Before the
Telecom Regulatory Authority of India
New Delhi, India

In the Matter of

Consultation Paper on Regulatory Framework for Over-The-Top (OTT) Communication Services

COMMENTS OF THE
COMPUTER & COMMUNICATIONS INDUSTRY ASSOCIATION (CCIA)[1]

CCIA respectfully submits these comments in response to the Telecom Regulatory Authority of India's (TRAI) Consultation Paper on Regulatory Framework for Over-the-Top (OTT) Communication Services that "seeks to analyse and discuss the implications of the growth of OTT services as can be regarded the same or similar to the services provided by TSPs ["telecom service providers"], the relationship between TSPs and OTT players, whether any change is required in the current regulatory framework and the manner in which such changes should be effected, if any."[2] CCIA's comments explain that it would be imprudent and harmful to apply telecoms-style regulations that are ill-fitting and ill-equipped to address these emerging services and applications, which are providing unique, economic and societal benefits to users in India.

CCIA is an international, nonprofit association representing a broad cross section of computer, communications, and Internet industry firms. For over 40 years, CCIA has advocated for promoting innovation and preserving full, fair, and open competition. CCIA recently filed

[1] CCIA represents large, medium, and small companies in the high technology products and services sectors, including computer hardware and software, electronic commerce, telecommunications, and Internet products and services. Our members employ more than 750,000 workers and generate annual revenues in excess of $540 billion. A list of CCIA's members is available online at http://www.ccianet.org/members.

[2] *Consultation Paper on Regulatory Framework for Over-The-Top (OTT) communication Services*, TELECOM REGULATORY AUTHORITY OF INDIA (TRAI) (Nov. 12, 2018), at 3 [hereinafter *Consultation Paper*].

comments on issues similar to those presented in this consultation in response to the International Telecommunication Union's (ITU) Open Consultation on OTTs.[3] Those comments included a study by WIK on the "Economic and Societal Value of Rich Interaction Applications (RIAs)", which was commissioned by CCIA and served as a major source of information for the ITU's consultation.[4]

TRAI has rightly noted that "[s]ince 2015, OTT services have witnessed a significant increase in adoption and usage".[5] Indeed, OTTs are having a significant, positive impact on India's economy, creating a consumer surplus that was estimated to be Rs 6.3 lakh crore in 2017,[6] and a recent survey found that seventy-eight percent of small and medium sized businesses that use WhatsApp in India "say they have increased sales because of WhatsApp".[7] CCIA appreciates TRAI's interest in this subject but advises TRAI against applying ill-fitting, telecoms-style regulations to OTT services. Instead, TRAI should seek to further the economic growth and societal benefits that have already been created by OTT usage in India and around the world.

[3] John A. Howes, Jr. & Joseph J. Kerins, *CCIA Response to the Open Consultation of the ITU Council Working Group on International Internet-related Public Policy Issues (CWG-Internet) on the "Public Policy considerations for OTTs"*, COMPUTER & COMMUNICATIONS INDUSTRY ASSOCIATION (CCIA) (Aug. 18, 2017), https://www.ccianet.org/wp-content/uploads/2017/08/CCIA-Comments-in-ITU-CWG-Internet-OTT-Open-Consultation.pdf.

[4] Dr. René Arnold et al., The Economic and Societal Value of Rich Interaction Applications (RIAs), WIK WISSENSCHAFTLICHES INSTITUT FÜR INFRASTRUKTUR UND KOMMUNIKATIONSDIENSTE GMBH (May 2017), http://www.wik.org/index.php?id=879&L=1 [hereinafter RIA Study].

[5] *Consultation Paper* at 3.

[6] PTI, *Telecom OTT apps create Rs 6.3 lakh cr consumer surplus: Study*, FINANCIAL EXPRESS (Nov. 17, 2017), https://www.financialexpress.com/industry/telecom-ott-apps-create-rs-6-3-lakh-cr-consumer-surplus-study/935890/. Consumer surplus is the differnce between a consumer's willingness to pay for a good and the market price, which indicates the economic welfare that people gain from buying and consuming goods or services.

[7] *The Economic Impact of WhatsApp in India*, WHATSAPP, https://whatsapp.morningconsultintelligence.com/india/ (last visited Jan. 7, 2019).

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.

TRAI correctly recognizes that "there is no globally accepted definition of OTT services,"[8] and that "[m]any OTT applications provide multiple services within or using the same platform."[9] One of the major problems with considering regulations for OTT applications is that they are not the 'same' as traditional telecoms services or those provided by TSPs. Because the term 'OTT' is itself imprecise, there is significant risk that applying regulations to any Internet-enabled applications, services, and websites with which users interact could apply to some but not all and thus distort competition. These regulations also could unnecessarily burden online access to banking, retail, and media services, to name just a few examples.

OTTs and TSP services have different histories. Though some OTTs share some characteristics with telephony and Short Message Services (SMS), their evolution is distinct, descending from the earliest desktop-based interactive applications, like MIT's Compatible Time-Sharing System (CTSS); the Zephyr Notification System; and the SDC time-sharing system.[10] Indeed, one of the most popular OTTs was AOL's Instant Messenger (AIM), introduced in 1997. AIM quickly faced competitors, like MSN Messenger and Yahoo! Messenger in the late '90s and early 2000s, but this competition led to advanced features and functionality like voice chat, file transfers, and communicating with mobile phones, which are similar to what is found with some of today's OTTs. Thus, even in their brief history, so far OTT services have been subject to a faster pace of development and more intense competition than TSP services, for which network ownership operates as a high barrier to entry.

[8] *Id*. at 5.
[9] *Id*. at 8.
[10] John Howes, Jr., *What Do WhatsApp and AIM Have in Common?*, DISRUPTIVE COMPETITION PROJECT (June 22, 2017), http://www.project-disco.org/innovation/062217-what-do-whatsapp-and-aim-have-in-common/.

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.

In addition to the critical difference of independence from network ownership, OTTs should not be considered and should not be treated as substitutes for traditional TSP telecoms services because consumers do not use OTTs and TSP services as like-for-like substitutes — just as computers are not a direct substitute for typewriters. The consultation paper rightly notes that "[m]any OTT applications provide multiple services within or using the same platform. This may lead to problem of disaggregating relevant services that need to be regulated."[11] However, it also suggests applying a "substantial functionality" test. Imposing such a test could have harmful consequences if OTT developers relegated messaging or voice functionalities so they would not be considered "substantial" and therefore regulated. This would make it more difficult for users to use these functions, which would have a significant negative impact on families trying to communicate conveniently and affordably from different parts of India. It would also adversely affect small businesses and workers who depend on these newer modes of communications provided by OTTs to conduct commerce. Inevitably, a "substantial" or "ancillary functionality" test would lead to uncertainty and litigation regarding varying factors or vague regulatory considerations.

TRAI should recognize that OTTs are not simply offering free calling or texting applications; they provide many different functions compared to telecoms services. According to WIK, these applications "feature on average nine functions that offer consumers a wide range of interaction opportunities, including group chat, photo and video sharing, location sharing and real-time translation."[12] Because OTT applications and services face so much competition, they

[11] *Consultation Paper* at 8.
[12] RIA Study at 3.

must keep innovating and adding new functions to maintain the user's engagement. Furthermore, due to the vast amount of OTTs available and strong competition, consumers can stop using OTTs at will and easily switch between them – usually at no cost. Users often have multiple OTTs running at the same time. OTTs provide a wide range of opportunities for interaction and are constantly updating and evolving, so the imposition of regulation would instantly face difficulty in its application. By contrast, consumers generally have limited choice of TSPs and, where choice exists, long-term contracts make it difficult to switch providers.

TRAI should also consider that, as stated before, OTTs and TSPs have different histories. SMS originally developed from radio telegraphy, but the earliest desktop versions of what we now call OTTs used Internet Protocol (IP). Because most early OTTs were IP-based, they did not have the privileges or limitations of telecoms networks (*e.g.*, voice calls on Public Switched Telephone Networks (PSTN)). For example, though interoperability is crucial to the success of telephony (*i.e.* making telephone calls between carriers with different service areas), not all OTTs are interoperable, nor is interoperability between OTTs necessary. OTTs provide many different functions that may not work on other OTT apps.

Not only are requirements that were necessary for the PSTN and traditional telephony inappropriate and inapplicable for OTTs, but TRAI must also consider issues of competition and control over broadband access. Another fundamental difference is that providers of OTT applications and services generally do not control the underlying infrastructure through which consumers access them. In general, the marketplace for OTTs is very competitive, but as the consultation paper rightly notes, "[a]ccessibility of OTT services is dependent upon accessibility of Internet."[13] Consumers generally cannot access these applications if they do not have broadband access, which is controlled by the TSP. Moreover, OTTs do not control the quality of

[13] *Consultation Paper* at 2.

the Internet connection that consumers use — that service is rendered by the TSPs. Finally, if consumers do not like their TSP's service, they generally have few if any choices for broadband access. However, if consumers does not like the service or functions of an OTT application, they can switch in a matter of seconds.

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.

CCIA disagrees with the assertion that there is a regulatory or licensing imbalance between TSPs and OTTs. As stated previously, these are different services, with different histories, different relationships with the consumer, and very different levels of competition and switching costs. This is why legacy telecoms regulations are ill-suited for OTT applications.

OTTs actually drive investment in and the technological advancement of telecoms networks, which the consultation paper has rightly noted.[14] As OTTs develop, consumers want to spend more time online and, therefore, subscribe to telecoms services – mobile services but also fixed broadband. Indeed, WIK found that heavy users of video and music streaming OTTs "are more likely to have upgraded their mobile and fixed IAS ["Internet Access Service"] subscriptions within the last two years."[15] Consumers who use OTTs require more bandwidth and better connections, so they will in turn pay more to the TSP. Therefore, OTT use has a substantial positive impact on TSPs' businesses, giving them more opportunities to earn revenue and finance new deployments and facilities such as fibre networks, data centers, routers, and other networking equipment, which helps companies in the supply chain. TSPs can also fund more research and development that can lead to technological breakthroughs. At the same time, OTTs themselves are making large network investments to carry their own traffic closer to end-

[14] *See Consultation Paper* at 18 ("At the same time, TSPs themselves have also benefited from increased data consumption due to the proliferation of OTT services.").
[15] RIA Study at 19.

users, which reduces the network costs of TSPs. Indeed, some major OTTs, as a general rule, will carry traffic as far toward end-users as the end-user's TSP will allow.

Instead of focusing on regulatory or licensing differences between TSPs and OTTs, TRAI should focus on reducing regulatory barriers to broadband deployment for all providers, including but not limited to incumbent TSPs. For example, updating regulations on the siting of macrocell towers will help operators provide coverage to more places over long distances. Similarly, regulations affecting the siting and deployment of small cells that are the size of a backpack or luggage and can carry greater capacity should not be the same as those affecting macrocells, which can be 15 to 60 meters in height. Streamlining regulations will ease burdens and reduce costs for TSPs to build out their networks, which will in turn help them gain new customers and revenue.

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.

Interoperability is becoming more common among OTTs, but TRAI should avoid interoperability mandates. Interoperability means something different in the context of telephony and operating communications networks than it does for competition between OTTs. Interoperability or interconnection is crucial to the success of telephony (*i.e.* making telephone calls between carriers with different service areas). However, the context is different with OTTs. CCIA is concerned about this sort of characterization in the consultation paper, for it suggests that some OTTs could "switch[] off access to rival companies on devices and operating systems."[16] Consumers generally access OTTs through networks controlled by TSPs, so the term "switching off access" seems to imply that an OTT could switch off the consumers' access to the network. The real concern is the other way around. CCIA has long advocated for strong,

[16] *Consultation Paper* at 18.

enforceable, net neutrality rules that prevent TSPs from "switching off access" for consumers who would like to access any lawful site, application, or content of their choosing.

Interoperability mandates between OTTs would be problematic because not all OTTs are interoperable. Although it is becoming more common, interoperability for OTTs is driven largely by market forces and whether it is beneficial for the OTTs' users to connect through another OTT. OTTs as a group provide many different functions that may not work for particular apps. For example, some, but not all OTTs offer encryption for calls and messages that can only be accessed by users of the same OTT service. Encrypted communications platforms protect users' sensitive personal information and promote free expression. They can also serve as a market differentiator for consumers who are looking for strong privacy and security protections. Requiring interoperability between OTTs that offer encrypted communications would be technically infeasible and introduce vulnerabilities into the services relied upon by individuals and businesses alike, harming both security and innovation. Consumers should be able to choose between encrypted and unencrypted OTT services, yet interoperability mandates would take away that choice. Along those lines, OTT developers must consider if connecting two platforms, applications, etc. is even feasible.

TRAI should also consider that OTTs offer types of interoperability that are not generally found with TSPs. Many OTTs allow interoperability across multiple devices (*e.g.*, smartphones, tablets, wearables, desktops from multiple manufacturers) that have various different operating systems and network connections. Interoperability of OTTs has occurred without regulation and instead has been motivated by the desires of developers to reach more users in more places. The imposition of interoperability mandates would stifle this sort of progress and innovation.

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.

CCIA has long supported strong encryption as key to ensuring human rights and fundamental freedoms. Encryption methods and other security measures that have been instituted by OTT developers are critical for safeguarding user privacy. CCIA believes that the social benefits must be weighed against the perceived costs to law enforcement access. TRAI should not pursue regulation of encryption that is specific only to OTTs.

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.

There are many instances where OTTs have been crucial for aid workers during emergencies. For example, after the tragic train crash near Pukhrayan in the district of Kanpur in November 2016, WhatsApp helped reunite separated families by allowing doctors from different hospitals to share photos of missing loved ones in group chats.[17] However, it is important to distinguish OTT's capabilities from the capabilities of TSPs. OTTs are generally not interconnected with the PSTN, which is a major barrier to the efficacy of the completion of emergency communications from OTTs. Emergency services require accurate location information; however, OTTs may not have accurate or granular geolocation information because they may require user permission for geolocation, or the consumer may have to enable that functionality or submit an assumed location to the provider. An OTT app's ability to access geolocation information often depends on the device's operating system. Consumers often use OTTs when they can get connectivity via Wi-Fi, yet Wi-Fi is not often reliable for geolocation. Furthermore, Wi-Fi availability and geolocation accuracy can be severely limited by power outages, which occur frequently during emergencies. Thus, it generally is not technically

[17] AFP, *Doctors use WhatsApp to find kin of India train survivors*, THE EXPRESS TRIBUNE (Nov. 21, 2016), https://tribune.com.pk/story/1238438/doctors-use-whatsapp-find-kin-india-train-survivors/.

feasible for OTT services to provide the same emergency calling capabilities as TSPs. Rules that create a false impression that OTT services are a reliable way of getting help from emergency services would be counterproductive and could endanger lives and property in India.

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.

CCIA disagrees with arguments that there is not a "level playing field" between OTTs and TSPs — even when they provide similar services. There are fundamental technical and business differences between traditional telecoms services and OTTs that derive from the fact that OTTs do not control the underlying network infrastructure. TSPs control the network infrastructure, and they often face little to no real competition, so consumers cannot switch if they do not like their TSP's service. Not only do OTTs face constraints due to significantly greater competition than TSPs, but they also are subject to competition, consumer protection, and information technology laws.

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.

CCIA maintains that there are fundamental technical and business differences between TSPs and OTTs, so legacy telecoms rules and licensing conditions are generally inappropriate for OTTs. Instead, TRAI should, where possible, reduce regulatory barriers on TSPs, like siting regulations, licence fees, and spectrum usage charges. Streamlining and reducing regulatory burdens will help TSPs reduce costs, deploy next generation technologies to more areas, and increase their revenue.

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

CCIA urges TRAI to continue its recognition that "[t]he growth of OTT services has undeniably led to tremendous social and economic benefits."[18] For example, WIK found that OTTs contributed close to $6 trillion across sixty-four countries over a 16-year period.[19] A key reason for this significant economic contribution is that these applications allow merchants to access new markets with significantly lower barriers to entry and little monetary risk. OTTs are having a significant, positive impact on India's economy, creating a consumer surplus that was estimated to be Rs 6.3 lakh crore in 2017.[20] A recent survey found that seventy-eight percent of small and medium sized businesses that use WhatsApp in India "sa[id] they have increased sales because of WhatsApp".[21] OTTs provide a meaningful opportunity for economic and societal growth in India, and CCIA supports efforts by TRAI to promote this growth. TRAI should not impose legacy telecoms rules on OTTs; instead, TRAI should seek to bolster this emerging market place that is generating significant economic and social benefits.

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Respectfully submitted,

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[18] *Consultation Paper* at 18.
[19] RIA Study.
[20] PTI, *Telecom OTT apps create Rs 6.3 lakh cr consumer surplus: Study*, FINANCIAL EXPRESS (Nov. 17, 2017), https://www.financialexpress.com/industry/telecom-ott-apps-create-rs-6-3-lakh-cr-consumer-surplus-study/935890/. Consumer surplus is the differnce between a consumer's willingness to pay for a good and the market price, which indicates the economic welfare that people gain from buying and consuming goods or services.
[21] *The Economic Impact of WhatsApp in India*, WHATSAPP, https://whatsapp.morningconsultintelligence.com/india/ (last visited Jan. 7, 2019).