Annexure: USISPF Feedback on Consultation Paper on Regulatory Framework for Over-The-Top (OTT) Communication Services

Introduction

USISPF would like to take this opportunity to thank the Telecom Regulatory Authority of India ('**TRAI**') for providing us the opportunity to provide comments to the Consultation Paper on "Regulatory Framework for Over-The-Top (OTT) Communication Services" ('**Consultation Paper**'). We have had the opportunity to review the consultation paper and offer our brief comments as follows:

Context

Today's consumers enjoy a wide variety of applications and content they can access over the Internet, including ways to communicate with others. Video, productivity tools, social networks, and an ever-expanding array of services and applications await a user at the end of an Internet connection. Much of this content is available for free. Consumers can simply point their browsers to a website or download an application on their phone and they can email friends, sample video, collaborate with colleagues, and have access to the content and services of their choice.

This explosion of choice and reduction in cost is an example of how the Internet allows healthy competition, fosters growth and improves people's lives. In the past, communications tools were provided by a handful of operators. Due to high entry barriers, consumers generally had access to the services of only a single monopoly telephone provider; along with the significant capital investment needed to build physical infrastructure, telephone networks depended on government-granted permissions. Today, in contrast, consumers have access to a myriad of communications tools – smart phone apps, email, streaming video, and much more.

The intense competition that prevails on the Internet means that the market forces alone can satisfactorily discipline providers. Applying telecommunications-specific regulatory obligations onto Internet-enabled services would increase their providers' costs (thereby impacting prices and availability for consumers) and could even eliminate service models, that have delivered tremendous benefits for consumers and largely contributed to universalize information, products and services. A host of laws of general applicability, including those governing tax, competition, privacy, and consumer protection, already apply to Internet applications and content today.

Comments to Questions raised by the Consultation Paper

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.

OTT communications services are inherently different from TSP services in a variety of ways, including technical, qualitative, and consumer-oriented differences. Some of these fundamental differences are indicated below:

- There is a clear contrast between the services offered by TSPs and those offered by OTT providers. There is, in the first place, a much higher degree of control & ownership of TSPs of their end subscribers while OTT services are offered purely on "opt-in" basis to internet users. TSP's services are tariff based services offered to end users while OTT services are usually free of charge without any committed revenues from end users.
- OTTs are not substitutes of TSPs; they depend on them. OTT applications cannot be offered without access to the physical networks that *only* TSPs deploy. TSPs control the underlying broadband access infrastructure, and are the gatekeepers to broadband internet access and therefore, OTTs themselves.

Telecom networks and OTT applications operate in different layers (network layer and application layer respectively) and offer functionalities on different devices and compete for different groups of customers.

- TSP licenses also confer several exclusive rights that are not available to OTT players. These include, for example: (i) the right to acquire spectrum, (ii) the right to obtain numbering resources, (iii) the right to interconnect with the PSTN, and (iv) the right of way to set up infrastructure.
- Furthermore, OTT services such as WhatsApp, Skype, Telegram, Google Hangouts, JioChat Messenger and Hike Messenger create dynamic ecosystems that enable user interaction in ways that are not possible through traditional telecom services.[1] For instance, unlike telecom services, OTT services facilitate group chats, payments, and sharing of high-definition photos and videos.[2] A recent study estimates that for the year 2017 , this consumer surplus for India provided by "Rich Interactive Applications" or "RIA" was a substantial Rs 6.3 lakh crore. A 2017 report by WIK found that each 10% increase in usage of RIAs led to an average increase of US$5.6 trillion in global GDP (0.33% of GDP) from 2000 to 2015. And according to one study, a five percent increase in WhatsApp penetration in 2015 is associated with a US$22.9 billion increase in global GDP.
  There are also OTT services that may be used for specific purposes, including for "business interaction".[3] For example, Flock[4] and Slack[5] are business focused applications, to allow employees and teams to communicate and collaborate with each other on a single platform. This integration of various functions on a single platform allows OTT services to offer a one-stop solution to users' communication needs and creates added value by reducing the time and money they spend on transactions, searches and information gathering.[6]
- Unlike TSP networks, OTT apps operate in a highly competitive market in which it is easy for consumers to switch between competing apps, and many consumers access multiple OTT communications apps from one device (thus, the rationale underpinning many legacy telecommunications regulations does not apply to OTT communications applications).
- We would also like to draw TRAI's attention to the European Union's acknowledgment in the revised European Electronic Communications Code of the fundamental differences between "number-based interpersonal communications services" ("NB-ICS"), such as those interconnected with the public telephone network, and "number-independent interpersonal communications services" ("NI-ICS"), which includes non-interconnected OTT communications apps that ride over the network.[7] The EU created separate regulatory regimes for NB-ICS and NI-ICS, subjecting NI-ICS to lighter touch regulation (e.g. transparency requirements).

[1] In fact, some authors have increasingly moved away from the term "OTT" as well, in favour of nomenclature such as "Rich Interaction Applications" that more accurately captures the wide suite of functions that such internet applications perform. See, the Economic and Societal Value of Rich Interaction Applications in India, Page 6. -- https://www.broadbandindiaforum.com/files/reports-and-publications/THE%20ECONOMIC%20AND%20SOCIETAL%20VALUE%20OF%20RICH%20INTERACTION%20APPLICATIONS%20IN%20INDIA.pdf

[2] The Economic and Societal Value of Rich Interaction Applications in India, Page 6.

[3] The Economic and Societal Value of Rich Interaction Applications in India, Page 5.

[4] https://flock.com/in/

[5] https://slack.com/

[6] The Economic and Societal Value of Rich Interaction Applications in India, Page 13.

[7] European Parliament and the Council of the European Union, *Directive establishing the European Electronic Communications Code*, Article 2 ¶ 6 (July 11, 2018).

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.

Substitutability is only one of the many criteria that should be considered in determining whether comparable regulations should apply on OTTs and TSPs. Other relevant factors include ubiquity and adoption, consumer welfare, addressable markets, level of competition, maturity of industry, lifecycle of product/services, impact on economy (especially SMEs and startups), level of innovation, nature of the underlying technology and other technical considerations such as whether the service connects to the public telephone network, and switching costs, amongst other factors. Substitutability is however a complex process - it comprises many considerations and factors and shouldn't be simply reduced to one factor. Besides functional similarity, several considerations are important for determining substitutability in the context of regulation. For example, the players must: (i) compete in the same layer (e.g., network layer, application layer, etc.) with comparable rights to resources; (ii) offer functionally comparable services; (iii) compete for the same group of customers; (iv) operate in the same service area; and (v) offer services on comparable devices.

We believe that invoking substitutability between the services for regulation or licensing requirements for OTT services will hurt consumers and industry. It will create a new barrier to entry for both new apps and service providers by raising the cost of service provision. Low barriers to entry, the open nature of the Internet, and rich interactions and experiences that OTT application and content providers enable are key to the continued growth of the digital economy.

Further, under the Indian Telegraph Act, the Central Government has the exclusive privilege to establish, maintain and work telegraphs (within which scope falls telecom infrastructure). It is under this statute, that the Central Government grants licenses (under the unified license regime) to third parties (such as TSPs) to establish, maintain and work different aspects of the telecom infrastructure and consequently requires to comply with the licensing norms. With the ability to operate telecom infrastructure in specified territories in India, the TSPs provide a bouquet of services such as access, internet, NLD, ILD services, etc (as opted by the TSP). In contrast, OTT players do not maintain or work, and have no role to play, in the telecom infrastructure licensed under the Telegraph Act. Instead they merely provide applications that the public accesses on certain categories (content layer) of the telecom infrastructure (i.e. the public internet) which is fully operated by TSP/ISPs. On the one hand, OTT providers should therefore logically not fall within the TSP licensing regime. They are, on the other hand, already regulated by existing laws (including the Information Technology Act and related rules). OTT services are in fact dependent and cannot exist without TSP/ISP services.

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 upgradations? If yes, how OTT service providers may participate in infusing investment in the telecom networks? Please justify your answer with reasons.

The perception that OTT service providers do not participate in infusing investment in telecom network is based on an outdated conception of the network infrastructure. In today's globalised world, the demand for data consumption is mostly driven by the consumption of online services that are created globally. To cater to this growing demand, OTT providers are investing in the global infrastructure required to host and carry content, and make it accessible to end users.

Globally, internet application, content providers, and service providers building facilities on their behalf, have invested in the four years since 2014 more than USD 300 billion in the networks, facilities and equipment of the Internet.[8] This amounts to USD75 billion per year, which is more than double their 2011–2013 average annual investment of USD33 billion. Approximately USD59.1 billion, or 78% of the annual OTT providers' total

[8] David Abecassis et al., Analysys Mason Report: Investment in Networks, Facilities, and Equipment by Content and Application Providers (Dec. 2018) ("Analysys Mason").

investment in internet infrastructure is direct investment, which includes investment in data centers, physical cables,[9] and other transport.[10]

It is worth noting that the amount of revenue that OTT providers invest as a proportion of their revenue is high. Indeed, on average, the three largest application and content providers by revenue collectively invested 9% of their 2011-2013 revenues in networks facilities and equipment.[11]

OTT providers also have a positive indirect impact on investments in telecom networks.[12] Increasing demands for OTT services have fuelled demands for the underlying telecommunication services. This has in turn increased revenue opportunities for TSPs as is evident from the following:

- On a global level, increasing demands for mobile applications have increased revenues from mobile data services, which grew at an annual average rate of 34% between 2010-2014.[13]
- Increasing demand for OTT services has encouraged growth in data traffic for TSPs. Several TSPs in Africa recorded growth of more than 50% in data traffic in 2015, which in turn increased data revenues as a share of total revenues. [14]
    - Finally, over 60% of Internet traffic crosses a content delivery network - a significant investment by OTT providers to improve the efficiency of the transport and delivery networks.[15]
- The recent massive investments in 4G networks in India are primarily due to revenue opportunities offered by OTT applications. OTT music, video applications continue to drive growth of data and the accompanying revenues for TSPs.

Beyond just telecom networks, OTT providers have provided investment and revenue opportunities across the economy, not just for TSPs alone. A recent study by ICRIER determined that during the period 2015-16, OTT providers contributed a minimum of USD 20.4 billion (Rs. 1357.6 billion) to India's GDP. The study forecasts that by 2020, OTT providers could contribute a minimum of USD 270.9 billion (Rs.18275.9 billion) to India's GDP.

Infusion of investments in the telecom networks for network capacity expansions based on technology upgrades is not solely dependent on regulatory or licensing regimes in the country. Even though TRAI has been proactive in regulating tariffs, most TSP services are either under forbearance or offered well below defined tariff ceilings, indicating healthy business offerings driven by competition within TSPs. If, upon thorough, transparent, and objective review, the government determines that TSPs are not investing at what seems to be appropriate levels, then there may be other limiting factors at play that would not implicate OTT providers. In particular, excessive spectrum fees have been highlighted as barriers to investment. Other impediments to investment may include

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[9] For example, top providers have invested in the Unity, Southeast Asia Japan and FASTER submarine cable systems and the Asia Pacific Gateway system. (Analysys Mason)

[10] Analysys Mason .

[11] David Abecassis et al., Analysys Mason Report: Investment in Networks, Facilities, and Equipment by Content and Application Providers (Sept. 2014) ("Analysys Mason") at 33.

[12] Impact of online communication services on the telecommunications market in Africa, available at <https://en.idate.org/impact-of-online-communication-services-on-the-telecommunications-market-in-africa/ >, last accessed on 28 November 2018.

[13] B. Williamson, Next generation communications & the level playing field – what should be done?, available at <http://www.ccianet.org/wp-content/uploads/2016/06/Next-Gen-Comm-Level-Playing-Field.pdf>, last accessed on 28 November 2018.

[14] The Mobile Economy Sub-Saharan Africa 2018, available at <https://www.gsma.com/mobileeconomy/sub-saharan-africa/ >, last accessed on 28 November 2018.

[15] Investment in networks, facilities and equipment by content and application providers, available at <http://www.analysysmason.com/research/content/reports/content-application-provider-internet-infrastructure-sept2014/ >, last accessed on 28 November 2018.

high licensing fees (3%), difficulty in obtaining rights-of-way, lack of infrastructure sharing, high taxation (including 5% USOF, ~5% SUC, 18% GST) and limits on foreign investment.

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.

Competition is always to the benefit of businesses as well as consumers if it is fostered in a conducive and balanced environment. Most importantly a competitive environment also causes lowering of prices for both data and traditional services and consumers can avail of better data connectivity at a lower price. Such an environment has led to an accelerated adoption of OTT services and increase in demand for more data.

Interoperability between OTT Services

When it comes to the OTT market, consumers have a vast range of choices at low to zero costs because the market is highly competitive and has low switching costs. Consumers find it extremely easy to acquire knowledge about different apps and switch from one to another. This is corroborated by the Competition Commission of India in its order *in re* Vinod Kumar Gupta and Whatsapp Inc.[16], which has stated as follows:

"The Commission also observes that there are no significant costs preventing the users to switch from one consumer communication apps to another. It may be due to the following reasons:

(i) all consumer communication apps are offered for free of cost or at a very low price (mostly free),

(ii) all consumer communication apps are easily downloadable on smartphones and can co-exist on the same handset (also called 'multi homing') without taking much capacity along with other apps,

(iii) once consumer communication apps are installed on a device, users can pass on from one app to its competitor apps in no-time,

(iv) consumer communication apps are normally characterised by simple user interfaces so that costs of switching to a new app are minimal for consumers, and

(v) *information about new apps is easily accessible given the ever increasing number of reviews of consumer communication apps on apps store"*

Further, the OTT economy is arguably more competitive than TSP services. Constant new entry is a feature of the online space because the barriers to entry for online services are low. The products offered are typically software-based, which means they can be rolled out, adopted, and built upon much more quickly (and cheaply) than industrial products. A new mobile app requires minimal staff, capital investment and infrastructure. The rise of cloud-computing platforms has dramatically decreased the time and capital necessary to start and scale an online service.

India has a robust antitrust regime that is equipped to deal with issues relating to abuse of dominance. The Competition Commission of India, associated with the Competition Act, 2002 is the competent forum to address such matters. Thus, no regulatory measures based on a notion of perceived consumer harm will be justified.

Interoperability between telecom and OTT services

The interoperability between telecom and OTT services has already been examined by the Authority in its Recommendations on Regulatory Framework for Internet Telephony[17] published in 2017. In its recommendations, the Authority has noted that the present regulatory framework permits Unified Access

[16]Case no. 99 of 2016, available at

https://www.cci.gov.in/sites/default/files/26%282%29%20Order%20in%20Case%20No.%2099%20of%202016.pdf.

[17] Available at https://trai.gov.in/sites/default/files/Recommendations_24_10_2017_0.pdf.

Service Licensee (UASL), Cellular Mobile Telecom Service (CMTS) licensees and Unified Licensee (access service) to provide unrestricted Internet Telephony, which extends to both PC to Phone and Phone to PC calls within India as well as abroad. Additionally, ISPs in India are presently permitted to provide one-way PC-to-Phone Internet Telephony service for International Long Distance outgoing calls only on PSTN/PLMN to such countries where termination of Internet Telephony calls is permitted. Thus, when it comes to traditional voice connectivity, telecom and OTT services are already interoperable, to the extent provided above.

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.

As articulated in the Consultation Paper, all the services offered by OTT providers ride on network/services offered by TSPs which are well aligned with all applicable guidelines or safeguards for national security. Currently, there is no private network allowed to be run by OTT providers of their own so all the underlying network supporting OTT services are managed, controlled and provided by TSPs. Additional lawful interception for OTT providers would hence be meaningless, unless OTT providers are allowed/enabled to create their own network independent of TSPs.

Multiple statutory frameworks allow the Indian government to lawfully intercept communication to preserve law and order, and protect national security.

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.

No such additional provisions are required as OTT providers do not offer any 'telecom services' and OTT services are highly dependent on the level/QoS of internet access to the end user which is controlled and managed by TSPs. The last mile (broadband, wireless or fixed line) access to user is enabler for any emergency services which can be offered by the TSP only as they provide & control the last mile. Any such obligation for OTT providers will be meaningless as they would not be in a position to support the very purpose of emergency services in the absence of their ability to manage the last mile access to the users.

For emergency services, regulators in other jurisdictions have drawn a critical distinction between services for which consumers expect emergency services access, and those for which there is no such expectation. Ofcom in the United Kingdom and the Federal Communications Commission in the United States, [18] for example, have acted to ensure that the public receives emergency calling and other regulatory protections when purchasing "mainstream" services that are likely to be used as a consumer's primary form of two-way, real-time voice communication.[19] This approach ensures that customer expectations about the capabilities of their services are met, while innovative offerings that do not have attached legacy expectations are not unnecessarily burdened or discouraged.

This key distinction between different types of services has shaped regulatory responses to emerging services world-wide. The European Commission has observed that the regulatory treatment of VoIP depends on the nature of the service being offered.[20] In countries like Singapore, Hong Kong, and the United States regulators

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18 The U.S. regulator has imposed obligations on "interconnected VoIP" because they allow users to both make calls to the public switched telephone network ("PSTN") and receive calls from the PSTN. *See* 47 C.F.R. § 9.3 (interconnected VoIP service, among other things, "permits users generally to receive calls that originate on the public switched telephone network and to terminate calls to the public switched telephone network.").

19 *See* Ofcom, *Ofcom says VoIP providers must offer access to 999*, July 26, 2007, http://media.ofcom.org.uk/news/2007/ofcom-says-voip-providers-must-offer-access-to-999/ (discussing imposition of emergency calling on "mainstream" VoIP services); 47 C.F.R. § 9.5 (imposing 911 calling obligations on interconnected VoIP providers).

20 European Commission, Commission Staff Working Document on the Treatment of Voice over Internet Protocol (VoIP) under the EU Regulatory Framework, June 14, 2004, *available at* http://ec.europa.eu/information_society/newsroom/cf/dae/itemdetail.cfm?type=371&typeName=Policy%20and%20legislation&item_id=13631.

have drawn distinctions between emerging services and services that have the same characteristics as traditional telephony, and tailored emergency service rules accordingly.[21] For example, Singapore does not require all providers to offer access to emergency services, but does require customer notice when access is not provided.

TRAI may consider reiterating its recommendation in its Consultation on Regulatory Framework for Internet Telephony, in which it recognised the limitations of Internet Based Services and recommended the following" In view of the above, the Authority recommends that the access service providers providing Internet Telephony service may be encouraged to facilitate access to emergency number calls using location services; however they may not be mandated to provide such services at present. The subscribers may be informed about the limitations of providing access to emergency services to Internet Telephony subscribers in unambiguous terms."

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.

At the outset, we believe there is no "non-level playing field" between OTT service providers and TSPs, as OTTs and TSPs provide different services, do not operate in the same network layer, and because – as discussed above – there are fundamental technical and business differences between traditional services and apps.

As explained earlier competition laws, consumer protection laws and information technology laws already govern the relevant facets of internet services, so it would be incorrect to characterize this market as unregulated. Additionally, OTT service providers thrive on the open and unbound nature of the Internet which leads them to constant innovation. By attempting to regulate OTTs in the above manner, individuals, companies and entire industries that rely on various OTT services would find their costs increasing disproportionately.

Moreover, licensing requirements or other heavy-handed regulatory obligations could create barriers to entry and expansion for app providers, particularly start-ups that lack the resources to obtain a license or establish locally in every country where their applications are provided. This could result in Indian consumers not being able to access the full benefit of global online applications, depriving the Indian public of innovative and useful technology. Licensing requirements could also impair the ability of Indian businesses to use online applications to grow and reach more people. The global reach of online applications makes them useful to business, including small businesses, because it enables companies to reach a larger potential customer base that extends beyond India's borders. This increases their business and collectively expands the Indian economy. Licensing requirements could fragment applications and services provided over the Internet and therefore erode the utility and usefulness of a global outlet for Indian businesses. Keeping the Internet open, decentralized, and free of barriers is critical to helping Indian businesses remain competitive in today's increasingly digital economy.

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.

As suggested earlier, current Indian laws more than adequately address content regulation, interception, competition and other relevant concerns that may impact OTT providers. Therefore, OTT providers do not require any additional regulations and licensing conditions over and above those that are already applicable to them under relevant laws of India.

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21 *See, e.g., E911 Requirements for IP-Enabled Service Providers*, First Report and Order and FNPRM, 20 FCC Rcd. 10,245, 10,256-57 ¶ 23 (2005) ("VoIP 911 Order"); Info-communications Development Authority of Singapore, *IP Telephony Framework*, http://www.ida.gov.sg/Policies-and-Regulations/Industry-and-Licensees/Licensing/Framework-and-Guidelines/IP-Telephony-Framework; Office of the Communications Authority of the Government of Hong Kong, *Know More about IP Telephony Service*, http://www.ofca.gov.hk/mobile/en/consumer_focus/education_corner/guide/advice_lfs/ipts/.

We instead strongly urge the Authority to consider reducing the legacy regulatory barriers on TSPs, especially licence fees, spectrum usage charges, other levies and taxes, to improve the business case for TSPs.

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

Through Digital India, the Indian government wants to transform the country into a digitally empowered society,[22] recognizing the enormous social and economic potential of the internet. In 2015, the internet economy contributed nearly 3% of India's Gross Domestic Product.[23] In 2016, the consumer surplus[24] created by OTT services alone was equivalent to 4.3% of India's GDP that year.[25]

However, much of the value created by the internet is only because of its open and inclusive nature.[26] This was recognized by Shri Ravi Shankar Prasad, the Union Minister for Electronics and Information Technology, when he expressed the Indian government's categorical support for an "open, plural and inclusive"[27] internet that allows access "without discrimination".[28] As the Telecommunications Authority of Trinidad and Tobago has observed, "regulatory oversight of OTT services […] implies regulatory oversight of an aspect of the Open internet."[10] Thus, regulating OTT services will truncate the open internet and dilute its ability to fuel innovation. This in turn will affect the government's Digital India programme, which relies heavily on the ability of online services to create opportunities.

[22] http://www.digitalindia.gov.in/content/vision-and-vision-areas.

[23] Creating a $200 billion Internet Economy. Study for the Internet and Mobile Association of India (IAMAI) by the Boston Consulting Group.

[24] Consumer surplus is an economic measure of consumer benefit, which is calculated by analyzing the difference between what consumers are willing and able to pay for a good or service relative to its market price, or what they actually do spend on the good or service. It is therefore an estimate of the consumers' perception of value of the service relative to other available alternatives. See The Economic and Societal Value of Rich Interaction Applications in India, Page 10.

[25] The Economic and Societal Value of Rich Interaction Applications in India, Page 11.

[26] Page 25, http://icrier.org/pdf/open_Internet.pdf

[27] Page 21,22, http://meity.gov.in/writereaddata/files/Booklet_Final_20160517.pdf

[28] Page 7, http://meity.gov.in/writereaddata/files/Booklet_Final_20160517.pdf