating proper resolution. **Hence, currently there seems no need for implementing any new monitoring method towards Blocking / Throttling.**
- C. **In terms of defining :**
- **No Blocking:** No blocking of any lawful content unless detrimental to and impacting the efficiency of networks and their QoS
 - **No Throttling:** No degradation of internet traffic based on the content, application, services or end user unless detrimental to and impacting the efficiency of networks and their QoS
 - **No improper preferential treatment :** No prioritization of internet traffic based on the content, application or services within the same category of internet traffic unless governed by any QoS Regulation. All TSP's may resort to prioritizing specific category of application as may be defined by standard bodies (like 3GPP) from time to time including specialized services
- D. **Lastly, we are not aware of any specific scalable tool which can address the requirement of monitoring.**

QUESTION 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?

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QUESTION 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

Idea Submission:

- A. At the outset, it is submitted that any transparency principles laid down in the context of Net Neutrality should be made applicable to all components of the internet value chain/ other stakeholders of the internet eco-system as well and not to TSPs alone.
- B. **Further, the Authority has itself correctly noted information categories under which Transparency is being sought in the context of Net Neutrality, are already extensively covered under TRAI's Current Transparency regime.**
- C. Additionally, we feel that it is necessary that the Authority first formulate & state the correct understanding of the concept of Net Neutrality, based on which the Transparency regime can be viewed holistically.
- D. **In this context, the Authority has till date provided no roadmap on issue of Regulatory neutrality qua OTT Communication Service providers, even though Authority is fully aware that** some of the services being provided by OTT Communications players are a perfect substitute of PSTN/Internet Telephony services and violate the basic principle of 'SAME SERVICE SAME RULES'.
- E. Thus, Transparency in the context of NN, cannot be defined in isolation. Moreover, currently the understanding of the concept of Net Neutrality varies across stakeholders which creates varied opinions / conclusions on the subject. Any comment on either the right approach or the mode, trigger and

frequency to publish such information, can thus be forthcoming only after a common understanding of the concept of NN has been developed by all stakeholders including the users.

- F. **We would thus request the Authority to defer this question for the time being, and seek responses from all stakeholders through a separate Consultation Note only once it has notified its final views on the concept of NN.**
- G. Lastly, we would also like to submit that it has been noticed that many players in the internet value chain have shown inclination and propensity of qualifying/publishing network quality ranking based on the techniques deployed on servers at their own end. These techniques do not have sufficient data to qualify differences between actual network qualities, bad experience due to device issues or customer behavior related issues, etc. **Such practices should not be allowed.**

Question 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?

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

Idea Submission:

- A. Firstly, as stated above, the licensing & Regulatory framework is not complete without resolution on the interlinked issue of regulation of OTT Communication Service Provider. The TRAI is aware that the services that are offered by the OTT communication players such as messaging/instant messaging and VOIP telephony are perfect substitutes of the services that are being offered by the TSPs under UASL/UL, which is impacting the revenues of TSPs and also their incentive and ability to invest in infrastructure. There is thus an urgent need to address the various regulatory imbalances and ensure Regulatory Neutrality, between TSPs and OTT communication players.

- B. It is further submitted that Regulatory flexibility to the TSPs is essential for enhanced data adoption and growth. It is thus imperative that the Government and the Regulator create an environment of innovation and flexibility while balancing the same with the cardinal principles of tariff forbearance, transparency and non-discrimination.
- C. The DoT Committee has recommended that a clause, requiring licensee to adhere to the core principles of Net Neutrality, as specified by guidelines issued by the licensor from time to time, should be incorporated in the license conditions of TSP/ISPs. The guidelines can describe the principles in detail and provide applicable criteria to test any violation of the principles of Net Neutrality.
- D. **We believe that at the present stage, India should adopt a cautious observation approach or at best look at Self-Regulation model.** India's internet penetration and broadband rollout is at too nascent a stage at present and the first priority is to ensure availability of and access to the Internet before looking at concerns related to net neutrality.
- E. It is pertinent to mention here that in the Indian context the benefits of the policy of tariff forbearance adopted by TRAI since 2002 are proven and documented. Further it is also well-acknowledged that all the benefits that can come from effective regulation, such as economic and technological growth, increased investment in the sector, cost reduction with improved efficiency, better quality of service, improved customer satisfaction, affordable prices delivering better value for money and improved access and availability of services have got delivered under the prevailing Light touch regulatory regime of TRAI.
- F. **We thus urge the Authority to consider the cautious observation approach / "Self-Regulatory" approach in the context of NN too. In any case, as pointed out in para 6.1.3 of the CP, "If it comes to the notice of the Authority that service providers are systematically indulging in discriminatory practices like blocking of particular content or providing slower or faster speeds for access to particular services, appropriate regulatory interventions can be immediately adopted, based on the learnings from this consultation process."**
- G. **It is also submitted that in case the Authority opts for QoS regulation, the scope of such regulations must include prevention of distortions in user choice and any form of interference with competition between content providers to facilitate a free and open internet.**

Question 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)

Idea Submission:

A. The Authority has already rightly pointed out the challenges in the process under para 6.3.4 of its CP, where it says:

6.3.4 There may be various challenges in this process, such as the technical difficulty in proactively identifying violations, by users or any third party or investigating a TMP that is no longer in use. These technical elements of NN enforcement remain a challenge for regulators worldwide, who are actively engaged in building clarity on such issues.

B. Firstly, as stated above, the licensing & Regulatory framework is not complete without resolution on the interlinked issue of regulation of OTT Communication Service Provider. The TRAI is aware that the services that are offered by the OTT communication players such as messaging/instant messaging and VOIP telephony are perfect substitutes of the services that are being offered by the TSPs under UASL/UL, which is impacting the revenues of TSPs and also their incentive and ability to invest in infrastructure. There is thus an urgent need to address the various regulatory imbalances and ensure Regulatory Neutrality, between TSPs and OTT communication players.

C. We thus submit that implementation of monitoring mechanism is clearly premature at this stage. **We would thus request the Authority to defer this question for the time being, and seek responses from all stakeholders through a separate Consultation Note only once it has notified its final views on the concept of NN.**

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

Idea Submission:

- A. It is submitted that would be premature to comment on such implementation issues at this point in time. We feel that at first a correct understanding of the concept of Net Neutrality and the roles and responsibilities of the various stakeholders in the internet value chain needs to be first developed to be able to offer a proper and considered comment on the issue of effectiveness of any multi-stakeholder forum for managing the operational aspects of the NN framework.
- B. **We would thus request the Authority to defer this question for the time being, and seek responses from all stakeholders through a separate Consultation Note only once it has notified its final views on the concept of NN.**

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?

Idea Submission:

- A. It is submitted that would be premature to comment on such implementation issues at this point in time. We feel that at first a correct understanding of the concept of Net Neutrality and the roles and responsibilities of the various stakeholders in the internet value chain needs to be first developed to be able to offer a proper

and considered comment on the issue of effectiveness of any multi-stakeholder forum for managing the operational aspects of the NN framework.

- B. The Authority has rightly pointed out that there are growing discussion on the rise of “context aware” networks. Idea Cellular feels that moving forward networks must be made ‘context aware’, i.e., they must be dynamically able to adapt to the needs of devices and applications rather than make the applications adapt to its access characteristics. This is required considering the future evolution of such networks like information centric networking, software defined networking and mobile edge computing.
- C. We also feel that for newly evolving technology and use cases, there are already various technological forums for participation of the entire eco-system – OEMs, TSPs, content providers who can bring out newer contexts and practices that can be adopted by all. Thus there is no need to necessarily do anything new.

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.

Idea Submission:

- A. Devices, browsers and Operating system with their capabilities, features and the Software development Tools (SDK’s) made available to the developer community has unleashed innovation in Mobile internet. These will play a significant role for any innovation in mobile internet and Digital services over mobile in future as well.
- B. The capabilities of the chipset in the device along with OS dictates the device behavior and the way it negotiates and reacts to the response from the network. In this regard, you would kindly take note of the recent COAI letter on QoS degradation on certain specific chipset dual SIM mobile devices. Thus at certain level, the issue of valid device certification needs to be considered.
- C. There is huge amount of development happening on the network side to improve customer experience but the benefits can only be realized if the devices and OS adopt the same. As examples “Carrier aggregation”

and “Discontinuous Transmission” are two such features where chip vendors and device OEM’s can play major role.

- D. At the same time the Apps and Clients being developed over the OS and Browsers plays a critical role in how the applications behaves in a particular network. Any chat generating too much of signaling hogs network capacity and deprive other customer the network resources. Thus it is imperative that applications and browsers when developed should consider network impact and should go through network certification before launched.

 - E. Thus it is important that an collaborative mechanism should be adopted between Chipset vendor, Device OEM’s, App developer community and TSP under the guidance of Licensor/ regulator to ensure coordinated effort with emphasis on adoption of new features and network certification to ensure best customer experience and maximise network efficiency.
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