

This paper sets out the comments on the Consultation Paper on Net Neutrality dated January 4, 2017 issued by the Telecom Regulatory Authority of India ("TRAI"). The deliberation and discussion by the TRAI on the issue of Net Neutrality to establish an appropriate institutional framework for regulating Net Neutrality is the need of the hour, keeping in mind the developments in other jurisdictions on the concept of Net Neutrality, where the idea of equal or non-discriminatory treatment of content while providing access to the Internet resonates in the principles adopted by these jurisdictions.

## **BACKGROUND**

**Presently, there are no laws enforcing net neutrality in India.** Although TRAI guidelines from time to time promote net neutrality, it does not enforce it. The Information Technology Act 2000 also does not prohibit companies from throttling their service in accordance with their business interests. Moreover, there is **no universal approach or global consensus** on the best approach to be followed for Net Neutrality, as there are variations in the requirements of one country to another, including in terms of their level of development, adoption of the internet, state of content business and the regulatory, licensing and legal framework within which they operate. Keeping this background in mind, it is important to deliberate on the issue of Net Neutrality and how a policy framework can be identified and adopted in the Indian context.

Net neutrality is the principle that Internet service providers and governments should treat all data on the Internet equally by not discriminating or charging differentially by user, content, site, platform, application, type of attached equipment, or mode of communication.

Proponents of the principle of net neutrality hold that all traffic on the Internet should be treated equally or in other words, service providers should allow access to all content without favouring any particular product or website. Net Neutrality proponents also claim that telecom companies seek to impose a tiered service model in order to control the pipeline and thereby remove competition, create artificial scarcity, and oblige subscribers to buy their otherwise uncompetitive services. Many believe net neutrality to be primarily important as a preservation of current freedoms.

The net neutrality debate becomes even more relevant in case of India where the penetration of smart phones is increasing and efforts are on to bring more people to the Internet, through the digital India campaign. Presently, there are no norms for net neutrality in India.

While on the other hand, the telecom/Internet Service Providers argue that they have made huge investments in broadband capacity, and, therefore, they should be allowed to charge for the services, which generate lot of traffic, on the other hand, desire to charge differentially for accessing the internet may have a detrimental effect, if not regulated properly.

## INTRODUCTION

**Thus, Net neutrality should be properly understood in context.** The general understanding of Net Neutrality “*equal access to all content at all times*”, is usually stretched to extreme ends. One of the most acceptable definitions of Net Neutrality is by Tim Wu i.e. “*Net neutrality aspires to treat all content, sites and platforms equally*”. It would appear that the aspiration of treating all content equally is yet to be achieved and the reason for that is the physical limitation of infrastructure. **While we aspire for equal and unbiased access, the same is subject to varied factors, one being the physical limitation of infrastructure.** For example, the average internet speeds in India are lower than most BRICS economies on account of skewed contention ratios and latency rates.

**Article 14 of the Constitution of India** embodies the principle of equality and guarantees the right to equality to every citizen of India, prohibiting unreasonable discrimination between persons. However, even this fundamental right granted under the Constitution is subject to **reasonable restrictions** as it provides for ‘*reasonable classification*’ of persons, objects, and transactions for the purpose of achieving the required equality. For example, charging separate fares in airlines or trains for different categories of seats is not discriminatory in nature but is a reasonable classification. Similarly, **Net Neutrality is also to be understood as being equitable access than equal access.**

While we should aspire for *equal access to all content at all times*, till the **limitation exists** (most likely due to the physical constraints of the infrastructure), we have to provide the most equitable way of equal access while ensuring smooth flow of essential services, adequate opportunity for start-ups etc., but at the same time also allowing commercial innovation and sustenance through preferred arrangements, as we cannot ignore the fact that TSPs/ISPs have made investments in the network establishments while providing the services to consumers.

**The end goal is to achieve quality internet access, with adequate speeds, to maximum number of Indians which is also cost effective at the same time.** Therefore, legitimate Traffic Management Practices (TMPs) may be allowed, but the same should be tested against the core principles of Net Neutrality.

***“We need to understand that absolute Net Neutrality is an abstract concept.”***

In view of this Background and Introduction we now set out below our responses to the queries raised by TRAI in its consultation paper:

## ISSUES FOR CONSULTATIONS

### **Q1: What could be the principles for ensuring undiscriminatory access to content on the internet, in the Indian context?**

The regulatory framework identifying principles for non-discriminatory access to content on the Internet should incorporate suitable provisions to ensure net neutrality is maintained and that there are appropriate enforcement mechanisms to deal with any complaints or reported breach of the principles.

In our view, user rights on the Internet need to be protected so that Telecom Service Providers/Internet Service Providers (TSPs/ISPs) do not restrict the ability of the user to send, receive, display, use, post any legal content, application or service on the Internet, or restrict any kind of lawful Internet activity or use.

Security restrictions as required should be put in place for ensuring reliable services and lawful demand of security agencies.

Clear and declared definition of acceptable technical practices by TSPs should be put in place for management of network traffic in conformity with principles of net neutrality.

*The end goal is to achieve quality internet access, with adequate speeds, which is also cost effective at the same time. Therefore, legitimate Traffic Management Practices may be allowed to ensure non-discriminatory access to content on the Internet.*

Therefore, we are **in favour of the guidelines** suggested by the DoT Committee to define the core principles of Net Neutrality. These broad principles can be the pillars of in-discriminatory access to content for the people in the country:

- (i) Consumers **should be entitled to access, create and disseminate** the lawful content of their choice subject to reasonable regulations.
- (ii) The content should not be subjected to discrimination on the basis of source and destination of access, creation or dissemination i.e. **application agnosticism**
- (iii) **Transparency and 'Accessible Information Disclosure'** should be the abiding principles on all the Internet Service Providers (ISPs) so that consumers can make an informed decision on the choice of their ISPs.
- (iv) **Freedom to connect all kinds of devices**, which are not harmful, to the network and services

**Q2: 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 the scope? How should such terms be defined?**
- b) **How should services provided by content delivery network and direct interconnection arrangement be treated?**

**Q6: Should the following be treated as exceptions to any regulations on TMPs?**

- a) **Emergency situations and services;**
- b) **Restrictions on unlawful content;**
- c) **Maintaining security and integrity of the network;**
- d) **Services that may be notified in public internet by the Government/Authority based on certain criteria; or**
- e) **Any other services**

*(Combined Answers for Question 2 and 6)*

**Internet bandwidth is akin to a highway.** The exponential increase in the Internet traffic and the evolving nature of the content that constitutes the part of the traffic, can therefore lead to the overburdening of networks. As a result, TSPs/ISPs may not always be able to deliver an adequate level of Quality of Service to their users, which is problematic both from a regulatory compliance perspective as well as for competitive reasons. It is not possible to expand the highway beyond a certain limit and if we also include the dynamics of capital investment and duration of network infrastructure, the issue becomes more complicated. In such a situation, the ideal way should be to manage the traffic while making sure that the users of this highway i.e. internet **experience the least possible inconvenience**. In such a situation, traffic shaping becomes a necessity. Moreover, we need to **draw a line here between ‘business traffic shaping’ and ‘systemic traffic shaping’**. The case of Comcast and Telus (which are considered the origin of NN debate) comes under the ‘business traffic shaping’ as it violates two of four mentioned basic principles of indiscriminatory access. Customers were barred from accessing lawful content and very importantly, this traffic shaping practice was not done in concurrence with the end users.

Similarly, **distinction will have to be made with respect to the content available** on the Internet, for example – what constitutes entertainment, essential services, knowledge, start-ups etc. We may consider that it is possible for the resources to be **‘equitably distributed’ instead of being ‘equally distributed’** and for the same, a state/government intervention is an essential aspect wherein the state/government itself lays down certain limitations and guidelines after taking into consideration various factors that dominate the industry. For example, the **basic income concept was discussed in the latest Economic Survey**. The principle was that the Below Poverty Line population will get a basic income after taxing the

rich in a reasonable manner. However, there cannot be imposition of an unreasonable tax as it might hamper the businesses and eventually the overall economic health of the country, but at the same time, provision for basic income has to be made for the disadvantaged. In such a situation, it is **important to strike the correct balance between business and welfare needs**. Similarly with the internet, we need to strike the right balance in the commercial and social aspects of its usage. Undoubtedly, internet access to file an RTI, access to the government websites for the perusal of records by citizens etc. are essential services that should be provided to everyone. Thus, Net Neutrality should also cover within its ambit an acceptable distinction between essential social services / emergency services and commercial services.

Further, we also need to emphasize and bring to light that the **internet is not a free resource**. The development of internet requires infrastructure building which further needs capital for investment. To deliver better speeds, one requires a broadband connection, towers for signal delivery, a spectrum allocation, a suitable device which can support the speed at which it is being delivered etc. All of this requires huge capital investments and the burden of fees is laid on the users ultimately. **However, this raises a pertinent question whether it is only the responsibility of the consumer to foot the bill for the development of the infrastructure?** 'Equitable distribution' would require everyone to be equitably responsible for the development of this network. Herein, the content providers play a vital role. The Content Providers are the backbone of the internet, but at the same time they are also commercially motivated. Start ups like Facebook, Google, Twitters, Amazon etc are multibillion dollar companies who have been able to gain revenues at the expense of the consumers who pay for the internet and the businesses who develop the infrastructure for the internet access, while having no share in the responsibility for development of infrastructure, consumer awareness/education etc. In view of the aforesaid, the **concept of a Social Responsibility Fund** can be introduced **wherein the burden is placed equally on the shoulders** of all the three – ISPs/TSPs, Content Providers and the consumers.

**Q3: 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)**

**Q4/5: If a broad regulatory approach, as suggested in Q3 is 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 from 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 users choice and without any arrangement between a TSP and content providers, be treated?**

*(Combined Answer for Question 3 and 4)*

An important aspect that cannot be over-looked is the **physical limitation of the internet infrastructure**, presently and limit of infrastructure in particular as a resource. There is so much of bandwidth which one can utilise after creating the maximum possible infrastructure to access this bandwidth. When accessing the Internet, one has to bear in mind the factor that **there exists one single pipeline that provide the Internet access to all**. There is no random access concept here which applies to the technological processes in general. It is only after one packet is delivered that the other packet can move, if it does not happen (for various reasons); the packets will keep gathering at the node and will eventually lead to congestion, which, in simple terms, is systematic throttling. There is only a single pipeline, with so much of breadth, which caters to different people over varied geographical locations, using different types of devices with varied operation systems and capacities to absorb that speed. To ease the clogging of the traffic, a system of checks and balances should be put in place which places the onus not only on the TSPs but also on the content providers and end users i.e. the customers, who all have an equal responsibility towards the same. This is where the **idea of consumers having the control to direct this systemic shaping of traffic comes** into play. Even with countries like Japan and South Korea, which provides the best possible internet speeds and have the maximum supporting infrastructure, the issues of congestion arises and these governments have explicitly made sure that consumers should have the power to create an ecosystem where systemic shaping could be avoided to the maximum possible extent. **We suggest that data package systems should be created on the basis of type of content (voice, data and video etc.) used within reasonable limits**, which a consumer is completely aware of. Not only will this result in decreased systemic congestion, the rate structure on this basis will have more accessible price rates for consumers while giving ISPs the space to work out a more balanced tariff structure.

A more reasonable data traffic management can be evolved keeping in mind a '**tariff rebalancing approach**' that looks at a '**pay as you use**' principle. A fair, transparent and pro-consumer tariff rebalancing regime should be adopted. The authority must be cognizant of the tariff rebalancing that needs to be looked at vis-à-vis data with a '**same service same rules**' principle followed. Tariff plans offered by TSPs/ISPs must conform to the principles of Net Neutrality set forth in guidelines issued by the Government as Licensor. TRAI may examine the tariff filings made by TSPs/ISPs to determine whether the tariff plan conforms to the principles of Net Neutrality. This kind of arrangement has two benefits:

1) It **allows consumers full control** and choice over their data plan and the access to the type of data they want to access, create and disseminate;

2) It gives ISPs better control over their traffic shaping exercises without harming the interests of the consumers and thus resolves the issue of network congestion to a considerable extent.

These broader principles can create a balance of power and responsibility between the three core stakeholders of internet i.e. consumers, ISPs/TSPs and content providers. We also suggest a **balanced mechanism** to be put in place, for all issues and grievances to be addressed of all the key stakeholders, for which a committee under TRAI could be created as mentioned below.

**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?).**

As per the rules of the US Federal Communications Commission ("FCC"), issued in February, 2015, it has been provided that:

*A person engaged in the provision of broadband Internet access service, insofar as such person is so engaged, shall not block lawful content, applications, services, or non-harmful devices, subject to reasonable network management.*

*A person engaged in the provision of broadband Internet access service, insofar as such person is so engaged, shall not impair or degrade lawful Internet traffic on the basis of Internet content, application, or service, or use of a non-harmful device, subject to reasonable network management.*

*A person engaged in the provision of broadband Internet access service, insofar as such person is so engaged, shall not engage in paid prioritisation. "Paid prioritisation" refers to the management of a broadband provider's network to directly or indirectly favour some traffic over other traffic, including through use of techniques such as traffic shaping, prioritisation, resource reservation, or other forms of preferential traffic management, either (a) in exchange for consideration (monetary or otherwise) from a third party, or (b) to benefit an affiliated entity.*

The Body of European Regulators for Electronic Communications guidelines dated 30.8.2016 ("BEREC Guidelines") on the Implementation by National Regulators of European Net Neutrality Rules provide that the providers of internet access services shall treat all traffic equally, when providing internet access services, without discrimination, restriction or interference, and irrespective of the sender and receiver, the content accessed or distributed,

the applications or services used or provided, or the terminal equipment used. It also identifies practises involving technical discrimination where an ISP blocks, slows down, restricts, interferes with, degrades or discriminates access to specific content, one or more applications (or categories thereof).

On the basis of above regulatory perspective, the harmful practices i.e. like blocking, throttling and improper (paid or otherwise) prioritization may not be permitted and should be seen in the context. These are grey areas and need to be defined **so that reasonable commercial use is not mistaken as any of the harmful practices.**

If the basic principles of non-discriminatory access as suggested in the aforesaid answers are followed and further a system where user herself has the control over the usage of type of data content that is being utilised is created, then the issues of blocking, throttling and Preferential treatment will hardly be a matter of concern and the need for it may be eliminated subject to exceptional circumstances. TMPs applied in the exceptional circumstances should be dealt on a case to case basis and seen in the light of certain established core principles of Net Neutrality.

**We cannot follow a UK based method in India** wherein competition is allowed to determine the impact of TMPs as the competition in India is limited to a few ISPs. As per the TRAI report of December 2016, though there are over 125 ISPs registered in the country, 10 ISPs have a whopping 98.46% of market share which shows that we cannot let the rules of free market decide if the above mentioned principles are being followed. Thus, creation of a certain mechanism would be tactful and prudent.

**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.**

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

*(Combined Answer for Question 9 and 10)*

For the reasons mentioned in the earlier answer, a Committee under TRAI may be created for 'Technical Resource Research and Monitoring' which should have a diverse representation and not be limited to only government officials. Such a committee should comprise / consist of representatives from each sphere such as government office, civil society, consumer groups, bureaucrats, Internet Rights Activists groups (having policy experience) and



computer science/engineering experts etc. This committee should have the responsibility to monitor internet practices, foster research in the field to develop best practices in TMPs, audit the report of TMPs submitted by the ISPs (to be explained further) and interact with consumers to generate feedback, resolve complaints of the consumers and create awareness about internet regulations. The committee can have the similar powers as that of TRAI to penalise the ISPs if they are following unreasonable TMPs. For this there would be no requirement of a new legislation as, it is well within the powers of TRAI to create this new sub-committee and delegate/share certain powers available with the authority.

The committee should derive its powers from the TRAI itself and should adopt regulatory methods to ensure compliance of the core principles of Net Neutrality by the TSPs. However, the regulatory methods adopted by such a committee should not be rigid in nature but flexible keeping in mind that Internet is an evolving / ever-changing concept. The committee should be able to constantly upgrade and adopt practices suitable to the network industry providing scope for innovation and growth and competition.

**To foster transparency, a combination of all the practices as mentioned in the question can be taken.** At the time of purchase of data plan, the user should be made aware of the TMPs that are in-built in the package in the simplest possible manner. Taking a cue from the Code of Practice on Traffic Management Transparency in UK, the information provided should be understandable, appropriate, accessible, current, comparable and verifiable. Table 5.1 suggested by TRAI in the Consultation Paper has all these elements. **An additional element of Data Caps and Downloading Limits per package (based on the data type) can be further added to make the Information Disclosure more comprehensive.**

A system / mechanism may be adopted by the TSPs/ISPs wherein an alert is provided to the user/consumer whenever **TMPs are exercised under exceptional circumstances.** Furthermore, this alert may carry the information regarding the reason as to why this is an exceptional circumstance and to what extent speed has been throttled or internet access denied. User should have the right to file a complaint with if unsatisfied by the said explanation provided. A complaint redressal mechanism can henceforth be created wherein particulars such as resolution of complaint in within a particular period etc. are looked into. User should have the right to file a complaint with the ISPs if she is unsatisfied with the explanation provided by the ISP. In case the complaint is not resolved in particular number of days (which can be decided in the sub-committee), this complaint should be referred to the sub-committee which can then form a consensus based opinion as to whether the TMPs applied were unwarranted or not. On the basis of the extent of the impact, the sub-committee could either admonish the ISPs or penalise the operator. As the sub-committee would be having representatives from across the aisle, we may be ensured that the bias would be minimised.

This two tier method has two benefits: 1) **It does not overly regulate the ISPs** and give them certain level of freedom to deal with the customers on one-to-one basis under their broader goal of customer satisfaction. 2) **It gives power to the consumers** to have a proper redressal mechanism if she feels that ISPs are using unreasonable practices.

Moreover, ISPs should submit a quarterly report of the TMPs applied in the various exceptional circumstances, other than the one agreed upon by the user, to be audited by the sub-committee. This will provide sub-committee with enough literature to derive broader principles of TMPs in practice which can, then, be further revisited at the end of tenure of each sub-committee as internet is a dynamic field. This mechanism will make sure that the regulatory structure is not static and it meets the demand of the dynamism which internet has.

**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).**

**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?**

**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?**

*(Combined Answer of Question 11, 12 and 13)*

It is important to understand that for this suggested system of checks and balances to work effectively, **education of the consumers** is very important as the consumers play a vital role in the entire chain and they are the ultimate bearer of the cost burden. **Without consumer awareness, it would not be possible to create a system which is equitably distributed.** For example, if the total access line speed being provided in one home is 20 Mbps and there are four different devices that are being used, it is obvious the speed would be divided between the four devices. Now, the speed to each device will also depend on the type of operating system of the device. If a mobile phone, cannot support more than 2 Mbps speed while a laptop can, it is obvious that speed in laptop will be more than the speed accessed in the laptop. **These conceptual details have to be explained to the consumers**, so that the grievance redressal system is not overwhelmed with complaints. As much as feedback is important, we need to make sure that the **feedback is based on an informed experience.** The Quality of Service is bound to be impacted due to the factors mentioned above. Various ISPs/TSPs might take the advantage of the fact that the consumer is completely unaware and

adopt in-discriminatory practices. Therefore, pro-active consumer awareness campaigns organised across the country are important for few years until we reach a stage where consumer is more aware of its rights, and there is enough competition to eliminate market deformities.

Further, various aspects have to be looked into, mainly the three i.e. the creation, funding and tariff of the infrastructure when considering the application of Net Neutrality in the Indian context. Also, various factors such as exclusion of objectionable content or essential services will also have to be separately considered at greater length to draw a line between where the access is essentially in-discriminatory. **Though, this idea may border on moral policing, but we need to understand it from the 'equitable' framework.** For example, access to MNREGA website is more important than access to the adult content. Thus we need to have a clear understanding of what is objectionable and **to what extent the access to it can be preferable to the access to the content which is essential in nature.**

Further, a more dynamic method which could also be adopted is introducing the questionnaires on QoE (Quality of Experience), as suggested by TRAI to gather feedback. This questionnaire can have basic format which will rate the Quality of Experience on the basis of speed, content, and any incidents of delay in access etc. The more granular form of it can be decided by the committee or TRAI itself to keep this questionnaire current in nature. Depending on the resources, this feedback can be taken bi-annually or annually in co-ordination ISPs. The expenses and the data can be shared with ISPs for the resources here as this will also help individual ISPs in their customer satisfaction data. **However we need to make a very important distinction between QoS (Quality of Services, for which minimum standards has been suggested by TRAI already) and QoE (Quality of Experience).** QoE can be very subjective in nature, as for an individual who may be, has been brought up in developed countries and has now come to India and is accessing internet, will most probably that not, rate the QoE bad or average due to the lower average speed of broadband in the country. We need to see that QoS provided by the ISPs are in resonance with the guidelines of minimum standards mentioned by TRAI.

Moreover, we need to remember that **Net Neutrality in particular and internet, in general, is not a static concept and the same being evolutionary in nature**, a pragmatic balanced approach should be adopted. We need to make sure that these regulations do not have adverse consequences for the creativity which internet envisages.

Therefore, it is vital to lay down the guiding principles which would allow the TSPs/ISPs the much required flexibility to manage their services only to the extent of carrying out the necessary traffic management practices without hampering the ideology of open internet and not being restrictive to other start-ups etc. It is indeed quite a challenge to strike a balance between giving the ISPs/TSPs the space to enhance, better their services and also to innovate,

however, at the same time preventing them to dominate and interfere with the consumer choices.

In view thereof, the government/authority has to lay down some necessary parameters of defining what all is included or excluded from the purview of traffic management. To what extent essential services or emergency services should be given priority over other content that flows on the internet? **The mechanics and details of the same can be dealt by the committee or TRAI itself however; the demarcation should be set out by the government authority itself.**

Henceforth, the regulator should regulate by function and not the type of technology or infrastructure that is being used. The regulatory framework should follow principles that seek to promote transparency, innovation and policy reform.

We are also in favour of continuous monitoring of the laid out regulations so that there can be periodic refinement of the said regulations. The said is necessary as stated by us earlier that both Net Neutrality and internet are not a static concepts and need constant up-gradation to keep up with the changing times and needs.

**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.**

We need to understand that the QoS is bound to be impacted due to the factors mentioned above. The data stated earlier on 94% people accessing internet on mobiles and the factor of a relatively unaware consumers (as seen in the issue of Net Neutrality in the beginning) due to the extremely complicated system of internet regulation, we would be encountering issues where certain ISPs might take the advantage of these factors. Here the role of sub-committee kicks in. It needs to make sure that there are consumer awareness campaigns organised across the country on the lines of consumer rights campaign. Moreover, this sub-committee will have to be more proactive in the beginning few years until we reach a stage where consumer is more aware of its rights, and there is enough competition to eliminate market deformities. The QoS standards for mobile could be defined by the sub-committee in concurrence with various stakeholders on an average access line speed basis because the type of mobiles that are used across the country varies considerably. Depending on the type of technology, in-built capacity etc, certain broad quality control measures can be devised, for which the similar process of complaint readdressal should be utilised.

- **Licensing:** Restriction should only be done by a government authority, as in this case, it could be the sub-committee on the internet.
- **Discriminatory Tariffs for Data Services Regulations, 2016** - We are also in favour of the Prohibition of Discriminatory Tariffs for Data Services Regulations, 2016, however,

the same should be subject to continuous monitoring. The committee created under the shadow of the TRAI shall play a pivotal role in carrying out such monitoring activities.

---