

24 March 2015

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Telecom Regulatory Authority of India
Mahanagar Doosanchar Bhawan
Jawahar Lal Nehru Marg
New Delhi 110002

Subject: **Response on TRAI Consultation Paper on Regulatory Framework for Over-the-top (OTT) services (02/2015)**


Dear Sir,

Please find enclosed our comments on the consultation paper subjected above.

We hope that the Authority will find our response useful and consider our inputs while formulating the recommendation on the subject.

Thanking you,

Yours sincerely,
For **Telewings Communications Services Private Limited**



(Pankaj Sharma)
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Telewings submissions on
TRAI Consultation paper on Regulatory Framework for Over-the-top (OTT)
Services (02/2015)

Preamble

Telewings welcomes TRAI's initiative on seeking comments from various stakeholders to understand the issues around the communication OTT services and assess the need of any regulation/ law on net neutrality through this consultation paper.

The mobile communications industry in India is a dynamic industry that is evolving not only in terms of the technology and operational aspects of the network, but also in terms of the range of offers and services to consumers and associated business models. The networks are still in the expansion phase for data capabilities and significant investments are to be made over the next 2 -3 years to meet the ever exploding data demand. In considering options for the development of regulatory frameworks for OTTs or Net Neutrality, it is imperative to ensure that **there should not be any adverse impact on the significant contribution in innovation and investment of licensed mobile network operators (L-TSPs) in India.**

OTT Services are changing competitive landscape – “Regulatory equality” is necessary to level the playing field

With changing times, social media and related content & applications have gained significant popularity among mobile customers. This technological shift has immensely benefited mobile consumers with better, more interactive & cheaper communication platform. The mode of the communication has become 'social' (one-to-many) and with the digitisation of content, the data consumption has increased exponentially in the last two years. However, despite the shift in the competitive landscape with the advent of OTT services, the existing regulatory framework is still too focused on the Licensed Telecom Service Providers (L-TSPs). Hence, an equal regulatory treatment of all type of service providers – L-TSPs, ASPs and OTTs will be key to encouraging and incentivising the huge investments in this important sector.

Presently, there are various types of OTTs which can be broadly classified into three categories:

- Content providers (text, video)
- Communication OTT providers (Instant messaging, Voice call, Video call,)
- M2M, IoT service providers

The communication OTT players have developed an asset-light business model for delivery of services to the end telecom users, but they lack interoperability from one application to another. On the other hand, L-TSPs have invested heavily in acquisition of spectrum and building the network infrastructure which are key to delivery of communication services to the end user. In our opinion both are complementary to each other provided that the regulatory imbalances are ironed out.

In order to reap the benefits of technological advancements and economies of scale, **there is a need of regulatory equality for ensuring level playing field.** We also recommend that the regulator's focus should be towards removal of impediments to capacity building in Access network and faster rollout of broadband services through:

- availability of adequate spectrum at reasonable cost,
- harmonisation of already allocated frequencies for better spectral efficiencies.

- associated clearances and resources from the government for network rollout viz microwave frequency.
- national level policy on right of way
- early release of spectrum trading and spectrum sharing guidelines in line with TRAI recommendations to possibly ease spectrum scarcity
- uniform levies and taxes viz flat SUC, abolishment of USOF etc.
- an incentive scheme for rollout of broadband using various methods of claw back of the levies and taxes paid

We believe that this will go a long way towards reducing regulatory imbalances in the service delivery eco system.

Regulatory flexibility for operators is also necessary to incentivise continued investment in networks, innovation in services and affordable tariffs to consumers. L-TSPs specific obligations should be minimised and replaced with horizontal regulations that apply to all providers. Competitive analysis should consider the impact of Internet platforms and OTTs in assessing market power. L-TSPs should be encouraged to enter into commercial arrangements with OTTs and experimenting with new services and associated business models as other entities in the broader Internet ecosystem.

We recommend that a broad regulatory framework based on the principle of “**same service, same rule**” to players of every hue should be promoted for ensuring level playing field. Such framework will ensure sustainable competition, safeguard network investments and will enable well balanced regulatory environment for all players in the digital eco system irrespective of using any technology to deliver content & applications through internet to the end customers. This kind of environment will benefit the consumers in terms of better customer experience, innovative offering and quality of service.

Net Neutrality - Equal Internet access to all

In India, the mobile market is characterised by intense competition coupled with lowest tariffs. The Licensed Telecom Service Providers (L-TSPs) are offering wide choice of Internet related services and options to suit particular needs and interests of various segments of the customers. This demonstrates that market forces are working well and existing competition & regulatory frameworks are sufficient to ensure a competitive market.

In India, Internet growth has just begun and YoY growth projections in the media portrays a myopic view as the present internet user subs base is small. The immediate priority in India, where majority of the population has no data connectivity, is for rolling out networks and reach to the next 1 billion of the population with internet connectivity, rather than continue to debate on the concepts and issues of Net neutrality which are at its nascent stage and beginning to be defined globally.

Telewings has taken a market position of “Sabse Sasta” offering to the mass market and believes in internet access to all i.e. an internet where customers can access the content and services of their choice and there are no restrictions in the services that operators can make available to end-users - **delivering value and choices for consumers.**

Traffic management is an essential function of mobile networks to manage the growing volumes of data traffic, to protect network and customers from malware/ denial of service, safe on-line experience for children, prioritizing emergency services, prioritizing time-critical

services in IOT space, manage subscriptions to cap data consumption costs, choice for consumers through multiple tariffs, block or monitor traffic as per legal directives and to meet the performance expectations of the different traffic types to ensure better experiences for all consumers. The regulations that prohibit traffic management or prescribe a limited set of permissible cases are not future-proof and will have unintended consequences for innovation and investments. We hope TRAI will recognize the importance of traffic management for efficient network management and service delivery, and the increased need for such practices as networks and services become more complex.

Any restrictive regulation on net neutrality will restrict the flexibility of L-TSPs to develop and offer bundled services based on market segmentation in order to enhance users' options and increase choice between different providers. India being a developing country, there is a need to educate un-served / under-served customers for the relevance of Internet services, which can be achieved by offering relevant services free for a limited period or encourage usage adoption with zero rentals which is within the ambit of existing regulations. Thus, such zero rating offers/ sponsored data usage schemes benefit consumers and should be reviewed on case to case basis. The US regulator "Federal Communications Commission" (FCC) vide its Internet Order dt. 26.02.15 has noted that such schemes in some instances provide benefits to consumers, increases their choice and lower the cost. Considering this, FCC has decided to look at and assess such practices under the no-unreasonable interference/ disadvantage standard, based on the facts of each individual case, and take action as necessary.

In order to reap the benefits of technological advancements and economies of scale, instead of putting more regulatory boundaries, **there is a need of adopting the regulatory equality approach for ensuring level playing field and access to internet by all.**

The context of keeping net neutral and the whole debate around the net neutrality has been overshadowed by few groups of individuals through social networks which seem to be emotive in nature and is not leading to any rational and logical discussion. Therefore, there is need for a structured, rational and logical discussion on the topic of net neutrality. We request TRAI to review the necessity of having any framework on net neutrality after taking due inputs from all the stakeholders in line with above submissions.

Uninor initiative "Internet for all" and safe internet – Internet access for unconnected to improve lives, build societies and better future for all

The key objective of this initiative is to educate the unconnected populace about the socio-economic benefits of the internet which we believe is a catalyst for the growth and development of the common man and society at large. In this regard, Uninor being a responsible telecom operator has taken several campaigns and offerings to promote "Internet for all" for a social cause and provide affordable basic Internet access that is built for the many, not just a few. With these campaigns and social interactions, we have experienced, how power of internet has brought changes in the lives of unconnected especially in rural & remote areas and helping them to lead a better life, enabling empowered societies. Uninor is also making sincere efforts not only for making available Internet to the masses but also ensure a Safe Internet.

In view of the above, we believe that the access to internet for unconnected is the most important factor for the success of "Digital India" initiative of the Government. Therefore,

apart from open internet, Internet for all and safe internet should also be important part of agenda of all stakeholders.

Telewings response to the issues raised in the consultation paper

Question 1: Is it too early to establish a regulatory framework for OTT services, since internet penetration is still evolving, access speeds are generally low and there is limited coverage of high-speed broadband in the country? Or, should some beginning be made now with a regulatory framework that could be adapted to changes in the future? Please comment with justifications.

Telewings Response:

It is a well established fact that communication is an essential infrastructure for socio-economic development in an increasingly knowledge intensive society. The reach of telecom services including broadband services to all parts of the country is integral to the development of an innovative and technologically driven society. Studies have shown that there is a more than positive correlation between the penetration of Internet & Mobile Services and the growth of GDP of a country. We do agree that despite the fact that India being a second largest telecom network in the world, next only to China, presently the broadband penetration in India is not up to the mark. However, mobile internet & broadband has started gaining momentum due to the advent of 3G and 4G technologies, proliferation of smart phones (~ 18 - 20%) and availability of relevant applications and contents. The rise of social media and e-commerce related activities is also contributing in increasing mobile internet penetration and data usage.

Thus, some beginning should be made in this area by implementing broad regulatory framework based on the equality principle of “**same service, same rule**”. However understanding the pros and cons of regulation vis-a-vis non-regulation and their consequences is important. It must also be noted that any changes to existing regulation should not restrict market development and ability of L-TSPs to offer innovative products / services for meeting varied needs of consumers.

Question 2: Should the OTT players offering communication services (voice, messaging and video call services) through applications (resident either in the country or outside) be brought under the licensing regime? Please comment with justifications.

Telewings Response:

Communication OTT services are making inroads into the domain of licensed telecom companies by offering communication options (voice, message, video, chat, instant messaging) through applications. They have an inherent asset light structure and are not under any obligation of taxes and levies which are imposed on licensed telecom service providers ‘L-TSP’ for the similar bouquet of communication services.

The other licensing obligations, reporting requirements and regulatory costs are not obligated on these communication OTT players, thus creating an un-level playing field vis-a-vis the licensed telecom service providers ‘L-TSP’.

Indian licensed telecom service providers are operating under telecom license and they have to ensure compliance to all license conditions (like lawful interception & monitoring of

contents, privacy and security conditions, installation of servers within the geographical boundaries of the country, access to emergency numbers etc) at all the times during the tenure of license period. L-TSPs need to acquire spectrum separately through auction by paying hefty amount for offering telecom services coupled with rollout obligation within a stipulated time period. In addition to this, L-TSPs are liable to other regulatory cost / taxes in terms of license fee, spectrum usage charges, revenue contribution towards USOF, corporate taxes etc. For any non-compliance to these license conditions, L-TSPs are being imposed financial penalties / penal actions. Further, licensed telecom companies need to upgrade their networks on regular basis to ensure compliance to Quality of service benchmarks, Unsolicited Commercial Communications (SPAM/ DND filtering), etc. which requires substantial investments. Further, there are obligations on switching of domestic calls within the service area and routing of international calls/messages through International Gateways, besides restrictions on sending user information abroad. All these license conditions have been bypassed by the OTTs while delivering an array of communication and content services over the top of a L-TSPs mobile network without the L-TSPs being informed.

While the L-TSPs have sought prior approval of Licensor before launch of any communication services and duly demonstrated its capability of LI to LEAs, no such approval/clearance has ever been sought by communication OTTs.

We recommend that TRAI should focus its efforts towards regulatory equality between L-TSPs and OTTs enabling L-TSPs to offer such communication OTT services with all flexibility that present technology has to offer. Certain levies like USOF may also be abolished as they have outlived their utility.

This equality can be achieved by implementing 'Same Service Same Rule' and the very minimum bring all communication service providers (L-TSP and OTT) under uniform obligations for consumer protection, lawful intercept, data protection, retention and privacy, service security, reliability, emergency services and local taxes.

The US regulator FCC has released Internet Order dated 26 Feb'14 which mandates service providers to ensure compliance to three bright line rules – No Blocking, No Throttling and No Paid Prioritization in order to protect the open internet access. In this regard, it is important to reiterate the below statement of FCC Chairman, Tom Wheeler that *"These enforceable, bright-line rules assure the rights of Internet users to go where they want, when they want, and the rights of innovators to introduce new products without asking anyone's permission"*. FCC has also given flexibility to service providers in their Internet Order. Some of them are listed below:

- TSPs are allowed to implement reasonable traffic management techniques.
- Tariff forbearance & no filing requirements, Zero rating schemes to be reviewed on case to case basis before launch.
- No contribution to USO fund, exemption from state & local taxation under the Internet Freedom Act.

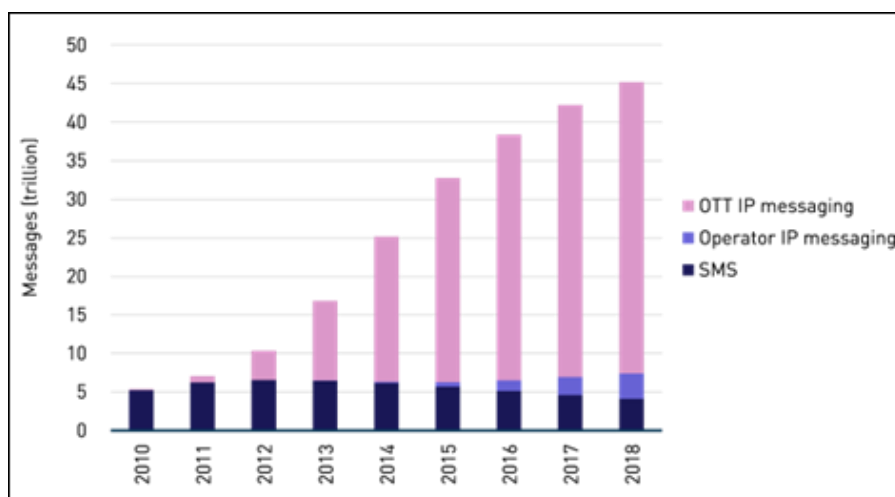
It is recommended that similar flexibility is essential for L-TSPs for innovation and to protect their investments. This is in line with the objectives of NTP-12 and will create a level-playing field for both communication OTT providers & L-TSP.

Question 3: Is the growth of OTT impacting the traditional revenue stream of TSPs? If so, is the increase in data revenues of the TSPs sufficient to compensate for this impact? Please comment with reasons.

Telewings Response:

It is evident that communication OTT players have significantly impacted 'conventional' telecom service providers not just globally but also in India. The stupendous growth of OTT services are mainly supported by growing demand of smart phones, advancement in technologies, availability of internet banking platform, and most important is offering of alternate, interactive and cheap option to traditional voice and messaging services to the consumers. But, it has direct impact on the L-TSPs traditional voice and messaging services which are licensed within the scope of our Licenses.

It is well documented that the L-TSPs SMS revenues have seen a marked decline, very much due to its substitution by OTT messaging services such as WhatsApp, WeChat, Hike, Others. TRAI has mentioned in the paper that due to the advent of OTT communication services, there is a decline in the messaging traffic from 5346 million in Jun'13 to 4367 million in Jun'14 leading to implication of approximately Rs 4000 crs per annum alone from the decline in SMS revenue. In another illustration (refer below chart) of Malaysian telecom market, the similar trend is observed.



Source: Analysys Mason, 2014

The above trend shows how OTT services are having significant disruption to the existing business of L-TSPs and could substantially derail investment capability. In case of Uninor the fall in SMS traffic is 26% for the period QE Mar'14 to QE Dec'14.

These OTT communication services are also making substantial loss of revenue for the Government exchequer. The loss of government value add due to fall in SMS traffic alone at the overall Industry level is a matter of research and may be an eye opener.

India being a predominantly mobile telephony market having around 97% mobile users coupled with more than 83% of Indian internet users accessing the internet through their mobile devices, has enabled explosive growth of OTT services. There is no doubt that with the growth social networks there is an uptake in data usage. However, with the emergence of OTT services, L-TSPs are losing not only their traditional voice & SMS revenue but also the VAS revenues as consumers have direct access to OTT services & applications.

Moreover, L-TSPs are investing enormous money in acquiring the spectrum, building & continuous up gradation of the networks (both capacity & coverage) for meeting the growing data demands of the customer. L-TSPs have constant pressure from regulator for ensuring compliance to quality of service benchmarks which entails availability of adequate resources and investment. L-TSPs also have to invest sufficient funds on OPEX. On the contrary, the OTTs business model has completely delinked services from network. If encouraged, this will dis-incentivise CAPEX investments in network rollout.

For instance, in case of Uninor, the growth in SMS traffic during 2013 is stagnated in the year 2014 due to more usage of OTT services for communication and opportunity loss of revenue has not been compensated by growth in Data services.

This decline in revenues brings about challenges to continued CAPEX investment in network expansion in rural underserved markets. At a national level this would consequently pose a threat to the level of investments which are required to deliver increasing coverage and quality demanded by the remaining 75% of the mobile customers who have not yet experienced the data world. These OTT players are commercial entities and they have advertisement and valuation based revenue models which are driven by Indian consumers. An example to quote from the consultation paper (para 2.29) - Whatsapp has a subscriber base of ~700 mn monthly active users globally, delivering 30 Billion messages each day. Out of which ~70 mn users are from India accounting of 10% of the total user base. Considering the growth potential of revenue/ valuation from these Indian consumers to these commercial entities, it is essential that the benefits of the same should be extended to the customers. Thus, the OTT players and L-TSPs should be allowed to establish mutually negotiated commercial arrangements for sharing revenue and costs.

[Question 4: Should the OTT players pay for use of the TSPs network over and above data charges paid by consumers? If yes, what pricing options can be adopted? Could such options include prices based on bandwidth consumption? Can prices be used as a means of product/service differentiation? Please comment with justifications.](#)

Telewings Response:

The relationship between OTT players and L-TSPs should be left to the market forces and best served by mutual negotiations.

At the very least the cost of regulatory compliances, taxes and levies should be recovered back to back from the OTT service providers. Any regulatory obligation on OTTs to pay would be going too far. Instead Regulator should recommend broad regulatory framework for ensuring a level playing field for both parties to thrive in their business.

[Question 5: Do you agree that imbalances exist in the regulatory environment in the operation of OTT players? If so, what should be the framework to address these issues? How can the prevailing laws and regulations be applied to OTT players \(who operate in the virtual world\) and compliance enforced? What could be the impact on the economy? Please comment with justifications.](#)

Telewings Response:

In India, there are no obligations under jurisdictional laws on OTT players for ensuring protection of consumer interest, lawful intercepts, data protection, privacy, service quality etc. OTT players collecting revenues from consumers may not be subjected to local taxes as they

operate over the net. Whereas, the licensed Telecom Service Providers are subject to all jurisdictional, licensing and regulatory obligations. Thereby, making OTT services much cheaper than the traditional communication services. The current modus operandi of OTT services lead to regulatory imbalances, bypassing local laws/ policies which need to comply while doing business, circumvention of local taxation obligations, channelling away taxable revenues and profits from 'conventional' service providers thus denying the government of legitimate tax revenues and raises security issues which needs to be addressed by the Government for ensuring level playing field for both L-TSPs and OTT players.

As mentioned earlier, since OTT communications services are provided on TSPs mobile network and are having direct bearing on the L-TSPs revenue, hence in order to have level playing field, equality principle of "same service, same rule" should be made applicable. We recommend that TRAI should focus towards reducing the regulatory asymmetry enabling L-TSPs to offer such OTT services with all flexibility that present technology has to offer. The license conditions should be suitably modified so that L-TSPs can offer services from a common server hosting applications offering services globally from one location and achieve economies of scale. The concerns of the security agencies will be adequately addressed when OTT services are offered by L-TSPs and the same should also be applicable to standalone OTTs. Similarly, while offering services, OTT players should also be mandated to comply with various licensing conditions (like LI, availability of customer data/ transactions as and when required by LEAs, privacy & confidentiality of customer information, QoS, tariff orders etc.) by virtue of entering into the bilateral commercial arrangements with L-TSPs.

In view of the above explanations, we call upon the Regulator for **Regulatory Equality for all licensed communication services under the Telegraph Act** to maintain **level playing field**.

Question 6: How should the security concerns be addressed with regard to OTT players providing communication services? What security conditions such as maintaining data records, logs etc. Need to be mandated for such OTT players? And, how can compliance with these conditions be ensured if the applications of such OTT players reside outside the country? Please comment with justifications.

Question 7: How should the OTT players offering app services ensure security, safety and privacy of the consumer? How should they ensure protection of consumer interest? Please comment with justifications.

Telewings Response to Q6 & Q7:

National security is paramount, it is uniformly obligated on any citizen / organization providing services in India. Any lapses on this account will have serious implication on the ordinary citizen as well as compromise national security.

In case of OTT service providers, they are not obligated to any jurisdictional laws in India. As a commercial organisation benefiting from providing services to citizens of India, they should submit to jurisdictional laws of India.

Internet based services provide anonymity to a user in terms of his/her age, identity, address, thus is a threat to national security. For instance, Internet telephony does not follow standard protocol, as is essential in the traditional voice services through GSM, thereby making extremely difficult for LEAs to track the source of internet calls. Similarly, in case of messaging, it becomes difficult for LEAs to intercept the same due to non-availability of

encryption keys. Therefore, we recommend that all **OTT service providers should ensure traceability of users at all times.**

Similarly, the confidentiality and privacy of the customer data is also an important obligation and a matter of concern from national security perspective because of the 'open' architecture of the Internet. In case of OTT services, there is no visibility that whether consent is being sought from the end user at the time of installation / subscription of the OTT services or not for using his/ her personal information, how such data is being collected and processed for what all purposes. There is a need for greater transparency at OTTs end while handling the end user information. It is suggested that OTT players should have privacy policy clearly depicting the process of dealing with these concerns and same should be shared with the end users as well as publish the policy on their respective websites for the information and transparency purposes.

The above objectives may be best served if the L-TSPs are allowed to deploy their networks and application layers in a flexible manner, so that they can compete by offering application based services and at the same time comply to Indian security conditions as per license.

[Question 8: In what manner can the proposals for a regulatory framework for OTTs in India draw from those of ETNO, referred to in para 4.23 or the best practices summarised in para 4.29? And, what practices should be proscribed by regulatory fiat? Please comment with justifications.](#)

Telewings Response:

Currently, all OTT services are generally being allowed uniform access across the networks without paying any network usage charges. However, in given circumstances, the way OTT services are growing and impacting L-TSPs revenues, there is a need to put a broad regulatory framework under the equality principle of 'Same Service Same rule' for communication OTT services ensuring removing or decreasing the regulatory imbalances.

[Question 9: What are your views on net-neutrality in the Indian context? How should the various principles discussed in para 5.47 be dealt with? Please comment with justifications.](#)

Telewings Response:

There are several interpretations of the term "Net Neutrality". The strict interpretation that all data is equal has given way to the more realistic view that networks carry different types of traffic and therefore prohibiting traffic management practices can be counter-productive.

A broader view of the term "Net Neutrality" refers to the principle that the internet should be an open platform for freedom of expression, innovation and socio-economic development. Mobile operators are committed to maintaining the open internet. Managing network traffic and offering different service packages do not contradict this belief in the open internet. Without managing data traffic, operators cannot efficiently meet consumers' demands to access different types of applications and services through their mobile connections. Forcing them, through Net Neutrality regulations, to be detached from their network traffic is neither operationally practical nor necessary.

Net neutrality should be addressed in the context of capacity of networks (2G/3G/4G) for carrying the internet traffic, mode of delivery (wireless/wireline/ cable/ satellite) and maturity of the networks at industry and national level.

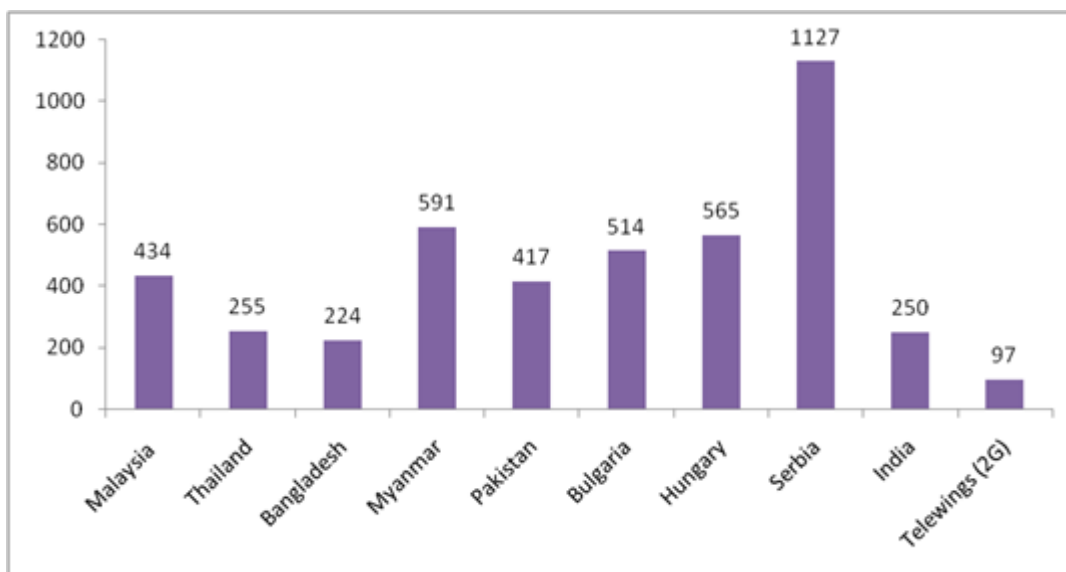
India is a market where the entire country is yet to reap the benefit of mobile coverage. The immediate priority in India, where 80% of the population has no data connectivity, is to ensure access to data service for the unconnected through broadband network rollout, rather than continue to debate on the concepts and issues of Net Neutrality which are only beginning to be defined globally. As a country our vision should be to provide basic internet to every citizen so that they can access -

- e-government sites,
- mobile financial services for financial inclusion,
- utility bill payment
- train ticket booking through IRCTC portal,
- weather forecast information for agriculture
- citizen services
- distance learning
- universal education
- examination results
- Government complaint portals and many such citizen services.

These application based services are part of their social life and require basic internet (low bandwidth) to access these services. It should be the endeavor of the Regulator to make available the public information and government services “anytime, anywhere”.

Therefore, it is high time we prioritize the connectivity for all the villages of India to ensure availability of basic internet services.

In India, the mobile market is characterised by intense competition coupled with lowest tariffs in both voice and data services (refer below chart depicting 3G price comparison across Telenor business units). The Licensed Telecom Service Providers (L-TSPs) are offering wide choice of Internet related services and options to suit particular needs and interests of various segments of the customers. This demonstrates that market forces are working well and existing competition & regulatory frameworks are sufficient to ensure a competitive market.



1GB data charges (in INR) basis cheapest offers available in above markets for 3G data services

Any regulation that restrict the flexibility of L-TSPs to offer a combination of services packaged for various segments of the customers, will not be good for future growth and development of this important sector. This will be akin to retail pricing regulation. There is a need to educate un-served / under-served customers for the relevance of Internet services, which can be achieved by offering relevant services for a limited trial period which is within the ambit of existing regulations. Thus, such zero rating offers/ sponsored data usage schemes benefits consumers at lower cost as well as encourage internet adoption and each scheme should be individually reviewed & allowed on case to case basis.

Telewings has taken a market position of “Sabse Sasta” offering to the mass market and believes in the internet access to all i.e. an internet where customers can access the content and services of their choice and there are no restrictions in the services that operators can make available to end-users. We support an open and innovative Internet enabling equal access to all with reasonable traffic management for managing traffic congestion, prioritize time-critical services and optimise performance of various applications as a part of normal operational activity.

In order to reap the benefits of technological advancements and economies of scale, instead of putting more regulatory boundaries, **there is need of adopting the regulatory equality approach for ensuring level playing field and access to internet by all.**

Question 10: What forms of discrimination or traffic management practices are reasonable and consistent with a pragmatic approach? What should or can be permitted? Please comment with justifications.

Telewings Response:

Traffic management is an integral part of network operations, especially on mobile networks. With finite network capacity, mobile networks experience congestion. This may arise due to seasonal traffic load (e.g. New Year celebrations), unexpected events (e.g. major road accident) and high data downloads (e.g. watching cricket matches on mobile phones). Traffic management may result in constraining the capacity allocated to certain types of traffic (e.g., video streaming traffic) to ensure that they do not overload the network. This is an essential mechanism to prevent the network from failing during traffic peaks, and to ensure access to essential emergency services and uniform experience for all customers. Not doing so would result in time-critical services not being delivered within the expected performance bounds.

Traffic management measures help balance the network resource usage of bandwidth-heavy applications (e.g. video streaming) versus time-sensitive applications (e.g. remote alarm monitoring). They also help with optimisation of content delivery by adapting the parameters to the network and device conditions; for example, the bit rate and the format (size) of a video clip is optimised to the network condition and device type to deliver a “less-jittery” performance to the consumer. This also reduces unnecessary data consumption costs.

In addition to managing increasing volumes, networks also have to consider the performance characteristics of different services. For example, video streaming services consume inordinate amounts of network bandwidth – a lot more than downloading emails or searching for information – and can result in degraded experience to all users, if traffic is not managed. Cisco forecasts video traffic will be 72% of global mobile data traffic by 2019, compared to 55% at the end of 2014. Bandwidth hogging video traffic/ gaming/ file sharing

P-P connections will be an important factor in network investments and network management.

Traffic management does not imply blocking of a specific content or application provider on the network. On the contrary, active management of network resources makes the consumer experience better and makes networks more efficient, allowing operators to secure their networks, prioritize time-critical services and match scarce network resources to service requirements

Our endeavour is to provide best possible voice and data experience to our customers. However, in case of any traffic congestion due to the data hogging applications, we are within our right to implement reasonable traffic management practices. Further, it is also important that for users the value of Internet access depends on access to the content & services of their choice, regardless of the device they are using. For example, let assume that there are 100 data users using different data applications & services as per their requirements in the network at any point of time. Some of the users are using data hogging applications like you tube, movie download etc due to which traffic congestion is experienced in terms of slow internet access speed by other users who may be using very little bandwidth applications like email, railway ticket booking etc. Therefore, traffic management is critical to deliver the quality that all users of the Internet expect and require.

Traffic management is also needed to enable the network to prioritise near real time services over non real time services, as well as enabling the delivery of differentiated services providing different levels of quality of service. For instance, the traffic management will become even more essential when M2M and IOT related applications will be operational in the country. Although these applications are consuming low bandwidth but due to the nature of near real time communication is important, reasonable traffic management practices have to be applied for a successful completion of the communication between two devices/ machines within the specified timeframe. Similar traffic management is required for applications such as Tele-medicine, disaster management, whether forecast etc.

Traffic management is also necessary to protect the personal integrity and security of users, for example against denial of service attacks and the spreading of unsolicited emails.

In view of above explanation, there should be enough flexibility to L-TSPs to manage traffic congestion, unsolicited traffic and optimise performance of the various applications as part of normal operation by using appropriate and reasonable traffic management measures when data volume surge for ensuring consistent user experience. However, L-TSPs to ensure that there should not be any competitive blocking or throttling of services, content or applications as well as no unjustified discrimination of content or services.

We recommend, following practices on traffic management should be considered for ensuring open internet access to all consumers:

- For the single type of service, the traffic should not be discriminated in favour of any single content provider rather there should be equal access to all content providers offering such service.
- There should be a separation between specialised Services and basic internet access services. L-TSPs should continue to offer “specialised Services” with a guaranteed quality, as long as it do not degrade or impair Internet access services. We believe that prohibiting such services will hinder the development of innovative services. The pricing and quality for these specialised services should be left to the

market forces due to heterogeneous consumer segments and availability of intense competition.

- L-TSPs currently using various techniques like data caps, speed throttling after exhausting committed data usage etc should be continued without any regulatory intervention considering the fact that such terms & conditions are being upfront informed to the customer at the time of subscription of data pack.

Question 11: Should the TSPs be mandated to publish various traffic management techniques used for different OTT applications? Is this a sufficient condition to ensure transparency and a fair regulatory regime?

Telewings Response:

The L-TSPs should have the freedom to provide consumers with the information that is relevant and meaningful so that they are aware of the characteristics of the services and the capacity they are buying. The regulator may provide guidance on transparency but should not mandate a particular approach.

Question 12: How should the conducive and balanced environment be created such that TSPs are able to invest in network infrastructure and CAPs are able to innovate and grow? Who should bear the network upgradation costs? Please comment with justifications.

Telewings Response:

In order to create conducive and balanced environment, “same service, same rule” based upon the principle of regulatory equality should be made applicable by decreasing the regulatory asymmetry enabling L-TSPs to offer such OTT services with all flexibility that present technology has to offer.

We believe that such environment will offer an equal opportunity to all stakeholders to innovate and create more value, while delivering the highest quality of services that meet consumer demands.

Question 13: Should TSPs be allowed to implement non-price based discrimination of services? If so, under what circumstances are such practices acceptable? What restrictions, if any, need to be placed so that such measures are not abused? What measures should be adopted to ensure transparency to consumers? Please comment with justifications.

Telewings Response:

The non-price based discriminations of services should be allowed to implement as long as quality of services is not degraded and there is complete transparency with the user for the same.

Question 14: Is there a justification for allowing differential pricing for data access and OTT communication services? If so, what changes need to be brought about in the present tariff and regulatory framework for telecommunication services in the country? Please comment with justifications.

Telewings Response:

The all licensed telecom service providers are ensuring compliance to tariff principles & regulations and ensure upfront and transparent communication of applicable conditions to the customers. We believe that the pricing based on market segmentation for data access and OTT communication services are exclusive tariff offerings and should be continued for the benefit and convenience of the consumers.

In view of the above, there is no need for any changes in tariff regulations and should continue with tariff forbearance.

Question 15: Should OTT communication service players be treated as Bulk User of Telecom Services (BuTS)? How should the framework be structured to prevent any discrimination and protect stakeholder interest? Please comment with justification.

Telewings Response:

We support a bilateral arrangement based on mutually agreed terms between the stakeholders that is the OTT communication service providers and the L-TSPs. Any partnership or business model between OTT and L-TSP should be market driven and commercially negotiated by parties involved.

Question 16: What framework should be adopted to encourage India specific OTT apps? Please comment with justifications.

Telewings Response:

The applications and contents related to education, health, universal literacy, agriculture, climate, poverty alleviation, e-governance services etc which are directly associated with the community at large, it is recommended that such applications and development of the related contents may be financially supported from the USO fund.

Further, there are other means of assistance by which government can encourage such OTT apps and become instrumental in development and growth of the local app industry such as tax breaks, direct subsidy / grants etc.

Question 17: If the OTT communication service players are to be licensed, should they be categorised as ASP or CSP? If so, what should be the framework? Please comment with justifications.

Telewings Response:

There is a need to ensure regulatory equality so that there is a level playing for both communication OTTs and L-TSPs. As reiterated earlier, TRAI should recommend a broad regulatory framework basis the equality principle of, "same service, same rule". We believe, only under such environment, the L-TSPs will get a fair chance to compete with OTTs.

Question 18: Is there a need to regulate subscription charges for OTT communication services? Please comment with justifications.

Telewings Response:

No regulatory intervention is required. The pricing should be left to competition and market driven. The L-TSPs should be given the freedom to negotiate commercial arrangements with OTT players. These arrangements could be bilateral in nature, providing adequate measures for consumer protection. Further, any such arrangement should be subject to the applicability of service tax /VAT / GST on communication OTTs.

Question 19: What steps should be taken by the Government for regulation of non-communication OTT players? Please comment with justifications.

Telewings Response:

In case of non-communication OTT services, such as retail, health, transport etc., the regulations/ laws of the concerned department may apply. The consumer accessing such services/ applications through the network of licensed telecom service provider should not be held responsible for any unlawful actions taken, if any by these OTT players.

There are opportunities of tax arbitrage due to different jurisdiction, we hope that the Government is aware and ensuring that necessary actions, if any, are being taken.

Question 20: Are there any other issues that have a bearing on the subject discussed?

The “**Internet for all**” is a publically stated vision of Uninor in line with ambition of the Telenor group globally. This is the key contribution to the society and a catalyst for the growth and development of the common man and society at large. Uninor being a responsible operator has taken several campaigns and offerings to promote “Internet for all” for a social cause and provide affordable Internet access that is built for the many, not just for few. With the growing data demand, it is essential to make available safe internet. Uninor is making sincere efforts in this regard with the help of its Webwise programme. With these campaigns and social interactions, we have experienced that how power of internet has brought changes in the lives of unconnected especially in rural & remote areas and helping them to lead a better life, enabling empowered societies.



A note on the initiatives taken by Uninor is enclosed as Annexure depicting role played by Internet in empowering the society at large. These initiatives are great example of how our technology is built around human needs and helping individuals and communities develop socially as well as economically.

Uninor Initiatives: empowering societies through “Internet for All”

WebWise

A BCG report commissioned by Telenor Group makes important observations on the negative impact that easy access to the Internet can have on children. It is estimated that in across all the Telenor markets, there will be an increase of 100 million children accessing the Internet by the year 2017 and up to 85% of them will access the internet through the mobile phone.

According to the survey, Indian children in particular are extremely vulnerable to cyber-harm resulting from high access and low resilience to negative content –

- 95 million new children will come online by 2017 in India, taking the total to 134 million kids (303.8 mn children will benefit from Internet even if not using directly)
- 90% of children have experienced some form of threat on the internet
- 6 out of 10 parents are unaware of their child’s online activities.

While this is a great opportunity for millions as Internet can open a world of opportunities to them through digital education, health, governance and business growth. There is also a risk that it poses especially for children like cyber bullying, stalking, identity theft and many others.

Uninor’s Safe Internet for children program – '**WebWise**' aims at creating awareness around potential for harm from negative content among children and at the same time empowering children, teachers and parents with practical information and skills on how to identify potential threats and access the internet safely.

Uninor is doing the following activities under this program-

- Workshops for children in schools to build awareness and impart skills
- Workshops with parents and teachers to build capacity and identify risks, identify risky behaviour among children and empower with the right approach to enhance safe internet usage among children (create a family friendly internet experience)



So far, Uninor has conducted Safe Internet workshops in 75 schools across the country and covered more than 15,000 children.

Village Empowerment Programme

In March 2015, Uninor adopted a village - Peddashahpur in Telangana where activities were organized. Development of Internet based science for school children and a computer lab for students and villagers. The villagers of Peddashahpur were not digitally literate and were unaware of the uses of Internet in their daily lives. Out of 25 school teachers, only 2 knew how to use a computer. There was one computer and one science lab in Zila Parishad High School located in the centre of village. Due to lack of equipments both science lab and computer lab were not functioning well.

Uninor supported the village in -

- Setting up a computer lab at the local government school to be used by students and residents to get digitally trained
- Refurbishing the science lab of the school with new equipment and demonstrating the educative potential of Internet to students and teachers
- Installing a water filtration plant (Reverse Osmosis) at the village water tank to provide clean drinking water to the residents

Prayaas

Project Prayas was piloted in UP West to educate digital literacy amongst rural communities. A cross functional circle team is running a 360 degree training program for employees, RSE's, channel partners, colleges & inhabitants of the interior villages of the circle. Charity begins at home and hence the team first conducted a training for all its Employees & Feet on Street followed by channel partners and then reaching out to Youth and Rural Inhabitants. A village is identified and the Gram Panchayat is involved to seek support in holding a session on Why is Internet important and how can it benefit the Women, Youth, Children, Farmers, Businessmen etc. Awareness is being spread on the various available mobile applications on Safety, health, agriculture, education and many more.



Grahak Shiksha Kendras – knowledge & information centre

Under this initiative, Grahak Shiksha Kendras' (customer education hubs) has been set across all Uninor circles to engage with customer and educate them about the mobile Internet services.

In this first phase, 200 such stores/ hubs have been launched which will grow to 500 by end of 2015. These stores will act as a knowledge and awareness centers where existing and potential customers can walk in to get information related to Uninor voice and Internet services as well as resolve queries around the use of mobile phones.