

TCL Response to Consultation Paper on Regulatory Framework for Over-the-top (OTT) Services,

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.

TCL Response:

It is the right time for the Authority to make a careful start in terms of a regulatory framework for services delivered over the internet. The need is not dependent on access speeds and coverage.

It is expected that such a regulatory framework will cautiously evolve over time to match the rapid changes in internet services and in the telecom and OTT industry however a start is required and expected from the Authority.

National and global internet connectivity is key to India's economic growth.

TRAI OTT regulations should facilitate India economic growth and societal enablement by assuring that the India Internet is an open, highly democratic platform for innovation. Its power as a platform is to enable diverse, unpredictable creation of value by any and all, leveraging the internet's vast OTT resources.

To facilitate innovation and democracy, OTT services in India should be subject to appropriate regulation.

1. The primary goal of regulation must be to enable Internet value to the citizens of India, with a focus both on broadband penetration and providing digital inclusion to masses. This includes facilitating businesses, schools, health facilities, government entities and many others to leverage the internet to serve these citizens.
2. To support internet value, regulation must successfully stimulate
 - a. continued investment in internet infrastructure on the part of TSPs and ISPs
 - b. Development of diverse India OTT capabilities to leverage the internet infrastructure.
3. To protect the citizens of India using the Internet, regulation must thoughtfully encompass difficult questions such as
 - a. Open internet access (Net Neutrality)
 - b. Privacy and Personal Information protection
 - c. Freedom of speech
 - d. Freedom of commerce
 - e. Protection of vulnerable classes
 - i. Children
 - ii. Elderly
 - iii. other

- f. Consumer protection
 - i. Antifraud
 - ii. Antitrust
 - iii. Consumer health and safety
- g. National security

Most or all of such regulations should not be specific to OTT or internet, they should apply generically, including but not only when the transaction is across the internet.

Note that concerns, and therefore some regulations, may be different for different classes of users. In particular, as interpreted by the US FCC net neutrality will be required for consumers, but not for enterprises.

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.

TCL Response:

OTT communications services should not be brought under the licensing regime but at the same time regulatory and licensing regime for the licensed Service Providers should be appropriately relaxed to restore level playing field conditions between the two categories.

Licensing of OTT communications services is difficult to implement because such services largely and increasingly do not exist cleanly in standalone form. Text, voice, and video communication services are becoming an integrated function WITHIN and UPON business and personal applications and platforms (examples= eCommerce, contact centers, multiparty games, Facebook, Weibo, Twitter, Google, SalesForce, WebRTC, much else).

Licensing OTT communications would thus block the innovations and productivity improvements that OTT communications offer to consumers and businesses -- inhibiting India economic growth and to some extent, isolating India from the global economy.

Hence, OTT communication services through applications should not be brought under the licensing regime, but at the same time licensed operators must be allowed to offer digital OTT services (communications and otherwise) on the same terms as pure play OTTs, "outside" of their communications license.

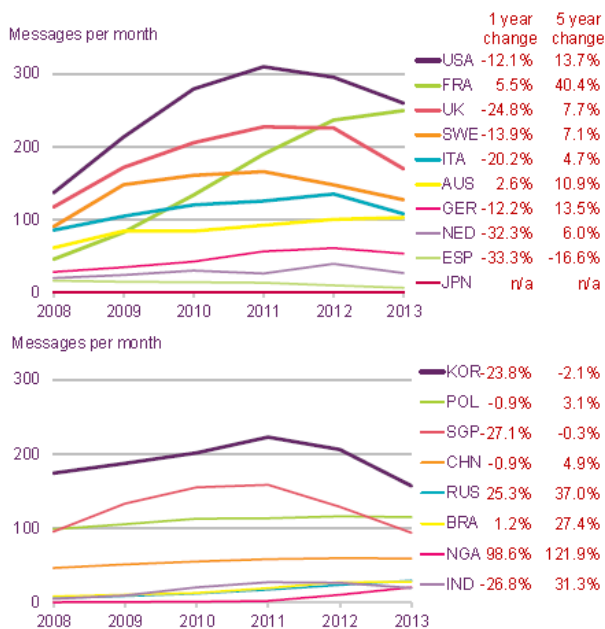
To the extent that licensed communication services are threatened by OTT services, the licensing/taxation/security monitoring and other regulatory compliance regimes for licensed services should be reconsidered and reviewed to facilitate licensed operators to adapt and compete with OTT players on a level playing field.

Note: Even though Communications OTT may be unlicensed, the OTT industry overall should still be subject to appropriate regulation to protect India internet consumers, as outlined in our response to question one, by developing appropriate framework to cater to the needs of national security imperatives, consumer privacy, and security, etc., and they should provide services using network resources from authorized licensed operators only.

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.

TCL Response:

Figure 6.59 Average number of monthly mobile messages per head: 2008 to 2013



Source: IHS / industry data / Ofcom
 Note: Messaging includes SMS and MMS

OTT substitution for messaging and international voice revenues is material in India, as well as globally.

With the correct business environment, increased data revenues can and would become sufficient to compensate—as demonstrated in other markets.

The growth of the OTT players offering communication services has impacted the traditional revenue streams (voice & SMS) of TSPs. The core services offered by TSPs are voice and SMS. With the growth of the OTT players offering Communication Services such as Skype, Whatsapp, Viber, Line, WeChat, Facebook Messenger, Blackberry Messenger etc., it is

very easy for consumers to replace the traditional channels such as SMS (which is charged to the retail consumer) to a free-for-use OTT messaging/voice app. This very point was highlighted in early 2015 when Whatsapp announced that its platform was sending over 30 billion messages a day. For reference, the global SMS traffic is approximately 20 billion messages a day. Whatsapp is just one of the many communication apps available today suggesting that OTT apps have already surpassed SMS traffic.

Data from the UK regulator OFCOM also suggests that overall SMS traffic in India has reduced year-on-year starting 2011.

While it has been our observation that OTT players offering voice and video calling services have not been entirely successful for domestic calls, it is seen that voice/video calling apps such as Skype are highly successful for international calls. Reasons for the lack of success on the domestic front stems from the fact that call rates within India are amongst the lowest in the world. Add to this the quality factor, the normal voice rates remain attractive for the retail consumer. On the international front, the tariff from TSPs is relatively higher (compared to the domestic tariff), enough for the retail consumer to be drawn to the usage of free calls using OTT services. This results in a substitution effect wherein the voice services from TSPs get replaced by free calling services using OTT apps, and this results in revenue loss to the TSPs.

The initial data from the Authority (see table 2) suggests that the data consumption and revenue from data services is increasing. However, it is yet unclear whether the consumption of data will continue to surge in view of the optimization of the

Table 2
Quarter/Description

	OND 2013	JFM 2014	AMJ 2014	JAS 2014
Data Usage of Mobile Users				
Data usage per subscriber per month - GSM (MB)	50.7	53.94	62.16	68.07
quarter-on quarter growth %		6.39%	15.24%	9.51%
Data usage per subscriber per month - CDMA (MB)	175.9	176.24	192.99	221.26
quarter-on quarter growth %		0.19%	9.50%	14.65%
Data usage per subscriber per month - Total (GSM + CDMA)	59.62	61.66	70.1	76.97
quarter-on quarter growth %		3.42%	13.69%	9.80%

compression algorithms used by the various OTT players. The end objective of most OTT apps is to minimize the data usage of the retail consumer, as retail consumers may not prefer

data-hungry apps which lead to higher data bills.

http://stakeholders.ofcom.org.uk/binaries/research/cmr/cmr14/icmr/ICMR_2014.pdf

Operators must be enabled to grow revenues from data by policy consideration and by business innovations such as:

1. Expanding the number of mobile internet subscribers and the average data consumed per subscriber by supplementing 100% “subscriber pays” data with
 - a. Open market sponsored data, whereby anyone can sponsor a specific internet data session with a subscriber to be zero-rated towards the subscriber and paid for by the sponsor. This is similar to 1-800 freephone services, calling-party-pays voice and SMS, sender-paid postage, etc.
 - b. Operator-designed “bundles” of free internet sites designed to attract specific market segments. Note: this requires monitoring to ensure that the bundling does not become anti-competitive; *i.e.*, that consumers do not lose choice.
2. Innovative pricing and bundling of data and other services to win a more sustainable share of wallet.
3. Digital services offerings to increasingly earn value from more than PSTN services and internet access, for example:
 - a. Mobile payments and mobile banking
 - b. Internet of Things (IoT) infrastructure services

- c. IoT applications services (smart city, health, energy, etc.)
- d. Unlicensed OTT services
- 4. Non-Internet digital services that are carried “alongside” the internet service
 - a. Television and entertainment
 - b. Dedicated IoT data networks

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.

TCL Response:

In terms of Internet Access Services towards consumers:

Content providers and enterprises should have an OPTION to pay for subscriber data charges based on quantity consumed—specifically when the subscriber is subject to some form of data quota (*e.g.*, mobile broadband).

Such Subscriber data charges for any given session should thus be payable in two ways:

1. Subscriber pays (as per traditional prepaid or postpaid subscriptions)
2. Open Market 3rd party Sponsor pays

Open Market Sponsor Pays sessions must be equally and easily available to ANY sponsor and on ANY network, it must be an open and fair marketplace (like voice and SMS).

An open capability for sponsor-paid sessions would provide subscribers with incremental internet value as well as generate incremental operator revenues.

Regulation should also facilitate Sponsored Prepaid Top Up and other mechanisms for businesses to put value into a subscriber’s “wallet.” One such mechanism could be that OTT players who want to cater to the customer base of a specific TSP(s) could buy an Internet transit port directly from the TSP(s). In all such cases, the OTT players are like any other customer for the TSP and will pay the TSP for the Internet bandwidth provided.

In terms of Internet Interconnection services:

Internet Interconnect agreements and OTT traffic across interconnect peering points among TSPs should not be regulated.

a) Direct Internet transit ports:

OTT players who want to cater to the customer base of a specific TSP can also buy an Internet transit port from the TSP or any other TSP. In all such cases, the OTT players are like any other customer for the TSP and will pay the respective TSP providing OTT internet Transit service for the Internet bandwidth required for its use.

b) **Traffic through the TSP's peering partners:**

TSPs may receive OTT traffic destined for the TSP's customer base through its Internet peering partners. As peering agreements between two TSPs are private and bilateral in nature, the traffic received from a peering partner will be strictly governed by the private agreement between the two TSPs and we do not see a reason for the OTT player to pay a TSP that is receiving the OTT traffic through its peering partner.

c) **Traffic through the TSP's upstream provider:**

TSP's may also receive OTT traffic from its upstream provider where one is a buyer and the other is seller. As agreements between any two buying and selling parties are private, we do not see a reason for the OTT player to pay a TSP that is receiving the OTT traffic through its upstream provider.

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.

TCL Response:

There are imbalances in the regulatory regime for licensed national carriers versus local or global OTT providers.

These imbalances are inherent in the nature of the digital economy and its "virtual" goods and services. The remedy towards the TSPs must be to allow them to offer OTT services on a level playing field, as an OTT provider themselves outside their licenses. Stated another way, we propose that TSPs should be subject to their TSP license regime only for ~~the~~ licensed services, not OTT services. OTT services provided by a TSP, being outside of the licensed services, should be subject only to ~~the~~ those requirements imposed upon OTT providers

The regulation and taxation of licensed carriers must evolve towards global standards having less onerous fiscal obligations which would go a long way towards helping them through a successful transformation into the digital economy—where their business is comprised of their licensed network services and an internet services portfolio that traverses their network and others.

Applying national PSTN communications regulations onto internet communications will be difficult if not impossible to enforce, but much worse, will isolate the India Economy and inhibit India's absorption into the Digital Economy.

Within several years, SmartPhones, Tablets and Internet of Things connected devices will become increasingly ubiquitous communications instruments across India. Owners of such tools must be facilitated into the digital economy, not held back from it.

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.

This is a very complex arena that requires a mix of regulation with a focus on societal needs (see comments to question 1, above) and self-governance (OTT players with poor security will be disadvantaged and may even cease to exist). It applies to OTT services in general, not only to OTT communications functions.

Presently, OTT players have no obligation for Consumer safety, security & privacy. As consumers mature, they will realize threats & risk of using such an unsecure mode of voice communication.

Further these OTT players should not be allowed to connect to non-licensed access entities or smaller TSPs who do not have Lawful intercept mechanism. Further OTT players should be obligated to fulfill the national security requirements under any new framework evolved for appropriate regulation of these entities.

It is suggested that if the applications of such OTT players reside outside the country, for certain kinds of information they may be advised and given sufficient and reasonable amount of time to comply with the information protection regulatory framework of the country. In case of non-compliance, relevant authorities may take necessary action such as blocking of services if there is a failure on the part of the OTT players to comply with privacy and other security requirements.

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.

TCL Response:

OTT players are expected to thoroughly check their apps from a quality and security perspective before publishing it on the various platforms. Software apps evolve over time and developers strive to remove any quality/security flaws as the failure to do so may lead to attrition of users and lead to downgrade in its rating and reviews on the various platforms such as Google's Play Store, Apple's App Store, etc.

The OS providers such as Google Android and Apple iOS and the app stores distributing apps must also carry a strong role to ensure application hygiene.

OTT players should also ensure the security and privacy of the user data. For example, the OTT app should ensure that the passwords and financial information such as credit card details, etc., of the users are kept secure and encrypted so that unsavory hacker groups do not get access to any such user information. In one such instance in 2014 eBay was a victim of hackers who had managed to steal personal records of 233 million users that included usernames, passwords, phone numbers and physical addresses.

Personal information of its user base should be used by OTT players only with the express consent of its users. There have been many instances wherein OTT players have used and sold user information with the consent of its user base. Many others collect user information without the express approval of its users. Such information is then used for targeted ad campaigns against those users. There should be a clear option for the users to opt out of such tracking by the OTT players.

Encryption in transit (*e.g.*, HTTPS and eventually HTTP2) and encryption at rest should become standard operating procedure.

Data at rest should also be encrypted.

PCI and other security hygiene must be rigorously practiced.

Security practices need to be transparent and measurable.

These are relatively easy to apply, measure, and if needed, enforced.

Sensitive Personal Information **MUST** be protected. This is much more difficult in the new “big data” world where masked identifications can be too easily and even accidentally unmasked.

These principles apply to all holders of user data, not only to OTT (*e.g.*, health, financial, education and government).

Personal Information protection is perhaps most richly and healthfully debated and regulated in the EU, but there are strong examples across other countries and non-governmentally in several industries and major OTTs.

Note: A difficult consideration for any government (India, US, China, or other) is that proper information security for individuals and enterprises via the encryption of information both in transit and at rest reduces the ability of any government to monitor. Internet data security for consumers and businesses is no longer compatible with easy-to-monitor communications.

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 summarized in para 4.29? And, what practices should be proscribed by regulatory fiat? Please comment with justifications.

TCL Response:

In view of our response to Question 4, the proposal set forward by ETNO (as referred to in para 4.23.) should be evaluated in light of the goal of creating regulatory parity. Specifically, we advocate that:

- Internet interconnection agreements and OTT traffic across interconnection peering points between TSPs should not be regulated;
- TSPs should be allowed flexibility to prioritize traffic with corporate/enterprise/B2B customers on the basis of commercial agreements, without regulatory involvement, as long as the TSP makes available sufficient network capacity so that the availability and general quality of non-prioritized Internet traffic is not impaired materially;

Para 4.29 talks about the following points –

- a) Separate regulatory practices for communication services and non – communication services. (*e.g.*, Germany, France.)
- b) Use of price discrimination on traffic to ensure development of broadband infrastructure. (*e.g.*, United Kingdom, Korea)
- c) Use of a FRAND approach in dealing with regulatory issues concerning OTT players.(*e.g.*, Korea, ETNO)

Response to a): In view of our response to Question 5 and Question 6, the governing principle should be that similar services are similarly regulated (or not regulated). Thus, OTT services should be treated the same regardless of the type of provider or the nature of the service, *i.e.*, communications or non-communications.

Response to b): Price differentiation of similarly-situated services should not be allowed in regard to consumer services. TSPs, however, should be provided latitude to differentiate enterprise services where such differentiation supports network cost recovery and investment and does not unduly or unreasonably operate to the detriment of end users.

Response to c): In view of our response to Question 4, we do not agree to the proposal set forward by ETNO regarding use of a FRAND approach.

India's framework should contemplate each licensed digital network as comprised of separated logical entities that require differentiated regulation and one or more of these logical entities may not need licensing to offer services outside the scope of traditional license services. Differentiated regulation should not be prevented to the extent such differentiation allows for parity treatment of providers offering similar services in emerging market segments. This may call for a bifurcated regulatory treatment between

core basic internet services and tailored non-internet network services crafted to particular customer needs.

1. The regulator must be very attentive to the health of the Basic Internet Access Service, as it is the critical economic engine.
2. Non-BIAS (non-internet) networks might often share the same licensed infrastructure (fiber, cables, spectrum) as BIAS.
Non-BIAS network allocation should be permitted as long as sufficient network capacity remains available to ensure that the general quality of BIAS is not materially impaired.

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.

TCL Response:

The India Basic Internet Access Service towards consumers should be net neutral in the context of effective competition, transparency, and low switching costs. Internet sessions should only be manipulated with fairness across all users for non-commercial network management, not for QoS or preferred flows.

TSPs should also be able to manage traffic with corporate/enterprise/B2B customers on the basis of commercial agreements as long as the TSP makes available sufficient network capacity so that the availability and general quality of Internet traffic is not impaired materially.

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.

TCL Response:

“Fair Usage” Traffic management is acceptable where all sessions are throttled fairly to cure or prevent congestion that damages the network for all users.

Different classes of users might select different grades of fair usage packages (e.g., bronze, silver, gold), with proper expectations set for each grade (e.g., different average speed, different data quota).

In our view, the following traffic management practices should be permitted –

- Techniques used for application agnostic congestion management.
- Technical network protection for network security and integrity.

- Techniques applied (blocking/limiting access) in compliance to legal and regulatory requirements.
- Maintain different service level agreements possibly including QoS with various corporate/enterprise/B2B customers as per type of service taken by an enterprise customer.
- Zero rating (with appropriate protections to assure it is not anti-competitively reducing consumer value and choice)
- Data Caps

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?

TCL Response:

If congestion management requires that the TSP is using any traffic management techniques for different OTT applications, then the TSP should include the policy used in its agreement with retail consumer.

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.

TCL Response:

A healthy competitive environment with proper regulation and taxation will by definition allow the TSPs to invest and grow, based on their revenues for basic internet and non-internet services and for value added services on top.

1. Internet services should involve subscriber-paid sessions supplemented by sponsored data sessions as well as top up. Zero rated content may be used in service-specific user segments.
2. Non-internet services should involve the evolution of PSTN to LTE, IP TV, Internet of Things and other, including MVNOs of various forms.
3. Value added services might include various competitive digital services they may develop (mobile banking, ehealth, advertising, direct operator billing, content services, data center, and much else). The TSP must be allowed to operate services “outside” the TSP license where these services are directly competitive with non-licensed providers (e.g., Data Center, ehealth, advertising, content services, etc.).

Regulation should aim for a competitive environment that is not so hyper-competitive that investment is stifled, nor so under-competitive that consumers are ill-served.

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.

TCL Response:

Yes, TSPs should be allowed to implement non-price based discrimination of services in certain situations.

For enterprise internet access, an enterprise customer should be able to contract for tailored service and service level agreements from the TSP as has been the approach in the industry for years. If a commercial customer found that the tariffed service did not suit its needs, it could negotiate for service terms that did meet its needs. Any other commercial customer could utilize this same approach.

For consumer internet access the following techniques should be allowed, for traffic management purposes only–

- Techniques used for application agnostic congestion management.
- Technical network protection for network security and integrity.
- Techniques applied (blocking/limiting access) in compliance to legal and regulatory requirements.
- Data Caps

If the TSP is using any traffic management techniques for non-price based discrimination of services, then the TSP should declare the fair usage policy in its contract with its customers.

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.

TCL Response:

Differential pricing of general OTT data access versus OTT communications services would be very problematic and not sustainable.

“Zero rated” pricing of OTT services (communications and other) are the one exception case, needed for consumer digital inclusion and to increase data revenues to TSPs, for example:

1. Open market sponsored data, whereby anyone can sponsor a specific internet data session and zero-rate it towards a subscriber (paying the TSP)
2. Operator-designed “bundles” of zero-rated or free internet sites designed to attract specific market segments

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.

TCL Response:

We do not believe that such a framework needs to be structured by the Authority. Paid Internet Transit as a commercial option for OTT providers should be left to the OTT service players and TSPs who can work out commercial agreements on mutually agreeable terms.

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

TCL Response:

Industrial Policy to encourage India OTT apps should include

1. Regulatory and taxation that facilitates unbounded innovation that leverages Basic Internet Access inside India and globally.
 - a. The regulation needs to recognize that most innovation will be apps that leverage other apps: apps using other apps as platforms or components.
 - b. The regulation needs to recognize that the new India OTT apps shall have business processes that may disrupt existing business approaches.
2. Ecosystem facilitation and sponsorship of innovation and internet business investment. This might include tax or other incentives to corporates and other investors, and perhaps direct funding of educational and other institutions.

This should include a government focus on IoT (internet of things) ecosystems and applications of importance to the India economy (*i.e.*, healthcare, education, logistics, smart power, smart city, etc.).

These kind of apps may be financially supported & promoted through Public – Private Partnership models. Tax incentives may be offered.

TSPs may be willing to offer zero-rated network access to selected Public Service Apps.

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.

TCL Response:

OTT communications service players should not be licensed as that will stifle the innovation that the India economy requires.

The communications licensing and the communications and OTT regulatory frameworks must instead manage a transformation of the industry from traditional telephony towards the digital economy built upon basic internet access.

A 20th century regulatory framework designed for traditional communication services may not fit onto the 21st century digital economy.

Regulation should focus on stabilization across this transformation, not protection from this transformation.

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

TCL Response:

There is no need to regulate subscription charges for OTT communication services. All such business models should be at the discretion of the OTT players.

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

TCL Response:

OTT non-communication services should be regulated carefully to protect and facilitate societal needs (see Q1).

Such regulatory goals should equally apply to all OTT services that utilize the public internet in India, whether the internal functions are communications and/or non-communications.

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

TCL Response:

India regulatory policy should also consider how to facilitate different needs for targeted constituencies, for example:

1. Consumers
2. Consumers currently not enabled via internet access
3. Literacy-challenged or disability-limited consumers
4. Regional Language Users
5. Enterprises

For example, Net Neutrality regulation should not apply to enterprises.

Also, mature market regulatory regimes (*e.g.*, US and EU) have a smaller imperative to enable digital inclusion, hence those jurisdictions may see less value in open market sponsored data and operator-designed bundles that include selected zero-rated or free internet sites.