

**CONSUMER PROTECTION ASSOCIATION  
HIMMATNAGAR  
DIST. : SABARKANTHA  
GUJARAT**



**COMMENTS  
ON  
Consultation Paper  
Regulatory Framework for Over-The-Top  
(OTT) communication Services**

**Introduction :**

With nearly 500 million internet users, a figure that is growing at a rate of 8%, India is one of the largest drivers of digital innovation across the world. India's potential as a market for global media and entertainment sector is unprecedented, and a liberal investment environment is helping foreign players to enter the Indian market easily.

The government's *Digital India Initiative* is helping even the most remote villages to stay connected. Indian culture values entertainment and the growth potential for media houses and entertainment giants are enormous. Over-the-top (OTT) media services have already entered India, and services such as Netflix, and Amazon Prime have a growing number of

users across the country. Surprisingly, OTT is growing popular even in smaller towns and villages where internet speed has been questionable, to say the least. In such a scenario, OTT is going to drive innovation in India simply because of the sheer value of the market that India offers.

When we look at statistics related to internet usage in India, it is quite unavoidable to feel overwhelmed by the sheer figures. These figures indicate that video consumption in India is growing at the speed of light, and much of the aspirational rural and small-town users have already begun to stream media using high-speed mobile internet connections. With a rural to urban migration pattern, accessing high-speed internet connections is not only easy but also a reality already in the making. Of the half a billion internet users, there are at least 180 million active online video viewers.

In 2017, the OTT market in India was valued at 37 billion rupees. OTT market in India is expected to grow at 17.3% in the next five years. People have already begun to supplement TV viewing with multiple OTT platforms such as Amazon Prime and Netflix.

### **Improvement in digital infrastructure**

While OTT is likely to open doors to a lot of content creators, broadcasters, and aggregators, it is also going to open up opportunities for people working towards improving digital infrastructure. OTT will propel software and web development opportunities, while also helping digital marketing agencies to take up new projects. Existing digital infrastructure in India is rather dismal, even if we consider high-speed 4G, the upcoming 5G, and broadband connections in urban areas. Telecom infrastructure is woefully outdated, and it will need to be updated and upgraded to handle

the burgeoning internet traffic that is likely to arise from 700 million smart phone users by 2020.

While Indian languages, ( 22 officially ) offer bountiful opportunities for innovation, currently there are issues with keyboards, fonts, and language input. Innovation in the field of improving user-experience for content in Indian languages is very important. Low data speeds are still a challenge, and OTT usage will force telecom operators and service providers to improve existing infrastructure and enhance speeds.

### **Enhanced user-generated content**

With smart phone usage is expected to explode, there are a lot of opportunities in the field of user-generated content. Much of the OTT-enabled services will likely see innovation in the area of helping people create and share content in the language of their choice. Innovation will revolve around building applications that are user-friendly in terms of content creation and sharing. With this in mind, video and music editing applications may prove to be important areas to consider.

Also, it identifies factors such as cost, convenience, features, content availability, smart phone and mobile internet penetration, user experience and net neutrality which are effectively lever aged by OTT players to offer better substitutes to telco offerings. Furthermore, it studies the impact of these factors on operators' voice, messaging and data services. From the research we confer, that Cost, Convenience, Communication (Social propensity), Content availability, Advancement in technology and in devices as well as telecom networks and Net Neutrality have led to adoption of OTT services.

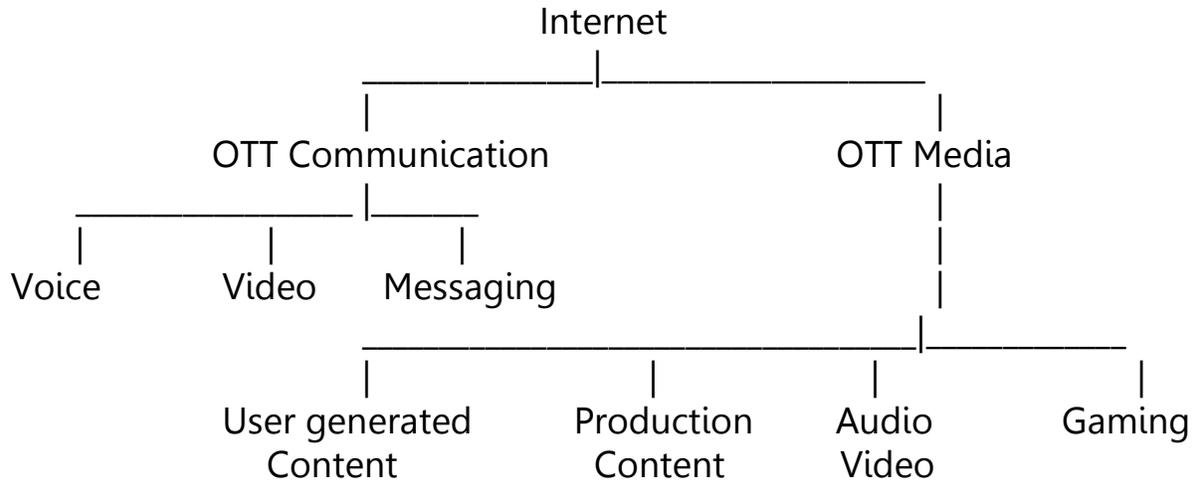
**It is clear that Over The Top (OTT) services have impacted the telecom operators resulting in the erosion of billions of rupees from the operator's balance sheets worldwide. If these OTT players are not dealt strategically, then in the medium to long term the telcos might just become a dumb pipe for OTT services. Therefore, we believe that OTT services must be analyzed in great detail & the operators should take reference from the OTT players and all the gaps in their services, which might even require transformation in their business model.**

**Q.1 Which service(s) when provided by the OTT service provider(s) should be regarded as the same or similar to service(s) being provided by the TSPs. Please list all such OTT services with descriptions comparing it with services being provided by TSPs.**

**Comments :**

OTT services can be defined as any service provided over the internet that bypasses traditional operators' distribution channel.

- VoIP: Skype, Viber, etc.
- SMS: WhatsApp, Kakao Talk, Line, Telegram, etc.
- Apps: search portals, news portals, banking, weather, shopping, etc.
- Cloud Services: Dropbox, Google Drive, Apple icloud, etc.
- Internet Television (Video streaming): Netflix, Hulu, YouTube, Amazon Instant Video, etc.



1. OTT VoIP
  2. OTT Messaging
  3. OTT Video

Calls :

1. Skype
2. Nimbuzz
3. Viber
4. Fring
5. Line

Messaging services :

- |             |               |
|-------------|---------------|
| 1. WhatsApp | 2. Line       |
| 3. We Chat  | 4. Kakao Talk |
| 5. Chat ON  | 6. Viber      |
| 7. BBM      |               |

### **Personalized content**

The concept of personalized content is relatively new in India. However, OTT is set to change all that, and we can see that already happening. Netflix, Apple Music, Amazon Prime, and other OTT-based services have begun to offer personalized content to a market that was mostly used to the hand-me-down equivalent in media content. Personalization spurred by OTT will likely have cultural and social ramifications but in a positive manner. Indian media consumption has been dominated by proscriptive relaying of content without much choice for the actual viewer or consumer.

### **Streaming of video and audio**

More than 70% of revenue earned by the Indian music industry now comes from digital streaming. Affordable and high-speed internet connections have helped the music industry to make use of online platforms to offer music as OTT. Similarly, Indian movies and TV shows have a huge potential to reach the market via OTT. Most people in India have begun to replace their televisions with smart phones for media consumption. As smart phones usage tends to be an individual affair, as opposed to a family watching TV, individualization, and personalization of music and movies will grow.

### **Mushrooming of online gaming**

Video games in India are quite popular, throughout of reach for most ordinary citizens. Xbox, Nintendo, and PlayStation were all out of reach for ordinary and rural Indians, and their usage was limited to affluent urban users. The advent of affordable Android-based smart phones have

democratized online gaming and brought game play to millions of smart phone users across the country.

### **Content in various languages of India**

Right from sports, music, and movies to online gaming, content in regional languages is likely to be the focus of media houses, whether national or international. Sony LIV, for instance, believes that a large proportion of its OTT offering will depend on media consumption in languages other than English, such as Tamil, Bengali, Kannada, etc. In fact, Sony has plans to attract 200 million users from various linguistic states of India, subverting the idea of homogeneous media consumption. While music and movies already have an OTT presence for various languages of India, OTT-based TV services hold promising opportunities as well. As discussed earlier, the gradual replacement of TVs with smart phones will likely open up opportunities for TV content creators and aggregators as well. Innovation in this area will focus on making TV-streaming in regional content quicker and more accessible. Mobile app streaming via OTT is another area that might open doors to innovation.

### **The growth of messaging, voice calling, and video communication**

OTT isn't limited to media or entertainment consumption. While internet television and music, movies and video game streaming are associated with OTT, messaging apps and voice calling services come under the category of over-the-top services as well. OTT messaging includes WhatsApp, WeChat, iMessage, and others that bypass mobile network operators to provide messaging services. Similarly, VoIP services such as Skype, Viber, and others come under the OTT umbrella as well. These kinds

of services are set to explode across India, with most users choosing these free-to-use applications instead of paying separately for them.

**Q.2 Should substitutability be treated as the primary criterion for comparison of regulatory or licensing norms applicable to TSPs and OTT service providers? Please suggest factors or aspects, with justification, which should be considered to identify and discover the extent of substitutability.**

**Comments :**

1. Most European Regulators concluded that OTT is not a substitute for traditional voice services.
2. Norway has concluded that some OTT voice services are a substitute for traditional voice services.
3. Spain and Portugal have considered this substitute.
4. Body of European Regulation for Electronic Communication ( BEREC ) defined OTT as " Content, a service or an application that is provided to the end users over the public internet ". This definition implies that :
  - (i) The OTT provider is generally different than Internet Service Provider but an Internet Service Provider can also provide its own OTT services or partner with an OTT provider.
  - (ii) OTT refers to a way to deliver a service not to the nature of the service.

(iii) An OTT service may or may not qualify as an electronic Communication Service ( ECS ).

(iv) An OTT service that does not qualify A n ECS may still compete with ECS..

(a) Examples of OTT services that may qualify as ECS :

❖ OTT voice service with possibility to place calls to Public switched telephone network ( PSTN ) or receive calls from PSTN. Ex. Skype- In and Skype-out.

(b) Examples of OTT services that may not qualify as ECS, but that may compete with ECS..

❖ OTT voice service in closed user groups. Ex. Skype.

❖ Instant messaging. Ex. WhatsApp.

(c) Examples of OTT services that may not compete with ECS.

❖ Video streaming. Ex. Netflix

❖ E-Commerce. Ex. Amazone.

5. OTT is considered as a substitute for traditional voice services only in very specific cases. Only two European regulators NKOM and ANACOM have concluded that some OTT voice services are substitutes for traditional voices services. This was in a context where these OTT services: –

support full interconnection with traditional voices services and are allocated numbering resources –have

gained some importance either in terms of market share or in terms of regulatory status.

Outside of these rare situations, OTT voice services are not considered as a substitute for traditional voices services.

6. Substitution between OTT services and SMS has been assessed in France, Denmark and Germany. Unlike in Ghana, under the current European framework interconnection can only be regulated on the basis of a market review.

If someone wants to regulate SMS termination, it must therefore first demonstrate that SMS termination is relevant for ex-ante regulation for Electronic Communication Service criteria should be fulfilled which described below:

1. The service is commonly provided for remuneration.
  2. It consists wholly of mainly in the conveyance of signals and
  3. It does not provide or exercise editorial control over content.
7. Smart phone penetration in India is expected to continue increasing and substitutability of SMS with E-mails and instant messages is expected to increases. As a result, the competitive constraint at retail level could lead to effective competition. Apart from this, ubiquity of smart phone and mobile data packages can play a major role. We should monitor the evolution of the market.

**Q.3 Whether regulatory or licensing imbalance is impacting infusion of investments in the telecom networks especially required from time to time for network capacity expansions and technology up gradations? If yes, how OTT service providers may participate in infusing investment in the telecom networks? Please justify your answer with reasons.**

**Comments :**

Yes.

TRAI should take certain steps like :

1. Fair environment for Competition, Innovation and Investment :
  - (i) Develop measures with a view to promoting competition, encouraging innovation and investment in the national telecommunication ecosystem.
  - (ii) Assess the economic, policy and consumer welfare impacts of OTT including the regulatory framework and economic incentives.
  - (iii) Develop enabling policies and/or regulation frame work to foster fair competition between network operators and OTT providers.
  - (iv) Consider fundamental differences between traditional national telecom services and OTT.
2. Relationship between OTT and network operators :
  - (i) Consider inter-dependence between operators and OTT providers i.e. How consumer demand for OTT can affect increase in data demand and decrease in traditional service demand.

- (ii) Encourage co-operation between OTT and network operators.
  - (iii) Stimulate innovation and investment in the development of telecom infrastructure.
3. Fostering innovation and investment :
- (i) Foster entrepreneurship and innovation in OTT application and encourage sustainable infrastructure investments .
  - (ii) In the spirit of service availability and affordability, foster enabling legal and regulatory environments and develop policies :
    - Fair, transparent, stable, predictable and non-discriminatory
    - Promote competition, technological and service innovation
    - Encourage private sector investment incentives
4. Fostering innovation and investment :
- (i) Participate and contribute to national standardization efforts to ensure open, interoperable, portable, secure, and affordable services for consumers .
  - (ii) Consider challenges arise from exponential growth of OTT.
  - (iii) Support for innovation, demand stimulation, industry collaboration, and public-private partnership.
5. Consumer protection and international collaboration :
- Take appropriate measures to encourage all market participants to maintain the security of networks carrying data and help protect consumers of .
6. There is certainly a requirement for some level of regulation for online communication providers. A licensing regime might not be the

best way to about it, as it would be impractical and diminish the value of the internet to the citizen.

7. Implementation of licensing regulation for OTT communication services can be extremely difficult since there is multiplicity of OTT players that provide a mix of services or aggregated services, and not just voice calling or messaging or chatting features, etc.
8. We feel that there should be a " Global compact " on such issues.
9. There may be a " rights based approach " to this issue.
10. It should be keep in mind that applying additional legislation to digital services may increase the overall burden of regulation compared with the risk of chocking innovation by small firms like OTT entrants. Relying on self and co-regulation, potentially supported by standards can be applied.
11. Partnering with OTT :

There is a saying that if you cannot beat them, join them. So partnering with the opponent can be a good strategy when it is difficult to beat them at their game. Many telecom operators are already resorting to this strategy wherein they are partnering with the OTT players and benefit from their traffic. Some of the examples are as follows:

1. Viber's partnership with Axis in Indonesia: Axis, an Indonesian telecom operator has entered into a partnership with Viber wherein Axis lets its customers buy a Viber data service rather than a full data plan, as a migration strategy that educates customers about buying data bundles from their

mobile provider and allows them to become comfortable doing so.

2. DiGi telecommunications, a Malaysian mobile service provider, has partnered with WhatsApp provider as a result of which the DiGi customers can get unlimited access to WhatsApp service for a fixed fee. Same strategy has also been adopted by 3 Hong Kong, a mobile network operator and broadband service provider in Hong Kong and by reliance Communications in India.
3. Aircel partnered with Nimbuzz and promoted their partnership, in the state of Jammu and Kashmir wherein the Aircel via SMS informed and encouraged its subscribers to download Nimbuzz application whereby 40 MB of data usage would be transferred for free to those subscribers who would download and activate the application within a time span of 24 hours.

These strategies have enabled the operators to keep the traffic and gain a share of the revenues. However, the operator has limited or almost no control on the direction as well as quality of the services offered through these partnership deals. This may adversely affect their relationship with their customers. Moreover they can reap benefits of the partnership only as long as their partner brand is in demand. It would also diminish the MNOs' role. They would be relegated to a transport mechanism for "off deck" applications and would pressure MNOs to reduce OPEX and CAPEX costs on their network.

12. Developing their Own Services :

Another long term strategy which can be adopted by telecom operators would be to introduce its own OTT service. This will enable them to have full control over the service and also enable them to interact with other such initiatives within the telecom fraternity. The operator can develop the necessary expertise in-house or acquire a company with relevant skills and know-how. Although it is not the fastest route to market but it enables the CSP to own the consumer relationship and expand into adjacent market and reach a much broader customer base. They can also leverage their core assets (control over the network, customer insight, customer care and distribution channel) to differentiate their OTT services from other offerings in the market.

However, the investment required for such an approach is quite high and the approach is risky for CSPs as they do not have the necessary skills to launch such services.

**Example:**

T-Mobile USA has launched Bobsled, Telefonica Digital has introduced Tu Me service both of which offer free voice and texts. Orange have also launched their own branded OTT communication services namely Libon. Similarly, Comcast has started providing web access to its films and TV shows in order to compete with Netflix.

The GSM Association (GSMA) is actively promoting Joyn, its IP-based communications specification and brand. Member companies are encouraged to use it as the standard approach to develop and

introduce new services such as chat, image sharing and file transfer that can compete with 3rd party OTT services. What might just make this endeavor work is that the Joyn is a community that spans all Joyn enabled operators, similar to what current SMS and telephony technologies do. This would make services originating from Joyn ubiquitous across communication providers.

Joyn however is not without its own challenges, many of which are out under individual operators' control. The long development and time-to-market cycles mean that commitment from device manufacturers to the technology is critical to its success. Until Joyn manages to effectively address these issues, in its current form it remains an urgent necessity but an incomplete solution.

**Q.4 Would inter-operability among OTT services and also inter-operability of their services with TSPs services promote competition and benefit the users? What measures may be taken, if any, to promote such competition? Please justify your answer with reasons.**

**Comments :**

Inter operability will be useful for the consumers. Consumers have a vast range of choice at low to zero cost because the OTT market is highly competitive and has low switching cost. Consumers find it extremely easy to acquire knowledge about different apps and switch from one to another. Apart from this :

1. Apps are easily downloadable on smart phones and can co-exist on the same handset without taking much capacity along with other apps.
2. Information about new apps is easily accessible given the ever increasing number of reviews of consumer communication apps on apps store like Google play store etc..
3. A new mobile app requires minimal staff, capital investment and infrastructure.
4. The rise of cloud-computing platform has dramatically decreased the time and capital necessary to start and scale an online service.

The traditional sources of income for telecom operators, based predominantly on subscriptions and metered services, are showing signs of becoming obsolete. On the other hand, the business models that are gaining dominance, such as OTT services like WhatsApp, Skype and Netflix, neither contribute to the direct income of access providers nor to the government's tax revenues. They do however use the communication networks and necessitate additional network investments. OTT services do lead to higher data usage and additional revenues for the telecom operators thereby offsetting the loss due to decline in messaging and voice revenues to some extent.

Furthermore, OTT players like Viber, Snapchat and WeChat among others take advantage of new possibilities to obtain income by exploiting the "two-sided" aspect of their markets and earn their revenues mainly from advertising, in-app purchases and subscription charges. In this regard,

telecom operators are finding it difficult to adapt to this model where they don't have experience. They are trying to identify the reasons so they can devise strategies accordingly. At the same time, their market power is being eroded due to higher competition and is shifting towards content providers, especially in case of music and video streaming services such as Netflix, YouTube, among others.

1. Inter operability of services is good strategy which can be followed. Many operators are resorting to this strategy wherein they are bundling offers in such a way that the lure of financial saving by using OTT services becomes less enticing. By bundling data or voice package with SMS plan, at an affordable price operators can maximize their revenues and at the same time reduce the threat of OTT services. However, this would only help the operator retain some level of customer loyalty for a short time period.
  
2. Content bundling is another innovative way for operator to bundle the data intensive OTTs like Video apps (Netflix) with their normal voice subscription plans to encourage the customer for using these apps thus driving the increased data usage. This also enhances the customer experience as the time bound monthly limit instead of per Mb charging eliminates the fear factor for customers when signing up to a value added service.

Examples:

- (i) After a failed attempt to block Skype, TeliaSonera, now offers Skype with select data plans.

- (ii) Many Indian telcos such as Tata Docomo, RCom, Airtel among others have planned specifically for whatsapp, Facebook, saavn services.
  - (iii) Vodafone in the UK has begun to incorporate a choice of one of Spotify Premium, Sky Sports or Netflix access free for 6 months, as part of their Vodafone 4G Red plans. This gives Vodafone a nice headline message which encourages customers to sign up to a higher tier and increases mobile data usage.
3. The existence of a pricing arbitrage in VoIP OTT communication services requires a graduated and calibrated public policy response. In case of OTT VoIP international calling services, a liberal approach may be adopted. However, in case of domestic calls (local and national), communication services by TSPs and OTT communication services may be treated similarly from a regulatory angle for the present. The nature of regulatory similarity, the calibration of regulatory response and its phasing can be appropriately determined after TRAI's recommendations to this effect.
4. OTT services may be mandated to interconnect with each other if technically feasible and regulatory desirable for a competitive market place.

**Q.5 Are there issues related to lawful interception of OTT communication that are required to be resolved in the interest of national security or any other safeguards that need to be instituted? Should the responsibilities of OTT service providers and TSPs be separated? Please provide suggestions with justifications.**

**Comments :**

**(i) Are there issues related to lawful interception of OTT communication that are required to be resolved in the interest of national security or any other safeguards that need to be instituted?**

Yes.

The biggest security threat is from OTT communication service players which are highly capitalize, global monopolies and today control multiple million customers across continents.

Tele – SP and OTT – SP both are required to create infrastructure and be technically compliant to lawful interception requests. Those OTTs – SP refuse to comply lawful interception should be blocked.

There should be a framework for lawful interception,

- (i) Need to targeted and have sufficient safeguards to prevent misuse.
- (ii) Should be seriously enforced without exceptions, but should not create undue burden on small startups.

The main issues related to security , safety and privacy of the consumer are :

1. Jurisdiction and Enforcement :
    - (i) Most of the OTT service providers are based outside of India. The OTT service providers must co-operate for the criminal or any other investigation conducted by Government agencies or Judiciary System.
    - (ii) There should be link with Indian territory as, OTT is not owned or manage any infrastructure in India.
    - (iii) The offence committed in the territory of the Kingdom by Indian or by foreign nationals must be punished in accordance with the provision of Indian Law.
  2. Whether OTT is an operator of telecommunication network or provider of a telecommunication service ?
  3. Cultural sensitivity and diversity as most of the OTT players operates from outside the country .
  4. Loss of content privacy & compromised cyber security leading to cybercrimes.
  5. Free apps share the personal information with various third party developers.
  6. In constant 'always on' connection, what information is being collected by mobile apps.( Big data)
  5. Cyber predators, bullies, stalkers are all online waiting to find their next victim.
- (ii) Should the responsibilities of OTT service providers and TSPs be separated? Please provide suggestions with justifications.**

Yes.

Both operates in different layers i.e. TSP operating in the infrastructure layer and OTT in the application layer and have a different rights i.e. TP has exclusive rights to spectrum and other rights while OTT does not have.

Therefore it is fair and justifiable that both should have different responsibilities in this regards.

**Q.6 Should there be provisions for emergency services to be made accessible via OTT platforms at par with the requirements prescribed for telecom service providers? Please provide suggestions with justification.**

**Comments :**

Yes.

Those OTT-SPs that reach a critical mass should be mandated to provide emergency services. For example, Skype provides emergency services in 4 countries including U.K..

Regulations should enforce minimal standards for emergency calling, UCC etc., that should be applicable to all functionally equivalent services.

**Q.7 Is there an issue of non-level playing field between OTT providers and TSPs providing same or similar services? In case the answer is yes, should any regulatory or licensing norms be made applicable to OTT service providers to make it a level playing field? List all such regulation(s) and license(s), with justifications.**

**Comments :**

Yes.

1. The telecommunication industry is widely recognized as a heavily regulated market, and corporate strategies can be mostly based on non-market actions like political strategies and non-economic considerations. On the contrary, OTT business models are depicted as mechanisms for escaping “politico-regulatory games and trade-offs” identified the supporters of the global IPTV industry within the telecom sector (operators), TV business (publishers, content producers, advertisers), device manufacturers (TV screens, set-top box devices, network devices), and state (primary and secondary regulatory authorities).
2. There is a fundamental need to create an absolute approach in understanding the complex nature of the OTT market and consequently establishing a multidimensional regulatory perspective.
3. The various policy issues are constantly evolving and interdependent on each other, and there is no test for determining whether a solution is right or wrong. To deal with this, we suggest that any intervention should be subject to constant review and reconsideration. Further, to

- make interventions future proof any instrument adopted should preferably be technology neutral.
4. It should remain mandatory for OTT SPs to get unified license for interconnecting internet telephony with others.
  5. Various OTT providers like Netflix, Skype, Viber, WhatsApp among others are creating huge data traffic consequently congesting the mobile and cable operators' network. These operators are hence under tremendous pressure to upgrade their existing infrastructure.
  6. These OTT players have two advantages over mobile and cable network operators: they can use the telecom infrastructure without paying for it, and they're not subject to the regulatory regimes that apply to operators such as other service providers. The telecom service providers also bear the additional burden of various tax provisions by local, regional and national authorities.
  7. Network providers are also subject to requirements such as local sourcing obligations, data protection rules, lawful interception laws, and non-discrimination pacts. Furthermore, the operators are also constrained by the geographical boundaries of their networks they are serving in. However, OTT players are not constrained to any geographical region and can practically serve consumers throughout the world. They are also not governed by any regulatory body globally as well regionally.
  8. This lack of regulations allow OTT players to adopt innovative, flexible and agile business model which are far more optimized. While Operators are liable to pay taxes in every country they are operating in, such an obligation is not applicable to OTT players as they are

required to pay taxes to the country where their Headquarter is located.

9. These OTTs take advantage of different tax regimes by establishing themselves in low tax countries and serving to users in high tax countries. OTTs like Skype and Facebook have their offices in Luxembourg and Ireland respectively, each of which is considered to be a tax-haven country. Since OTT players do not have to comply with telecom Regulations they are able to provide inexpensive/ free of cost services to their customers and are thus able to realize an exponential growth in their consumer base.
10. The telecom industry globally and especially in India is a highly regulated sector, primarily because of two reasons. One, they use Radio Frequency spectrum, which is a limited national resource. Two, in the communications age development of telecommunications is critical to the development and welfare of any society or nation. Compared to this, OTT players face minimal regulatory constraints. The limits put on their business usually exist only to the extent of addressing the security and privacy concerns associated with user data. And even these regulations are not well defined in most nations till date. As far as service obligations go, they are practically non-existent for OTT players beyond what they promise their users. Hence OTT players have essentially been able to build creative, flexible business models which they continue to adapt to the market's requirements.

11. Under telecom laws in India, calls originating in the country can't be "terminated on mobiles or landlines anywhere in the world without a license. However, an OTT player can still launch "a full-fledged VoIP service" by tying-up with someone who has a license. Nimbuzz has tied up with Spectra net for providing VOIP services which allows Indian users to make international calls. For an OTT player, the cost of providing VOIP service will cost a fraction as compared to the cost beared by a telecom operator. However these regulations apply only to Indian companies. Viber has recently launched Viber out service in which it lets its user call landlines and mobiles without having any license.

**(ii) In case the answer is yes, should any regulatory or licensing norms be made applicable to OTT service providers to make it a level playing field? List all such regulation(s) and license(s), with justifications.**

**Comments :**

Yes.

Apart of level of playing field it is important for the National security also. In November 2017, Skype was found guilty of failing to give essential information and provide write tap on Skype calls as the company was considered as a provider.

OTT services should have registration with DoT as it is required by the Telecom Laws because it is a service provided, which consists completely or mainly of signal transmissions and is carried over electronic

communication networks. Not doing so should constitute a serious offence which could damage the interest of users and competition.

**Q.8 In case, any regulation or licensing condition is suggested to made applicable to OTT service providers in response to Q.7 then whether such regulations or licensing conditions are required to be reviewed or redefined in context of OTT services or these may be applicable in the present form itself? If review or redefinition is suggested then propose or suggest the changes needed with justifications.**

**Comments :**

The most determining factor of the growth of OTT services will be the government and regulatory stance towards them. In our opinion, it is important to keep in mind at all times that high speed Internet access, the opportunities it offers for the development of new business models such as OTTs and their implications for telecom operators essentially foretell a technological revolution. Throughout history, technological revolutions have had "winners" and "losers", but finally what should be considered is the ultimate aggregate effect on the welfare of society at large. Therefore, governments and TRAI should facilitate this process and should not implement measures that could hinder it.

**Q.9 Are there any other issues that you would like to bring to the attention of the Authority?**

**Comments :** No

( Dr. Kashyapnath )