

7<sup>th</sup> January 2019  
JC/Misc/2019

Secretary  
Telecom Regulatory Authority of India (TRAI)  
Mahanagar Doorsanchar Bhawan (next to Zakir Hussain College),  
Jawahar Lal Nehru Marg (Old Minto Road),  
New Delhi - 110 002

Attn: **Secretary**

Dear Sir,

Sub: **Comments on TRAI - Consultation Paper on 'Regulatory Framework for Over The Top (OTT) Communication Services'**

- 1) This is with reference to the Consultation Paper released by TRAI on 'Regulatory Framework for Over The Top (OTT) Communication Services' dated 12<sup>th</sup> November 2018 ("**Consultation Paper**") issued by the TRAI. TRAI has invited comments on the Consultation Paper which contains approaches to determine if the Indian legal framework governing the Telecom Service Providers ("**TSPs**") is creating a non-playing field and regulatory imbalance. Accordingly, please find below our comments on the same.
- 2) To introduce ourselves, Juris Corp is a full service law firm co-founded by Mr. Jayesh H in the year 2000 and is now in its 18<sup>th</sup> year. The firm specializes in Technology law, Corporate Commercial, Securities, Banking & Finance, Private Equity, Securitisation, Bankruptcy & Restructuring, Real Estate and Dispute Resolution.
- 3) Juris Corp has been closely following various policy initiatives proposed by TRAI and in that regard, takes this opportunity to laud TRAI and for its vision, plan and action.
- 4) Please find below in the table, our comments / suggestions on the Consultation Paper for your kind consideration.

Yours sincerely,

Juris Corp

## SUGGESTIONS/COMMENTS ON THE PERSONAL DATA PROTECTION BILL, 2018

1. **Name of the Stakeholder:** Juris Corp
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5. **Suggestions/Comments as under:** Please refer the below table

<b>Q. No.</b>	<b>Points pertaining to</b>	<b>Suggestions/Answers</b>	<b>Rationale</b>
1.	Chapter 2 - Definition of OTT Services in different jurisdictions and contexts	<p>The following services provided by the OTT service providers can be considered as same or similar to the services provided by the TSPs:</p> <p>(a) <u>Voice Services</u> - The OTT Voice over Internet Protocol (“VoIP”) service is referred to as voice and/or video-based internet communication services. Such services provide real-time person to person telecommunication services using the network infrastructure of the TSP. VoIP employs internet as a medium of transmission for voice calls by the way of sending voice data packets replacing the traditional circuit transmissions used traditionally by TSPs.</p> <p>The OTT service providers offer VoIP services through multiple forms such as voice and video calls as aligned to the market needs. On comparing the voice services provided by the OTT service providers and the TSPs, it is observed that the services provided by the two players are similar in nature wherein the consumers are enabled to access communication services through either traditional circuits or internet.</p>	<p>The present Consultation Paper primarily focuses on a particular segregation of OTT services which includes messaging and voice services which are collectively referred to as communication services. In the light of this, the communication services provided by the OTT service providers can be considered at par or similar to the services provided by the TSPs. The focal rationale behind considering such similarity is the final result of such services and the purpose of such services, which when looked in essence are observed to be similar.</p> <p>The similarity of the communication services provided by OTT service providers and the TSPs can be compared on the following scales:</p> <p>(A) <u>Function:</u> The services provided by the two players primarily offers the function of long-distance communication. The similarity in the function implies that the services provided by the service providers are similar in nature and defined in the same parlance. However, the practice of defining the services in a single title is debateable as the OTT services possesses various extinguished characteristics</p>

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		<p>In addition to the basic voice services, the OTT service providers also offer video calling services which has not been ventured by the TSPs currently.</p> <p>(b) <u>Messaging Services</u> - OTT service providers offer instant messaging services to the consumers over the Internet through various messaging platforms as an alternative to text messaging services (SMS) provided by the TSPs. The services provided by the two players are similar in essence, however, differ in certain features. OTT messaging is not limited to private or direct messaging unlike traditional SMS and includes advanced features such as broadcast messages. In addition to the basic features, OTT messaging platforms also provide certain advanced services such as:</p> <ul style="list-style-type: none"> <li>(i) voice and video messages;</li> <li>(ii) messages using geo-location information including live location tracking system; and</li> <li>(iii) photo, audio or video sharing.</li> </ul>	<p>which are not offered by the TSPs in its traditional form. For example, the services related to geo location.</p> <p>(B) <u>Means:</u> As highlighted by the previous reports from the Department of Technology, though the services provided by the service providers are similar in nature and serve the same purpose, they differ in their medium. The means of transmission utilized by the respective service providers are highly distinguishable on the basis of their technical processes. Therefore, it must be highlighted that the similarity of the services provided by the service providers cannot be solely dependent on the functionality but also the technical and infrastructural basis of the services.</p> <p>In the light of these pointers, we observe that even though the functionality of the services provided by the two service providers same, the communication services by them cannot be referred to as identical but only as highly similar in nature.</p>
2.	Chapter 2	<p>In the light of the similarity of the communication services provided by the OTT service providers and the TSPs, the OTT service providers render services which are directly substitutable with the services provided by TSPs, which in turn are strictly regulated entities. However, the factor of similarity between the services and the corresponding substitutability cannot be considered as the sole criterion</p>	<p>In our view, the factor of substitutability of the services by OTT service providers cannot be considered as the sole criterion together with the extent of similarity between the services provided by the two players, the OTT-based communication services differ from the conventional communication services primarily on two fronts:</p> <ul style="list-style-type: none"> <li>(i) <u>Platform</u> - The OTT-based communication is enabled through a software-based platform, such as an</li> </ul>

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		<p>for regulating the OTT services at par with the TSPs.</p> <p>On analysing the pointers of comparison, it is observed on one hand that the qualitative differences in the nature of services being provided by the two named stakeholders may justify the application of different regulatory frameworks. On the other hand, it could also be suggested that such OTT services are offering communication services that are directly substitutable with the services provided by regulated entities and therefore need to be bound by similar regulatory requirements. However, the similarity between the services cannot be put into conclusion of suggesting a natural parity or similarity between the OTT players to an extent that they can substitute.</p> <p>Various prevailing and upcoming OTT service providers devise applications that render a plethora of services within the ambit of the same application platform. In such a case, the application of same stringent regulatory framework on the OTT services may pave the way for the problem of disaggregating of relevant services that are required to be regulated amongst the multiple services provided by such OTT service providers.</p> <p>As a solution to the said issue, certain offshore jurisdictions such as the European Union have applied the 'test of functionality' for determining the services provided by the OTT service providers. The purpose of the test is to be determine whether the service in consideration forms a 'substantial' or 'ancillary' part of service provided by the OTT</p>	<p>application which may be installed on a computing or mobile device. However, conventional communication services such as SMS is not dependent on such a software-based platform but only a network provided by the TSP.</p> <p>(ii) <u>Infrastructure</u> - The traditional communication services require a dedicated network whereas the OTT-based communication services function on the internet and as such do not require any dedicated network for implementing such communication services.</p> <p>In addition to the above described factors of differentiation, based on the functionality of the services provided the OTT and the TSP service providers, there are certain ancillary factors that highlight the differences between the two services and strengthen the debate in favour of the connotation that substitutability cannot be considered as the sole and primary criterion for the comparing the regulatory or licensing norms applicable to TSP and OTT service providers. They can be summarized as follows:</p> <p>(A) The TSPs charge the end consumers for the services provided by them however the OTT services do not inhibit any such revenue flow and are solely dependent on other revenue streams such as advertisements. This in turn highlights the different revenue structures followed by</p>

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		<p>service provider or the OTT platform.</p> <p>However, not contradicting the above elaborated perspective, the factor of substitutability should be made one of the primary considerations for application of regulatory norms on the OTT service providers with the view of protecting the end user of such services in relation to the data privacy norms and the accountability of the service providers.</p> <p>In order to be devoid of the difficulty of segregating communication services from the non-communication services provided by the OTT service providers, the test of substitutability can be considered. The test will aid in making a distinction between such services and allowing a structure for a regulatory or licensing framework that may be applied to the OTT service providers without hampering their functionality and their role in the market.</p> <p>Further, the following factors can be taken into consideration to determine the extent of substitutability:</p> <p>(a) <u>Nature of the service:</u> The nature of the services can be considered to be substitutable if the service provided by the OTT is similar to that of services provided by the TSPs. In addition to this, if the OTT services are competing with TSP services in the market they can be considered as substitutes.</p> <p>Example: Voice over IP (VoIP) and Instant Messaging service</p> <p>(b) <u>Determining the primary function or service of the OTT services:</u> In order to</p>	<p>the two service providers.</p> <p>(B) The TSPs possess a well-established infrastructure and the services provided by them are dependent on such infrastructure. To the contrary, the OTTs are not obliged and do not establish any such infrastructure for functioning. The OTT services in turn, make use of the infrastructure grounded by the TSPs.</p> <p>(C) The TSPs are independent service providers as they provide services which are solely dependent on the infrastructure established by them through their own investment. On the other hand, the OTT services requires the end consumer to gain access of the services of the TSP service provider to utilize the OTT communications services. The primary requirement of the OTT services is the purchase of the internet access service from a TSP. Further, the OTT services do not control the underlying broadband internet access points.</p> <p>Therefore, if a regulatory imbalance is found to exist between the TSPs and OTT players providing such services wherein such services can be regarded as same/similar to the services provided by TSPs, the next logical step would be to</p>

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		<p>determine the primary function of the OTT services, it needs to be determined whether the service of VoIP and instant messaging provided by the OTT application is the primary function of such application or an ancillary function provided by the OTT application.</p> <p>Example: Google Docs is primarily an online text editor but allows users to chat with another in real time. Therefore, instant messaging can only be considered as an ancillary function in this case and cannot be considered as a substitute to the TSP services.</p> <p>(c) <u>Target market and consumers</u>: In case the target market and consumers of the OTT applications and the TSP services are the same, the OTT services can be considered as a substitute of TSP services.</p> <p>Example: LinkedIn is a service which is offered and available to a certain set of consumers and constitutes a different user base.</p> <p>(d) <u>Offer services on comparable devices</u>: The devices on which the OTT services and the TSP services are provided by the respective service providers can be considered as a factor of determining the extent of substitutability of the services.</p> <p>Example: Certain services provided by Skype Business are only accessible on computer devices such as desktops and laptops and cannot be used over the mobile phones. Further, the</p>	<p>examine whether there is a need for any regulatory intervention to address that imbalance.</p>

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		TSP services are only functional over the mobile phones which incorporates a valid and functioning network signal.	
3.	Chapter 3 - Economic Aspects Chapter 4 - Factors relating to regulatory framework	<p>The answer to question that are the stringent regulatory and licensing policies governing and regulating the TSP service providers have resulted in disruptions in investment is in affirmation. The reason for the same being that the TSPs provide an infrastructure to the OTTs to work on and the OTT services are solely dependent on the availability of the services provided by the TSP services. In addition to this, the quality of service of OTT space largely depends on the quality of service of underlying telecom service. In the background of these facts, the OTTs are provisioned with a well-established base for hassle free and convenient functioning placing the OTTs in an advantageous position to utilize all the resources set up by the TSPs. However, the TSPs are obliged to establish and set-up a structure and infrastructure which requires huge amounts of investment. On analysing the returns of the two players, statistics highlight that the OTTs earn a huge amount of revenue from various sources such as advertisements even in absence of charges collection from the end consumer in turn impacting and decreasing revenue gets decreased for the TSPs to a certain extent.</p> <p>The regulatory framework governing the OTTs and the TSPs should ensure efficient entry, promote investment in network upgrade by incumbent and incite entrant to build its own network facilities when it is socially optimal</p>	<p>In our view, the regulatory norms regulating the TSPs can be considered to be one of the primary reasons for lesser infusion of investment in the TSPs as the TSPs are mandated to pay hefty amounts of charges and fees such as spectrum charges and licensing fees. Further, the TSPs bear the costs for the infrastructure, spectrum management and licensing fees for use of spectrum, which in turn are utilised by the OTT service providers without any additional cost to the TSPs. At the same time, the TSPs are required to meet the Universal Services Obligations and roll-out obligations together with complying with various other regulations together with the terms of license agreement entered into between the TSP and the Government.</p> <p>These restraints and mandated fees along with the race of Indian consumers towards OTT based communication services have hampered the further infusion of investment TSP services. The reason behind the same being that from the perspective of the prospective investors, the investments in the OTT services prove to be more lucrative for the investors owing to the wider reach of OTT services.</p>

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		<p>to do in order to enhance quality of end user services.</p> <p>In order to provide a platform for the OTT service providers to participate in infusing investment in the telecom networks, a structure can be introduced wherein a designated authority or regulatory body is established constituting the various TSPs as members. In the said set-up the OTT service providers, desiring to provide the services using the TSP infrastructure, would be mandated to register with the established authority or body. The OTT service providers would be entitled to enter into an agreement with the authority by way of an agreement. The said agreement should contain various governing aspects related to the functioning of the OTTs primarily with respect to the sharing of the revenue between them, the infusion of investment to be made by OTTs in the TSPs and the role of OTTs in acting as a catalyst in the process of infusing investment in TSPs.</p>	
5.	Chapter 4 - Factors Relating to the regulatory framework.	<p>The lawful interception of OTT communication services poses significant challenges to any jurisdiction. The reason for the same being that most of the data servers of the leading OTT services are located in offshore jurisdictions. This in turn, leads to a number of issues with respect to the lawful interception of the data such as the following –</p> <p>(a) The OTT service providers collect and store personal information from the data subjects and the end users in their data servers located abroad, in turn leading to issues and dangers relating to data protection and national security.</p>	<p>The concept and structure of lawful interception was traditionally straightforward and uncomplicated because it was confined to circuit-switched networks carrying voice traffic and the liability of the same was always shouldered by the TSPs. However, with the change and evolution of communication patterns with the development and advancement of technology, there is a wide range of sophisticated and encrypted communication channels which are existing in the technology world and are accessible to hackers. The presence of such channels and have heightened the risk of breach and thereby, widened the scope of interception.</p>



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		<p>(b) In the event of any dispute wherein the data collected or stored by the OTT service providers' servers form the subject matter of the dispute, it becomes difficult to procure the data due to jurisdictional discrepancies.</p> <p>The following safeguards can be undertaken by the authorities in order to ensure such lawful interception and protection of data of the end users:</p> <p>(a) <u>Data Localisation</u>: Data localisation refers to measures that specifically inhibit the transfer of data across countries and may include regulations prohibiting information from being sent offshore or requiring prior consent of the data subject before information is transmitted across national borders or requiring backup of such information to be stored domestically, and even the levying of a tax on the export of data.</p> <p>(b) <u>Encryption</u>: The encryption standards should be made uniform across all entities, unlike current norms. Also, the government should notify a national policy for encryption of personal data. This encryption must apply to data in motion as well as in storage.</p> <p>Further, the responsibilities of such data protection and encryption should be clearly demarcated between the TSP and OTT service providers in order to prevent any escape of accountability of the players. Therefore, their respective responsibilities in relation to the data protection should be</p>	<p>Further, there is an increasing need of a robust system for a structured and breach-proof lawful encryption system due to OTT communications and media which pose a threat to the privacy of the end users without the accountability of the service provider. In addition to this, the frequent and huge amount of transfer of personal information on the internet is fraught with risk precisely because of the "open" architecture of the internet which is open to breach by any third party thereby, posing a risk of loss of content privacy, compromised cyber security and further, leading to cybercrime. The 'always online' state of mobile phones exposes users to cybercrime. Most of the applications provided by the OTT service providers can trace the user's location for underlying processes (such as GPS applications finding the nearest restaurants etc.). This information may be used to commit a crime, or the location itself may be the target of a crime. Such threats can impact the nation's security. New age cybercrimes such as cracking, phishing, piracy, identity, child pornography and cyber-extortion have been gaining ground in recent years.</p>

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		<p>encircled due to the following reasons:</p> <p>(a) Concerning the communication services, the OTT and TSP architectures are often considered to be intrinsically different. The major difference being the link between the network and the control layers. This architectural difference implies a difference in the business structure. In terms of sales, the TSPs traditionally offer their services to their local customers (i.e. the clients of their access networks), whereas the natural market of OTTs is globally open and not limited to a specific customer base.</p> <p>(b) The TSPs are indeed limited to a given geographical territory, due to their adherence to an access network. At the same time, one of the key strengths of OTT models is their control of the device control layer, for example through Android or iOS. This control enables them to blur the border between local and remote, by enabling the user to seamlessly synchronize local and remote data.</p>	
6.	Chapter 4 - Factors relating to regulatory framework	<p>The provision of emergency forms an integral part of the digital ecosystem implying that the OTT services, too, should incorporate such services. However, due to the following issues OTTs cannot fully perform this function:</p> <p>(a) OTTs which require the location of the user for its functioning, does not have continuous geo-location of the user and are ill-equipped for emergencies.</p>	<p>The provision of emergency services in the services provided by the OTT service providers find its importance in the fact that the OTT services are in full bloom in the current phase wherein voice, messaging and media applications are being used by the customers at a pacing rate. The OTT services have the highest reach to the customers as compared to traditional TSPs. However, such services also entail certain challenges and difficulties. One,</p>

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		<p>(b) Most public-safety answering points (PSAP) are currently not equipped to handle incoming emergency communications from OTT services that are not interconnected with the PSTN.</p> <p>Currently, the access to emergency services through the TSP services are dealt as per National Numbering Plan 2003. It has provision for various access numbers such as 100 (Police), 101(Fire), 102 (Ambulance) &amp; 108 (Emergency Disaster Management) Recommendation pertaining to implementation of Single Number based Integrated Emergency Communication and response System was made by TRAI which was implemented in the year 2017.</p> <p>The provision of emergency services in offshore jurisdictions are provided different forms. One such form is of emergency alert system which is a national public warning system that requires OTT providers, broadcasters, and streaming media providers in the United States of America to implement components. This system enables the President of The United States to address the American public during a national emergency and into their streaming media or broadcast network. The system may also be used by state and local authorities to deliver important emergency information, alerts and emergency weather information targeting a specific area. OTT providers and broadcasters in the jurisdiction are mandated to implement EAS.</p> <p>Similarly, in the European Union, all undertakings that provide end users with ECS (Electronic</p>	<p>the major issue what the Emergency Response System faced is the lack of location information being provided by the caller which ultimately led to jurisdictional issues and secondly, since there were different numbers for different emergency services, it led to confusion among the end users.</p> <p>To avoid such circumstances an integrated emergency communication and response regulation must be adopted for OTT services.</p>

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		<p>Communication Services) for originating national and international calls through a number or numbers in a national or international telephone numbering plan are required to ensure the end users' right to call to the emergency number 112. The Universal Service Directive extends to those OTT services that may be technically characterised as ECS (e.g. OTT services that make it possible to make calls to the mobile and fixed line telephony numbers). Thus, such services (e.g. Skype to PSTN, Viber to PSTN) should provide a possibility for their users to make emergency calls.</p> <p>Such kind of alert systems can be mandated for the OTT services operating in India without burdening them with prolonged procedures as on the TSPs.</p> <p>Alternatively, the emergency provisions provided by the OTT can be in the form of a Single Number/Link based Integrated Emergency Communication and Response System which would make the service successful and highly efficient.</p>	
7.	Chapter - 3 Economic Aspects	<p>The OTT services have had an upper hand in the playing field owing to the background that they are primarily functionable and operational on the structure which has already been established by the TSPs. A consumer is obliged to purchase the internet services from a network operator in order to access OTT communications services.</p> <p>In the light of such non-playing field and further in differences of the nature of the services, the following norms can be made applicable to OTT service providers in order to maintain the</p>	<p>The existence of OTTs are a significant threat to the TSPs in the sense that they not only are the direct competitors in the telecommunication markets, but also utilized their own broadband network utilities without any payment to any authority and added more data traffic which could cause network congestion at peak hours potentially requiring the TSPs to upgrade their infrastructure in coping with the new situation which is apparently not level playing field. On considering the contention of the TSPs that the TSPs are obliged to invest in building the infrastructure (capital costs) and incur other costs</p>

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		<p>balance between the two kinds of services:</p> <p>(a) Implementation of licensing measures to OTT service providers.</p> <p>(b) Provision for incorporating emergency provisions.</p> <p>(c) Provision for regulation and governance of the lawful interception.</p> <p>Further, the following strategies can be adopted to ensure the parity:</p> <p>(a) <u>Creating opportunities for revenue</u> - This approach involves charging consumers a premium for OTT services, for example, by only offering OTT VoIP services with premium data plans, however keeping the per minute tariff lower than the traditional voice call. This approach enables the operator to obtain revenues from the use of OTT VoIP on their network.</p> <p>(b) <u>Strategy of Collaboration</u> - This strategy involves partnering with select OTT players to develop a mutually beneficial relationship. The business model shall ensure a revenue share between both the service providers.</p> <p>(c) <u>Encourage competition</u> - This approach shall ensure that the TSPs develop their own OTT services to compete against the established OTT players. They either develop the necessary expertise in-house or acquire an entity with the relevant skills and knowhow and then rebrand and sell these services as</p>	<p>associated with operation of the network such as cost of spectrum, License Fee, Spectrum Usage Charge etc., it is observed that the OTT players are freely riding on their networks.</p> <p>The TSP whose network is utilized for delivering the OTT service has no control, no rights and no responsibilities for content on these applications and no claim on the latter. The presence of OTT services has especially the VoIP services have greatly impacted the financial revenue streams of the TSPs providing them with minimal benefits. However, another point of consideration should also be the increased use of data traffic and in turn the revenues of the TSPs from such increased usage by the end consumers.</p> <p>The two service providers, even though posing the factors of substitution, cannot be placed on a level playing field. In order to provide a level playing field to the two players without hindering the convenience and ease of the OTT services, which is essentially the key factor of OTT services, offshore jurisdictions have adopted certain measures such as:</p> <p>(i) Europe There are no licenses necessary in European Union states for OTT Providers, but in individual countries such as France and Spain OTT providers have been blocked when offering voice services that connect to the networks of the fixed and mobile operators. The justification in such a case would mean that in offering voice services the OTT provider is then behaving like a TSPS and should fulfil the obligations of a TSP as well i.e. offer emergency services, provide</p>

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		<p>their own thus enabling the telco to own the consumer relationship.</p> <p>(d) <u>Technical measures</u> - In some countries, measures such as traffic optimization, throttling and Wi-Fi offloading have been used to moderate the impact of OTT services, especially those requiring a lot of bandwidth.</p> <p>The regulatory services made applicable to the OTT service providers should be applied in a manner so as to ensure that such application of regulatory norms do not hinder the functioning of the OTT service providers for the sole reason that OTT services would then not be available to the consumers as easily and conveniently as they are currently available.</p>	<p>for legal interception, pay taxes, Universal Service Obligations etc.</p> <p>(ii) South Korea The KCC made it legal for telecommunication operators to charge their customers extra fees to use of foreign OTT VoIP applications or block their use entirely.</p> <p>(iii) USA The framework has not mandated the licences but obligations concerning emergency numbers and lawful interception.</p> <p>(iv) Singapore It mandates specific licences for VoIP connecting to PSTN. peer-to-peer not licensed, subject to competition law.</p> <p>Further, the jurisdictions provide for the following justifications for strategies adopted by them:</p> <p>(i) This approach enables the operator to obtain revenues from the use of OTT VoIP on their network. However, this approach may lead to customer dissatisfaction, as OTT VoIP becomes costlier than before.</p> <p>(ii) The premise of this approach is that OTTs should not just ride for free on operators' networks and operators should receive some fair compensation for the use of their networks</p> <p>(iii) Such an approach positions the TSPs as an innovator and improves its brand equity. The TSPs OTT services can help them expand into adjacent markets and have the potential to generate new revenue streams, resulting in growth.</p>

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			<p>(iv) The advantage of this approach to operators is that it reduces the strain on the network and the need for additional capital investment in infrastructure upgrades.</p> <p>(v) If content - streaming providers are blocked, it reduces the load on the network. This strategy has a high dependency on net-neutrality policies in a given country. If all operators in a given market are not aligned, then the operator implementing such an approach is likely to suffer significant customer attrition.</p>
8.		<p>The application of regulatory and licensing norms pertaining OTT service providers should be reviewed. The reason for the same being that owing to the features and convenience associated with OTT services and further the differences from the TSP services, the straight jacketed application of the measures that are applicable on TSPs would be unjust and be against parity. Also, since OTT and TSP services are not substituting each other they cannot be considered at par with each other in terms of services or regulatory compliance. Some of the measures that should be applied on OTT services but reviewed are:</p> <p>(a) Licensing measures-</p> <p>(i) Provision for obtaining a license or seeking permission from the Authority before setting up of the services.</p> <p>(ii) Provision to pay a nominal fee to an established Authority (TRAI) can be made in</p>	<p>Subjecting the traditional regulatory and licencing norms applicable on TSPs on the new age services such as OTT services would lead to -</p> <p>(A) No innovation and development in the technological arena. OTT services has also created an environment for innovation and alternative services to grow.</p> <p>(B) The OTT services would not be available easily and conveniently.</p> <p>(C) The TSPs would ultimately incur loss as the usage of data and internet would reduce to a great extent.</p>

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		<p>furtherance of registration of the OTT service provider.</p> <p>(b) Emergency Measures - OTTs can incorporate emergency measures as applicable in USA i.e. Emergency Alert System. (Ques. 6).</p> <p>(c) OTT services providers can adopt for Data Localisation or encryption for the process of lawful interception instead of being governed by stringent rules (I.T. Act 2000) through which TSPs are governed.</p>	
9.		<p>There are certain miscellaneous issues revolving around the said comparison and applicability of regulation in parity:</p> <p>(a) Users are not informed or educated on the risks associated with OTT applications downloaded from various stores.</p> <p>(b) Issues faced by OTT applications, all sub-categories of these apps—medical-centric, ecommerce-centric or payment-centric - have their own set of problems.</p> <p>(c) Traditionally, lawful interception can be readily executed because the information flows through a centralized signalling system. The information that is collected by the OTT service providers do not traverse in pre-designated common points in the communication paths. Thus, service providers tasked with implementing lawful interception of such communications have limited options.</p>	<p>OTT communications typically involve end users communicating with each other in a peer-to-peer mode, mostly utilizing proprietary and private signalling protocols.</p> <p>Major challenges are posed because-</p> <p>(A) Most of the time users believe that OTT applications downloaded from an official site can be trusted even though these stores do not guarantee trustworthiness of the products or items on sale or offer.</p> <p>(B) Due of the constant 'always on' connection, it is difficult to determine the activity or processes conducted by the mobile applications in the background. Further, it is difficult to track the transmission of information by the applications.</p>



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		(d) Lawful interception often cannot be performed in a timely manner because the network infrastructure has to be manually configured.	