



Joint Industry Response to

TRAI Pre-Consultation Paper

On

Net Neutrality

Released on May 30, 2016

Preamble

- a. At the outset, we would like to state that the industry fully supports Net Neutrality and firmly believes that access should be made available to all on a non-discriminatory basis. In fact, we emphasize not only **Net Neutrality, but seek Net Equality** – the need to connect the one billion citizens of India, who are still not connected to the Internet, by facilitating an open, inclusive and affordable access to the Internet, and **with the same rules being made applicable to the same services.**
- b. We welcome exhaustive consultation on the subject of Net Neutrality keeping in view the objective of connecting the next billion Indians.
- c. India is a market where 80% of the population still does not have the benefit of mobile data services. As shown below, India ranks low in various indices of broadband and network readiness as compared to other countries. In order to achieve the target rankings, a more enabling policy and regulatory framework that actually facilitates the investment in networks, innovation in tariffs and services, development of content and availability of affordable handsets is required. Therefore, as per the industry, the primary objective of any public policy on Net Neutrality should be directed towards the achievement of affordable, good quality, equitable and universal Broadband services for the citizens of India.

Parameter	Ranking
Broadband Commission, ITU - Broadband Report, 2014	142/191
BRIC Countries	4/4
ICT Development Index of 168 Countries	129/168
INSEAD ICT Network Readiness Index of 143 countries	89/143
Huawei's Global Connectivity Index of 50 Countries	44/50

- d. It is important to note that the Indian mobile telephony industry is in dire financial straits with a 1% return on investments and many operators even making negative returns on their investments. This situation puts at risk the Nation's agenda of "Broadband for All", as private operators will be unable to attract additional investments in the sector, required to support the ambitions of the government. Despite the daunting debt of INR 3.8 Lakh Cr, the Indian telecom industry has always been in favour of a business model which facilitates the un-connected consumer to become better connected and enable people of this country, especially the poor, to access certain content on the internet free of charge. **In this regard, the industry has put forth that the principle of "Same Service, Same Rules" should apply on OTT communication service providers.**
- e. TSPs fully support that Over-The-Top (OTT) application services should be actively encouraged. Any impediments to expansion and growth of OTT application services should be suitably addressed. In the case of OTT communication services, however, there is the issue of non-level playing field that needs to be addressed as these players offer similar/substitutable services as offered by the licensed TSPs. Even DoT in its report on Net Neutrality released in May 2016 has acknowledged that in case of Voice Over Internet Protocol (VoIP) OTT communication services, there exists a regulatory arbitrage, wherein such services also bypass the existing licensing and regulatory regime, creating a non-level playing field between TSPs and OTT communication service providers both competing for the same service provision.
- f. We would like to highlight that TSPs are licensed to provide voice, SMS and data services to the consumers and to do so TSPs offer different voice, SMS and data packs to the consumers as per the tariff orders of the Authority. The TSPs are the ones (a) who are required to invest heavily for creating the access infrastructure for the internet, (b) who are required to acquire the customers through proper verification processes, and (c) who TRAI holds accountable for ensuring the Quality of Services for the desired user experience. Coupled with prevalence of highly competitive tariffs in the Indian telecom market and the inequitable competition from the OTT Communication players, the ROI and profitability of the Telecom companies has been under considerable strain, TSPs find themselves in a quandary when they are treated at unequal and lower footing than unlicensed players.
- g. We believe that the regulatory framework of Net Neutrality should not be limited to TSP only, but apply to all other stakeholders such as website, content/applications providers and handset manufacturers. For example, while TSPs are subjected to strict data privacy rules and consumer information confidentiality provisions, however, the other stakeholders are not subject to such rules. **Hence, same service, same rules between the OTT Communication Service Providers and TSPs are required.**
- h. The stage of development of the Indian Telecom Market described above and the mammoth task of achieving national connectivity and broadband objectives, warrant that the definition of Net Neutrality in Indian context should facilitate rather than impede public policy objectives.

The immediate priority in India is for rolling out broadband networks to provide connectivity as envisaged in the Digital India programme.

- i. We would like to submit that any definition of Net Neutrality in the Indian context, should consider the factors of 'Affordability' and 'Proliferation of the data network'. It is felt that Net Neutrality regulation that has primacy of 'Affordability' and 'Proliferation of the data network' as its core philosophy shall contribute towards fulfilling all the other aims such as connecting the next 1 billion unconnected citizens to the internet; providing non-discriminatory internet access to every citizen; implement same service same rules for the service providers; assess and mitigate the potential revenue loss to the government owing to non-regulation of the content/application developers offering same services as licensed telecom operators; evaluate the critical security requirements of the country, as well as the data privacy developed outside of a holistic framework of Internet Governance.
- j. DoT in its report on Net Neutrality released in May 2016 has outlined (a) No Blocking, (b) No Throttling, and (c) No improper Paid Prioritization as the core principles of Net Neutrality. Internet is an eco-system in itself which encompasses different stakeholders such as access services provisioning entities (TSPs and ISPs), content services provisioning entities (Content Service Providers (CSPs), services enabling entities (Device Manufactures) and services subscription entities, i.e. the users. For the internet to remain neutral it is imperative that all the stakeholders should ensure that they on their part should not indulge in (a) Blocking, (b) Throttling and (c) Paid Prioritization of any content / stakeholder / users on a selective basis. The Indian TSPs completely conforms to these principles and requests that these principles be adopted as core principles of Net Neutrality. Further, the Committee has recognized that the primary goals of public policy in the context of Net Neutrality should be directed towards achievement of developmental aims of the country by facilitating "Affordable Broadband", "Quality Broadband" & "Universal Broadband" for its citizens along with the following approaches:
 - i. Expand access to broadband;
 - ii. Endeavour through Digital India to bridge the digital divide, promote social inclusion;
 - iii. Enable investment , directly or indirectly, to facilitate broadband expansion;
 - iv. Ensure the functioning of competitive markets in network, content and applications by prohibiting and preventing practices that distort competitive markets;
 - v. Recognize unbridled right of users to access lawful content of their choice without discrimination;
 - vi. Support the Investment-Innovation Virtuous Cycle and development of applications relevant and customized for users.

- k. In the upcoming Consultation paper, TRAI can use the following indicative list of criteria for testing the core principles:

1. User Rights	Subject to lawful restrictions, the fundamental right to freedom of expression and non-discriminatory access to the internet will apply
2. Content	Right to create and to access legal contents without any restrictions
3. Application & Services	Freedom to create and access any Application & Service
4. Devices	Freedom to connect all kinds of devices, which are not harmful, to the network and services
5. Blocking	No blocking of any lawful content
6. Throttling	No degradation of internet traffic based on the content, application, services or end user
7. Prioritization	No paid prioritization which creates discrimination
8. Transparency	Transparent disclosure of information to the users for enabling them to make informed choice
9. Competition	Competition to be promoted and not hindered
10. Congestion and Traffic Management	Reasonable and legitimate traffic management subject to ensuring core principles of Net-Neutrality
11. QoS	QoS to be ensured as per best practices and national regulations
12. Privacy	Online privacy of the individuals to be ensured
13. Security	Scrupulously follow the extant security guidelines
14. Data Protection	Disclosure of user information only with consent of the user or on legal requirements

- I. Product offerings of Telecom Services are part of valid business practice of a free market. As brought out earlier, in a purely “Indian Context”, affordability of data services is the most critical factor for the Indian Diaspora hence, ‘pricing of data services’ should be left to the competitive market forces.

- m. National security and privacy issues are of paramount importance, regardless of treatment of net neutrality. Accordingly, the regulatory framework for net neutrality must ensure their primacy and it is strongly recommended that no exception should be made for any service provider, including the OTT communication service providers, while subjecting them to the rules to meet the national security and privacy norms, i.e. same service same rule should be established for similar service providers. It is open knowledge that the CSPs indulge in mining of private data from the subscribers’ handsets and monetize the same in different ways. With the emergence of highly advanced techniques for data mining and data analytics, extraction of business intelligence through an individual’s usage pattern of the internet services and correlation and corroboration of information from multiple sources results in complete compromise of an individual’s privacy. The app providers and even the device OEMs put the customer’s privacy and security at risk by leaving trapdoors open for regular update of their apps / OS. These loopholes in the apps / OS are known to have been exploited for unlawful extraction of personal information of the consumers. Therefore, there is a pressing need to regulate the issue of customer consent for allowing the apps to mine their handset data as well as for auto updates in exchange for using the apps.

- n. In the end, we would like to express our concern about re-commencement of de novo consultations on the issues related to Net Neutrality and OTT Players. TRAI had issued a very comprehensive Consultation Paper on Regulatory Framework for OTT Services in March 2015 after holding an interactive whole-day Workshop involving all stakeholders in January 2015. The Consultation Paper raised several pertinent and inter-linked issues for consideration and response. The stakeholder responses and counter responses have been submitted to TRAI. However, the above exercise has not yet been taken to its logical conclusion through the well-established process of Open House Discussions and the subsequent regulatory deliberations and reasoned Recommendations. A special high-level Committee of the Department of Telecommunications (DoT) also held consultations with all stakeholders and came out with a detailed Report and Recommendations in May 2015; in the said report it was indicated that the TRAI recommendations were awaited. However, instead of concluding the pending consultation, we are perplexed that TRAI has now issued a Pre-Consultation Paper and raised issues that are a part of the earlier consultation. Some other related issues have been raised by way of separate consultations; one of which has culminated in a Regulation being issued by the Authority. While we are not sure of the benefits of such piecemeal consultation; we believe that once the Government takes a decision on the subject of net neutrality, all the interim/in-between consultation/decisions on differential pricing, free data, etc. would get subsumed into the final decision.

Query wise Response:

Q 1. *What should be regarded as the core principles of net neutrality in the Indian context? What are the key issues that are required to be considered so that the principles of net neutrality are ensured?*

- a) As stated before, DoT in its report on Net Neutrality released in May 2016 has outlined core principles of Net Neutrality as (a) No blocking, (b) No throttling & (c) No improper paid prioritization. The industry conforms to and supports these principles and suggests that these principles be adopted as core principles of Net Neutrality.
- b) We, however, submit that the principles of privacy, security and data protection which are of paramount importance need to be extended /applied to the OTT Communication players as well. OTT communication service providers need to be subject to the same rules as TSPs to meet the national security privacy and data protection norms. Any policy framework of net neutrality should be applicable to all stakeholders of Internet domain i.e. telecom operators, handset manufacturers, content providers, etc.
- c) The Government /Regulator should look at Net Neutrality, from the holistic framework of Internet Governance and focus efforts on the immediate priority towards providing data connectivity and rolling out broadband networks.
- d) In the Indian Context it needs to be kept in mind that more than 80% of the population still does not have the benefit of broadband coverage and only 12% of the subscribers are availing mobile broadband services. Significant investments are required to meet the broadband targets of the nation. Further, affordability of data services is the most critical factor and hence 'pricing of data services' should be left to the competitive market.
- e) Innovation and infrastructure ought to be promoted simultaneously for the growth and development, but at the same time, there should be a level playing field amongst all service providers / operators providing similar services.
- f) We believe that the core principles identified by the DoT Committee represent a balanced approach as required.

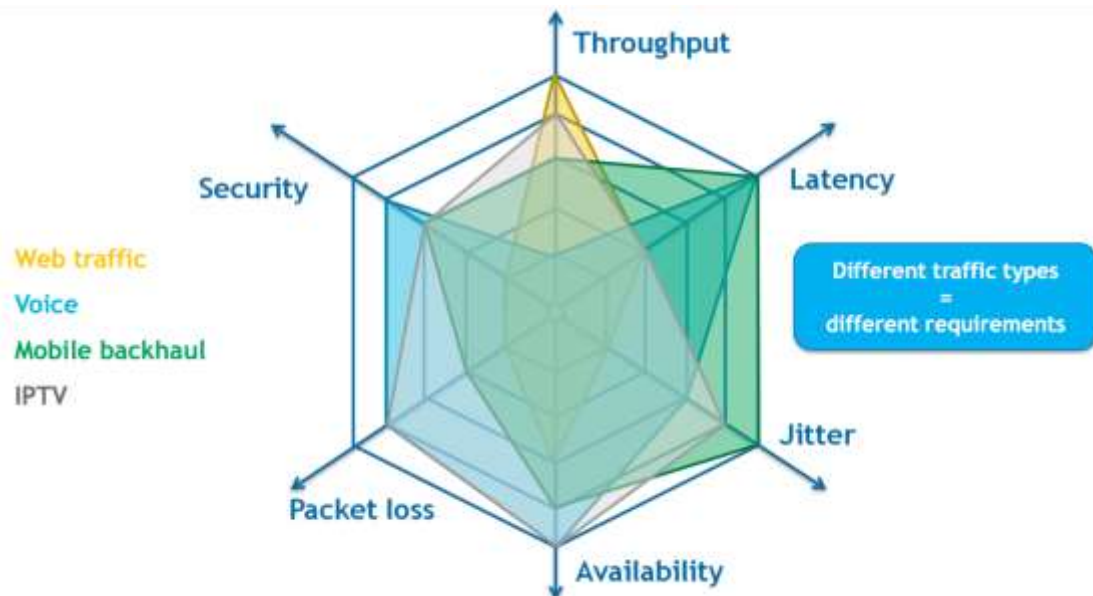
Q 2. *What are the reasonable traffic management practices that may need to be followed by TSPs while providing Internet access services and in what manner could these be misused? Are there any other current or potential practices in India that may give rise to concerns about net neutrality?*

- a) If all traffic/packets of data, whether video, voice, email or message will stand in the same queue and be treated equally, it implies that the service provider will not 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 calls will drop and video will buffer, as both of these services require higher priority to work effectively, as embedded in telecoms standards on a worldwide basis. However, it would be surprising if any two similar packets would be treated exactly alike when traveling through a network consisting of more than 30,000 autonomous systems that determine their terms of interconnection through arms-length negotiations. Indeed such equal treatment has never occurred even when the Internet was far less complex.

Not all bits are created equal: different types of traffic have different requirements.

When different packets arrive at a router at the same time and there is congestion, some packets will be momentarily dropped. They will automatically try again in a few milliseconds. However, if the packet is for a VoIP service, the delay may distort the image or sound, negatively affecting the end-user experience. If the packet is for an email, a short delay of a second will not cause any negative impact to the recipient of the email.



This is why different types of data are given different kinds of treatment and why implementing a principle that all data is equal would deteriorate our Internet experience. For more info, see video on how the Internet works:

https://www.youtube.com/watch?v=ZonvMhT5c_Q.

- b) The Internet was never designed to be neutral as different traffic types have different delivery needs. Legitimate Prioritization is a core aspect of internet technology right from its earliest days and different types of services such as e-mail versus IP telephony versus video versus PPDR (Public Protection and Disaster Relief) services have different QOS and speed requirements for the desired end-user Quality of Experience. Traffic management is a tool for consumer benefit and not for consumer harm and

should be permitted to help network operators to maintain and improve the quality of service provided to end users.

- c) Reasonable traffic management plays a fundamental role in ensuring a good end- user experience with the increasing Internet traffic and is an integral part of network management. While operators should not be permitted to block, throttle, degrade or otherwise apply anti-competitive measures against specific content, applications or services, traffic management is not in itself anti-competitive.
- d) Humans generate not all web traffic. Software agents generate in fact more web traffic than humans. They are shaping our online experience by influencing the way we interact, learn, trade and work. Many of them are used for malicious activity (spam schemes, DDoS floods, mass-scale hack attacks, click fraud campaigns) that impacts significantly our activities online. Traffic management is essential in maintaining a consistent user experience and minimizes the business and financial impacts on companies in the case of mischief.
- e) Over the last few years, the amount of data traffic flowing across communications networks has increased dramatically. While internet traffic was earlier dominated by email and web browsing, we now see a broader range of traffic types including video/music streaming, file transfer protocols, encrypted packets, online gaming, instant messaging and VOIP etc. Some of these services have a high degree of sensitivity to packet delay, error and loss- undesirable consequence of higher levels of network congestion that follow from increasing traffic volumes.
- f) The core principles mentioned above for Net neutrality recognize the need for reasonable network management practices. Legitimate Traffic management has 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.
- g) The voluntary code of practice on traffic management transparency for broadband services published in May 2013 by the Broadband Stakeholder Group in UK gives an overview of what traffic management is:

“Traffic management is a component of an ISP’s overall approach to network management. Network management includes elements such as capacity planning and network dimensioning to provide a quality of experience for [customers]. Traffic management practices are subsequently used to deliver and maintain that experience for [customers].”

- h) Further, we would like to submit that mobile network operators in India face significant challenges in managing their growing traffic requirements, in an environment of sub optimal spectrum allocations, constraints in setting up infrastructure, etc. Any principles

governing traffic management should take into account the challenges faced by mobile operators and should be sufficiently flexible to accommodate them.

- i) Traffic management encompasses a range of techniques used by network operators, ISPs to ensure the smooth flow of data traffic across the networks between the end users and content /service providers. Network operators and ISPs use traffic management to minimize the incidence and impacts of congestion, ensuring that as many users as possible get the best online experience possible. Examples of current and anticipated network management practices include:
 - i. Management of congestion
 - ii. Fair Usage policy implementation
 - iii. Blocking spam, malware, denial of service attacks and other security threats to the network or to user devices
 - iv. Ensuring that time sensitive services such as voice, video, online gaming and enterprise services can be delivered in a way which ensures optimal performance of those applications (without the calls dropping, buffering videos and time lags in games)
 - v. Network Performance: Network Management practices
 - vi. Peak Load Management
 - vii. Lawful restrictions directed to be imposed by the Government/ Legal court orders/LEA agencies.
 - viii. Prioritization for communications for emergency and disaster management services

- j) The use of public mobile internet services for machine-critical-applications is increasingly of interest. The police, fire, and emergency medical services (Public Protections and Disaster Relief i.e. PPDR services) have an increasing need for broadband which have to function in a prioritized way during a natural or a man-made disaster.

In view of the above, we submit that reasonable traffic management practices must be permitted to ensure the smooth flow of data traffic across the networks between the end users and content /service providers.

Q 3. *What should be India's policy and/or regulatory approach in dealing with issues relating to net neutrality? Please comment with justifications.*

- a) As highlighted in above in response to question 1, we would like to submit that India is a market where the complete country still does not have the benefit of mobile or broadband coverage. The immediate priority in India, where 80% of the population has no data connectivity, is for rolling out broadband networks; any policy and/or regulatory approach to net neutrality must facilitate rather than impede the achievement of public policy objectives of connectivity for all the villages of India as envisaged in the Digital India programme.

- b) We also submit that there is a need to adopt the principle of same service same rules to ensure that any segment does not grow at the cost of another due to any policy or regulatory arbitrage.
- c) The Pre CP has identified (a) reasonableness of traffic management tools that may be adopted by TSPs; (b) unrestricted access to the Internet; (c) transparency and informed choice by users; (d) customer privacy and (e) national security as the relevant issues that merit a deeper enquiry into the various issues for the subject of net neutrality. While we do agree to these, however, our detailed comments and suggestions for policy guideline and / or regulatory approach in dealing with issues relating to net neutrality on each of these and some additional issues are as given below:
- i. Reasonable traffic management practices must be permitted to ensure the smooth flow of data traffic across the networks between the end users and content /service providers; the same must be subject to the core principles of net neutrality
 - ii. Unrestricted access to the Internet should not be confused with price of access unless such prices are demonstrated to be discriminatory or materially restricting/limiting the choice of customers.
 - iii. The regulation prohibiting discriminatory pricing by the TSPs on the basis of content be revisited as they are based on a yet to be decided principles of net neutrality.
 - iv. Transparency and informed choice by users are important principles that must be adopted. The Authority should look at ways and means of ensuring transparency at the level of each and every stakeholder in the internet eco-system.
 - v. Principles of privacy, security and data protection which are of paramount importance, need to be extended /applied to the OTT Communication players as well as licensed TSPs. OTT communication service providers need to be subject to the same rules as TSPs to meet the national security privacy and data protection norms.
 - vi. Principles laid down for Net Neutrality should be applicable to all components of the internet value chain/ other stakeholders of the internet eco-system as well and not to TSPs alone.
 - vii. The provision of specialized services such as M2M, remote surgery, driverless cars, IoT, etc., require a committed quality of service and investments. Thus, the provision of such specialized services should be permitted to TSPs. TSPs and other entities which provide such specialized services should be allowed to explore various business models.

Q 4. *What precautions must be taken with respect to the activities of TSPs and content providers to ensure that national security interests are preserved? Please comment with justification.*

- a) At present, there is a widely differing treatment accorded between telcos and other internet eco-system stakeholders as regards security compliance requirements. There is a glaring disparity on this count, especially in case of similar/substitutable services. It

should be noted that extensive and stringent security conditions are laid down and are required to be met by the licensed telcos. These include:

- i. Taking permission/approval of the licensor for any new service
 - ii. Setting up Lawful Interception and Monitoring (LIM) systems
 - iii. Restriction on switching of domestic calls/messaging from outside the country
 - iv. Restriction on sending user information abroad
 - v. Gives the Licensor the right to inspect the sites/network used for extending the service
 - vi. Providing necessary facilities for continuous monitoring of the system, not employing any bulk encryption equipment; taking prior evaluation and approval of Licensor for any encryption equipment for specific requirements
 - vii. Switching/Routing of voice/messages in P2P scenario
 - viii. Responsibility for ensuring protection of privacy of communication and confidentiality of subscriber information
 - ix. Quality of Service, Unsolicited Commercial communications, Complaint Redressal Mechanism, etc.
- b) However, the other internet eco-system stakeholders who use data access channel of the telcos to reach to the customer with their services, including similar voice and messaging services are not subject to the security restrictions imposed on the telcos.
- c) There is undoubtedly a need to ensure that these concerns are addressed and there is a level playing field amongst all the internet eco-system stakeholders. This may be done by ensuring that the regulatory framework applicable to OTT communications services is the same as that applicable to the communications services provided by TSPs.
- d) Further, adequate guidelines for functioning, utilization of services and auditing of e-commerce sites, especially cash handling services sites, should be mandated through regulations to prevent any kind of money laundering.

Q 5. *What precautions must be taken with respect to the activities of TSPs and content providers to maintain customer privacy? Please comment with justification.*

- a) The Terms and Conditions of the license agreement require all the TSPs to ensure protection of privacy of communication and user data and comply with strict rules on customer confidentiality, record keeping and destruction. However, no such restrictions are applicable to the OTT players.
- b) The absence of a regulatory framework for OTT communications and app providers not only pose a threat to the privacy of individual users but also cause the transfer of personal information on the Internet for misuse. Therefore, there is a need to have a

regulatory framework for governing OTT and other app services for protecting the privacy of users.

- c) It is suggested that laws related to privacy must be broad-based and not applicable to TSPs alone – must govern all organizations, businesses (such as handset manufacturers, content providers) or the even government that are privy to user information.

Q 6. *What further issues should be considered for a comprehensive policy framework for defining the relationship between TSPs and OTT content providers?*

- a) We wish to submit that while we acknowledge the role of OTT players, however, it is pertinent to note that some of 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.
- b) There is thus a need to address the various regulatory imbalances and ensure Regulatory Neutrality, between TSPs and OTT players. For this, the Authority should **apply the principle of, “Same services, Same rules”**. Only under such an environment, the TSPs will get a fair chance to compete with OTTs on similar pricing and terms.
- c) Thus, we request TRAI to also consider our response to TRAI Consultation Paper No.2 /2015 on Regulatory Framework for Over-the-top (OTT) Services dated 24th April 2015, while framing the issues for the Consultation Paper on Net Neutrality. We would like to hereby highlight some key points that need further discussion:
- Regulatory Framework for OTT players need to be prescribed.
 - Promulgation of similar regulatory mechanism for all providers, including OTT players regarding National Security, public order, decency and morality, protection of privacy, data protection, public safety and disaster management.
 - Analyzing the impact of growth in OTT on the traditional revenue stream of TSPs
 - Discuss whether 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
 - Discussion on Commercial Negotiations: Similar to the mutual commercial agreements between the DTH infrastructure providers and content providers, TSPs too should have the freedom of commercial negotiation with OTTs who are utilizing the TSPs’ network and bandwidth for delivery of its services.
 - Pricing model and options, i.e. bandwidth / time / website access based, to be adopted for the commercial agreement between the TSP and the OTT service provider and the same should be left to the mutual arrangement between them.

- Security Issues: Security concerns, maintaining data records, logs etc. and ensuring security, safety and privacy of the consumer data as well as their compliance by OTT Communication players needs to be addressed.
- Policy framework to facilitate specialized services such as M2M, remote surgery, driverless cars, IoT, etc.
