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To Sh. Akhilesh Kumar Trivedi,
Advisor (Networks, Spectrum and Licensing),
TRAI

advmn@traigov.in

Subject: Submission for TRAI consultation on Regulatory Mechanism for Over-The-Top (OTT) Communication Services, and Selective Banning of OTT Services

Dear Sir,

Thank you for this opportunity to file comments on the issues of regulatory mechanism for Over-The-Top (OTT Communication Services, and Selective Banning of OTT Services).

We're an online media publication covering developments in the digital ecosystem in India, with the objective of providing news and analysis to help create a fair, open and competitive digital ecosystem in India.

We've participated several TRAI consultations in the past, and I have personally been attending TRAI open house discussions since 2006. We've also deposed on a number of occasions, before the Parliamentary Standing Committee on IT, and also with the Delhi Commission on Peace and Harmony.

Over the years, we have focused on policy issues related to Internet Freedom, censorship, paid news, surveillance and privacy, and from a business perspective, lowering of regulatory barriers and the easing of controls on Internet businesses and mobile operators.

This, combined with our reportage on business financials and on investments and financing of Internet startups gives us a breadth of understanding of business and policy across content and carriage, large companies and small, and Internet and mobile, from an independent perspective.

Our comments follow.

Thanking you,

Nikhil Pahwa,
Founder,
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Comments on the consultation paper

On the outset, I would request that the TRAI to reconsider using the phrase OTT Services. The Internet is a network of networks, and Internet Service Providers make services that are being provided on a server accessible through an interconnection of networks. These are not, as Telecom Operators claim, "Over-The-Top services".

In its order on "Prohibition of Discriminatory Tariffs for Data Services Regulations, 2016", the TRAI defines the Internet as:

"internet" means a global information system that is:

- (i) logically linked together by a globally unique address, based on Internet Protocol (IP) or its subsequent enhancements or upgradations;
- (ii) able to support communications using the Transmission Control Protocol/Internet Protocol (TCP/IP) suite or its subsequent enhancements or upgradations, or other IP compatible protocols;

It therefore acknowledges that the Internet is a global information system linked together, and not OTT services.

In the explanatory order on "Prohibition of Discriminatory Tariffs for Data Services Regulations, 2016", the TRAI recognises the nature of how the Internet operates:

The following are some of the key relevant features that form its structural underpinnings:

- (a) End-to-end design principle (minimum intervention principle) :As per this principle the "intelligence" in a network should be located at the ends of the system. The communications protocols themselves (the "pipes" through which the information flows) should be as simple and general as possible. This design feature enables content providers to undertake permission-less innovation and facilitates free choice by consumers. The application of this principle, together with the minimum intervention results in a network that is transparent to the host application communication and provides for a general, application agnostic transport service
- (c) Transit and peering arrangements: The physical infrastructure that enables the transmission of data packets through the **Internet involves a large number of**

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actors and processes, of which a service provider and its consumers represent only one edge. Service providers are connected with each other and with Internet backbone systems through a web of transit and peering arrangements.

In addition, taking into account the **TRAI Chairman Sh. PD Vaghela's public commitment to unbundling at the authority's OHD on Convergence**, we request that Telecom Operators be treated as Access Service Providers, and mere pipes that allow users access to the Internet for the purpose of this and future consultations. To consider that there is convergence is an outdated way of looking at the Internet and does not reflect well on a regulator that created an internationally recognised gold standard for telecom regulation with its order on "Differential Pricing for Data Services" on February 8, 2016. The same applies to the idea of Network Fees.

I would also strongly urge the TRAI to not deviate from the approach outlined by the regulator in that landmark order, and undo the benefits that Net Neutrality in India has provided to Internet users globally, especially with the growth of the SAAS ecosystem in India, to Internet users in India, which have adopted the Internet at an unprecedented pace and scale, and the Indian startup ecosystem, which has benefited immensely from the **prevention of rent seeking behavior from Indian telecom operators**, because of the TRAI's regulation on differential pricing.

I'd like to remind you that in 2016, [over 700 Indian startups had written to the TRAI asking it to protect Net Neutrality](https://timesofindia.indiatimes.com/tech-news/nearly-700-startup-founders-urge-pm-modi-to-defend-net-neutrality/articleshow/50729785.cms)¹, which would be negatively impacted by Network Fees or any collaborative arrangement between online services and telecom operators. Please do also bear in mind that over 2 million people had participated in the consultation in 2015-16, and written to the TRAI to support Net Neutrality.

In line with principles already established by the TRAI, and to enable India to have 1.4 billion Internet users, it is important that the TRAI reject the principle of Network Fees for OTT Services, and not just OTT Communications services, and not undo the great work done by the regulator.

1

<https://timesofindia.indiatimes.com/tech-news/nearly-700-startup-founders-urge-pm-modi-to-defend-net-neutrality/articleshow/50729785.cms>

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Key Principles

It's important that we take into account some key principles for Internet regulation:

1. **Non Discrimination:** All legal sites and applications must be equally accessible and as per the same charges for the same service.

"A non-discriminatory Internet decentralizes the sources of innovation because everyone can create Internet services and applications without having to obtain permission from network providers.²

I'd also like to highlight the definition of Net Neutrality as proposed by Prof Vishal Misra of Columbia University:

"Internet is a platform where ISPs provide no competitive advantage to specific apps/services, either through pricing or QoS"

This means that:

- a. **Banning:** ISPs and telecom operators must not ban, or be directed to ban, any specific website or application unless there is illegal activity associated with the provider of that application or service, backed by an appropriate law.
- b. **Discriminatory pricing, network usage fees or modulation of network speeds:** users, whether they're a large video service provider, a student who has developed an application or someone who is merely accessing content on the Internet, are treated equally by service providers, when it comes to pricing of Internet access or speeds of Internet access. This means:
 - i. No gateways to the Internet should be allowed, and no preferential listing of certain sites, no discrimination, whether via commercial arrangements or not.
 - ii. No speeding up of certain sites because of business deals. More importantly, it means no slowing down some sites.
 - iii. No differential pricing of data services: The cost of access must be the same for all sites (per Kb/Mb or as per data plan). This means no Zero Rating, no Network Fees, for different users, whether websites, apps or just someone accessing the Internet. The same plans must be available to all

² http://digitalcommons.law.yale.edu/cgi/viewcontent.cgi?article=1222&context=fss_papers

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Unbundling of content from carriage: It is essential for plurality and diversity that content should be separated from its carriage. This creates a separation of incentives:

- c. **The interest of the content and service providers** remains in the creation of valuable content and services, while
- d. **The interest of the carriage provider** will be in terms of allowing more content and services, so as to attract more consumers for the content.

A marriage between content and carriage, wherein a content provider also owns carriage, lends itself to conflict of interest issues related to anti-competitive practices such as the restriction of certain competing content providers, limiting of content to only select providers, or influencing the quality of service of certain content providers.

Thus, any collusion or combination of an ISP or Telecom service provider (TSP) wherein the TSP is allowed to regulate availability of a messaging and communications creates a conflict of interest and anti-competitive practices.

Proportionality: that any restriction on speech, and this includes carriers of speech, must be proportionate. This means that the harms caused by speech must be balanced against the benefits of enabling speech, and this determination must be backed by evidence. Any restriction on speech is a restriction of fundamental rights, and must be done in the rarest of circumstances. Blocking or banning of carriers of speech, which means that this potentially censors legal speech for a vast number of people, must be subject to a very high threshold and should ideally not happen, owing to inherent lack of proportionality.

Public Interest: Telecom operators are given exclusivity over spectrum, a national resource, in order to enable access to services, **in public interest**. The overriding factor here is public interest, and while auctioning is a mechanism for generating revenue for the government, it's also important that telecom operators remain non-discriminatory in public interest.

We would also request the TRAI to consider two other mechanisms for ensuring the growth of broadband in India, in case telecom operators feel that they're not in a position to invest further:

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e. **Enabling Community ISPs and locally owned Internet Infrastructure:**

The Internet Society has [a repository of successful community ISPs](#)³ that have enabled Internet access for underserved communities. In addition, given that telecom operators in India claim that it is challenging for them to invest in Internet Infrastructure, there is a case for locally owned Internet Infrastructure. The TRAI should study [ISOC's report on financing of locally owned Internet Infrastructure](#).

- f. **Release unlicensed spectrum:** The TRAI should consider recommending the releasing of unlicensed spectrum in public interest, and enable community ISPs especially to allow low cost internet access in underserved areas, especially in hilly areas. The TRAI should ask the DoT to reconsider its historically regressive approach to not delicense TV White Space spectrum. In fact, in 2018, [Invest India had highlighted](#)⁴ the opportunity for TV White Space spectrum for rural India. Telecom operators would undoubtedly be opposed to this move because it removes their exclusivity over spectrum, but public interest should override these concerns.

The philosophy of openness: The Internet ecosystem, in public interest, must be rooted in the philosophy of openness: that information must be made available in a manner that is transparent, free, non-discriminatory, neutral, unconditional, and without prejudice.

To this end, it is essential that any utilization of public resources such as spectrum imposes no restrictions on the users ability to create and distribute information, content and services, within the ambit of existing laws. There should be **no restrictions, based on:**

- g. The ability of the creator or the user of the information or content to create this information or content
- h. The identity of the creator or the user of the information or content.
- i. The purpose of the creator or the user of the information or content, especially whether it is commercial or non-commercial in nature.
- j. The interpretation of the information or content, once transmitted
- k. How people react to the information once disclosed and/or reused, remixed or repurposed.

This openness allows citizens to remix, bundle and unbundle content types, and reimagine the way the information may be understood or used by others. Openness, thus, leads to creativity, and enables freedom of expression.

³ <https://www.internetsociety.org/issues/community-networks/success-stories/>

⁴<https://www.investindia.gov.in/team-india-blogs/white-space-spectrum-india-untapped-opportunity-rural-connectivity>

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Responses to questions raised by TRAI in the consultation paper:

A. Issues Related to Regulatory Mechanism for OTT Communication Services

Q1: What should be the definition of over-the-top (OTT) services? Kindly provide a detailed response with justification.

Q2: What could be the reasonable classification of OTT services based on an intelligible differentia? Please provide a list of the categories of OTT services based on such classification. Kindly provide a detailed response with justification.

Answer:

1. The phrase OTT is misleading and is a telecom creation. It is only used by telecom companies, who have an interest in trying to treat Internet services as telecom services, and ignorant lawmakers and regulators who should know better.

There is no intelligible differentia for a definition of OTT Services, because these are not telecom operator services. These are Internet services that users access through access services providers such as ISPs and telecom operators, and are services running on computers and high-capacity computers called servers, which a user accesses directly.

The Department of Telecommunications and the TRAI should be trying to classify Internet services since this is the remit of the Ministry of Electronics and Information Technology.

Q3: What should be the definition of OTT communication services? Please provide a list of features which may comprehensively characterize OTT communication services. Kindly provide a detailed response with Justification.

Q4: What could be the reasonable classification of OTT communication services based on an intelligible differentia? Please provide a list of the categories of OTT communication services based on such classification. Kindly provide a detailed response with justification.

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Answer:

2. There is no clear definition of OTT Communication services, given that there is no such thing as an OTT service. Access service providers provide Internet Access. Internet services are not “over the top”. In addition:
 - 2.1. **Everything on the Internet is messaging and communication:** If the TRAI or DoT intend to try and define communication and messaging services, it’s worth noting that everything on the Internet is messaging and communications: Across the Internet, data packets are communicated between computing devices. The TCP/IP protocol enables networks to communicate and exchange data.
 - 2.2. **Person to person communication via audio, video or text is an integral part of many Internet businesses.** For example, Line has incorporated messaging, calling and games into a single application. WeChat has done this and added e-commerce. There are games that integrate messaging and Internet Telephony, allowing gamers to interact with each other while playing. Everything is a remix on the Internet⁵, and everything involves some aspect of messaging and communication. Slack is a B2B messaging platform with an Open API which enables the integration of thousands of independent services. Zoom is a meeting and communications platform that has
 - 2.3. **Classifying online services restricts their evolution:** What is a feature today could be the main business tomorrow. Take Golbibo as an example: it started as ibibo.com, a blogging platform in 2006. By 2008⁶, it had a Q&A feature called (Sawaal), similar to Yahoo Answers; Photo storage, blogs, a vertical search, a mobile calling feature, email, videos, a messenger, Push SMS (SMS+), online and mobile games, group SMS, voice based status updates, a social network, all via the same online platform. The company finally found a product-market fit in online travel, and shut other services down to focus on GoIbibo. A “classification” system would have prevented Ibibo from finding a product market fit, given the barriers to entry created by onerous regulations linked to classification.

Innumerable Internet startups have gone through this process of finding a product market fit. Creating restrictive regimes via registration and licensing, except in areas where either sensitive personal data such as health data, or areas where the potential for loss and harm, such as payments, will restrict

⁵ <https://www.youtube.com/watch?v=xPzpiRZAWUc>

⁶

<https://www.medianama.com/2008/08/223-ibibo-overhauled-integrates-mail-introduces-online-and-mobile-games/>

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innovation.

- 2.4. **Messaging and communications are evolving:** We've seen the evolution from text to emoji's and gifs. Video and voice based messaging and calling are now the norm. Group calling is a relatively recent feature to reach scale, especially post-pandemic. Even there, there are formats such as calls, webinars and conferences, and multiple services are competing for these markets. Federated messaging itself is not a new thing: the Jabber/XMPP protocol enables anyone to create a messaging app. XMTP, a web3 based messaging protocol, is in early stages of adoption.

B. Difference between online and telecom services

Q5. Please provide your views on the following aspects of OTT communication services vis-à-vis licensed telecommunication services in India:

- (a) regulatory aspects;
- (b) economic aspects;
- (c) security aspects;
- (d) privacy aspects;
- (e) safety aspects;
- (f) quality of service aspects;
- (g) consumer grievance redressal aspects; and
- (h) any other aspects (please specify).

Kindly provide a detailed response with justification.

Answer:

1. **Regulatory aspects:**
 - 1.1. **Addressing "Same Service Same rules" argument:** TSPs argue that the restrictions imposed on their voice calling services should also be applicable to Internet Telephony, including licensing, AGR related payments. They claim that the same rules must apply to the same service. This is fallacious, for multiple reasons:
 - 1.1.1. **Not the same service:** Internet Telephony is more malleable and can be integrated into multiple IP based services. PSTN calling cannot. At best, Internet Telephony and PSTN calling are imperfect substitutes.
 - 1.1.2. **Clear differentiation between online messaging and Access Services:** Telecom operators provide an Internet Access service to users. Users, using the client apps on their devices, pay Telecom

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operators and ISPs for data connections, which allow handsets to communicate with servers, and transmit messages sent by users to the recipient. Thus, there is a clear differentia between the two services from a regulatory perspective.

- 1.1.3. **Online messaging services are Internet services, regulated by MEITY**, and Telecom Operators are Internet Access services regulated by DoT. Online messaging services are governed by the IT Act and IT Rules 2020, although the constitutionality of the IT Rules is questionable. Telecom operators are regulated by the Telegraph Act, their licensing conditions, and by the IT Act (as intermediaries).
- 1.1.4. **Online services do not utilise spectrum, consumers do:** Telecom Operators license spectrum, which is a regulated national resource, and allow consumers to utilise spectrum to access the Internet, which they may do via apps or browsers. Online services are accessed by users, and do not utilise spectrum by themselves. They can only do so, on the basis of a demand coming from a telecom operators customer. Thus online apps have no control over utilisation of spectrum.

If a user doesn't have an Internet connection, the app or website will not work. Thus, the same regulatory treatment cannot apply to an app and an ISP/TSP.

- 1.1.5. **Online services cannot provide Internet access**, unless they get a telecom or a VNO license. TSPs are Internet access service providers.
- 1.1.6. **There is clear unbundling between TSPs and online services**, which is the basis of Net Neutrality. The job of a TSP is that of a neutral exchange: connecting users to each other, as a neutral exchange. Internet access is one such service. Internet Telephony, which uses Internet Protocol for transferring data packets which may be voice, is not an exclusive telecom operator mandate.

Additionally, **TSPs provide non-access services which are similar to regulated services:** For example, they provide "Value Added Services" such as Mobile Radio. We don't see FM radio stations demanding that TSPs buy an FM license. Similarly, their prepaid balance is used for purchase of goods and services from third party vendors. We don't see TSP's being asked to confirm to RBI regulations related to semi-closed prepaid wallets, or FM Radio licenses for Mobile Radio. Similarly, Airtel provides music streaming service Wynk: they don't need to buy an FM Radio license.

2. Economic Aspects

- 2.1. **Online services operate in a market with infinite competition, TSPs don't:** Infinite competition that online services face spurs innovation. It's rare

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for an online service to remain dominant for an extended period of time, despite network effects. For example, Orkut was once the dominant social network in India, until it was unseated by Facebook. TSPs operate in a market with finite competition, based on cost of licensing and exclusivity of spectrum.

2.2. Online messaging is fragmented and competitive: Consumers, given the availability of multiple types of messaging apps, can choose to use different applications for different purposes: for example, they may choose to use WeChat for communicating with someone in China, or Kakao Talk for someone in South Korea, and Line with someone in Japan. They may choose Telegram for participating in communities or receiving news updates. Paytm messaging may be used for communicating a payment and its reasons to someone using UPI.

2.3. Online services have no barrier to entry, TSPs have exclusivity: Spotify is a large online music streaming service operating in India. If it wants to provide Internet access, it will need to license spectrum, and buy an ISP/TSP/VNO license, which provide a barrier to entry. Telecom operators have exclusivity over spectrum. However, Airtel launched Wynk Music and Xstream streaming services without requiring a license. Similarly, Vi has Vi Movies & TV. Jio has Jio Cinema and Jio Saavn.

3. Privacy Aspects:

3.1. Telecom Operators do not provide adequately private messaging and calling services: One key reason for citizens to prefer online communications and messaging services over telecom operator based outdated PSTN services is the greater amount of privacy they provide to consumers. For example in August 2016, [Reuters had reported](#)

“It’s called Deep Packet Inspection, and what you can do with the analytics of that is mind-boggling,” said a senior Reliance executive, referring to a practice that digs into ‘packets’ of data created by computers for efficiency, mining them for information.”

Amber Sinha, previously the Executive Director at the Center for Internet and Society, had written that “The fact that DPI technologies enable the network operators to have access to the actual content of the data packets puts them in a position of great power as well as making them susceptible to significant pressure from the state”...“The very nature of of the DPI technology renders some aspects of recognized privacy principles like notice and consent obsolete”...“The ongoing Aadhaar case and a host of surveillance projects like CMS, NATGRID, NETRA and NMAC [38] have raised concerns about the state conducting mass-surveillance, particularly of online content. In this regard, it

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is all the more important to recognise the potential of Deep Packet Inspection technologies for impact on privacy rights of individuals.”

In addition, there are systems like CMS embedded in Indian telecom operators networks that allow for mass surveillance practices, thus making PSTN services privacy-obsolete.

- 3.2. **Online services are in a market where privacy is a competitive advantage.** Consumers who seek greater privacy choose online communications with end to end encryption. This means that two users having a private conversation can trust that no one is opening their communication, or engaging in deep packet inspection. Given the infinite competition in online services, where privacy is a key feature, this means that online services are regularly tested for breaches, including by ethical hackers, and provide much greater privacy than PSTN. Where consumers feel their privacy rights are not protected, for example, in case of WhatsApp changing its privacy policy, several consumers chose to use other platforms like Signal. Additionally, the same user may choose to use Signal for more private communication, for example, for sharing their medical records with a loved one, and WhatsApp for wishing someone on their birthday. This is a highly fragmented and competitive place.
- 3.3. **Safety and security aspects:** Online messaging services are decidedly more safe and secure than their alternatives in PSTN calling and messaging. It's important to remember that end-to-end encryption allows messaging to be private, and this in turn enables safety for citizens, by ensuring that others aren't able to read their messages, including confidential personal information about themselves: information that might otherwise make them vulnerable. OTPs on PSTN telecom networks can be subjected to sniffing. It is thus important to realise that even though security agencies have concerns around online messaging services being used by bad actors, introducing any vulnerability in these systems will subject all users to the same vulnerability, and thus creates a disproportionately large risk for the entire population of users using these services. There are thus also issues of proportionality here.

You can't make people secure by making them more vulnerable

Another concern with introducing surveillance here is the lack transparency and accountability of India's surveillance agencies. They aren't accountable to parliament, aren't subject to restrictions based on proportionality of surveillance requirements. India needs surveillance reform, and in public Internet, the TRAI should suggest that the DoT undertake the activity of

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providing transparency, accountability and proportionality in telecom surveillance, including in case of the Centralised Monitoring System.

C. Licensing

Q6. Whether there is a need to bring OTT communication services under any licensing/regulatory framework to promote a competitive landscape for the benefit of consumers and service innovation? Kindly provide a detailed response with justification.

Q7. In case it is decided to bring OTT communication services under a licensing/ regulatory framework, what licensing/ regulatory framework(s) would be appropriate for the various classes of OTT communication services as envisaged in the question number 4 above? Specifically, what should be the provisions in the licensing/ regulatory framework(s) for OTT Communication services in respect of the following aspects:

- (a) lawful interception;*
- (b) privacy and security;*
- (c) emergency services;*
- (d) unsolicited commercial communication;*
- (e) customer verification;*
- (f) quality of service;*
- (g) consumer grievance redressal;*
- (h) eligibility conditions;*
- (i) financial conditions (such as application processing fee, entry fee, license fee, bank guarantees etc.); and*
- (j) any other aspects (please specify).*

Kindly provide a detailed response in respect of each class of OTT communication services with justification.

1. To enable entrepreneurship and innovation in messaging and/or with the integration of messaging, we need **low friction, predictable systems, ideally without having to negotiate agreements between creators of content and services, and distributors, or licensing agreements, including those with the government.** Licensing will kill innovation and make messaging the exclusive preserve of a few large service providers.

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It will prevent/inhibit the integration of messaging and communications into multiple types of other services, such as ecommerce, payments, BPOs, games, education, healthcare, entertainment, video calling, among others.

The Internet thrives in an environment of permissionless innovation.

2. **Licensing of messaging services limits speech in digital transmission:** Licensing of content is flawed at its very core. *The Supreme Court of India, in the case of Ministry of I&B v. Cricket Association of Bengal⁷ has held that:*

“[a]irwaves being public property, it is the duty of the State to see that airwaves are so utilized as to plurality and diversity of views, opinions and ideas. This is imperative in every democracy where freedom of speech is assured. The free speech right guaranteed to every citizen of this country does not encompass the right to use these airwaves at his choosing. Conceding such a right would be detrimental to the free speech rights of the body of citizens in as much as only a privileged few - powerful economic, commercial and political interests - would come to dominate the media.

Thus:

- 2.1. Licensing of speech, including the carriers of speech, negatively impacts diversity and plurality of content, by limiting provisioning of content to only licensed entities, and allowing concentration of power in the hands of few. It creates barriers to entry: only those creators who have the wherewithal to bid for or acquire licenses are given the opportunity to create and distribute content.
- 2.2. Licensing of speech, including the carriers of speech, lends itself to excessive state control over its creation and distribution. This is unnecessary, especially given that there exist constitutional restrictions to free speech, under Article 19(2), and further restrictions via control over distribution of content and licensing are unnecessary and unwarranted.

Any attempt to create a licensing or registration framework for VoIP would create barriers to entry, innovation, and is unwarranted.

3. **There is no market failure in messaging:** The idea that there is a need for “a licensing/regulatory framework to promote a competitive landscape for the benefit of consumers and service innovation” is flawed by itself.

Firstly, licensing for one set of services is a form of discrimination. **Discrimination is not innovation.** There is NO market failure in messaging and communications: it is a highly competitive space.

⁷ <http://judis.nic.in/supremecourt/imgs1.aspx?filename=10896> (Source: Internet Freedom Foundation submission to TRAI on Preconsultation on Net Neutrality)

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There is sufficient innovation and competition in messaging, as evidenced by the growth of Slack, Zoom, the rollout of WhatsApp communities, the implementation of disappearing messages, one time message, GIF only messaging apps, the creation of the XMTP/Waku protocol for messaging, among several other features.

The TRAI needs to clearly demonstrate and publish evidence of market failure in messaging if it intends to suggest lack of competition as a reason for recommending licensing.

There is no appropriate regulatory framework for licensing messaging and communications services, thus Q7 is pointless.

However, there are two issues we wish to address:

1. Unsolicited commercial communication: the issue of unsolicited spam on Telecom Operator networks: **Unsolicited commercial communication is rampant largely because telecom operators benefit from it.**

The Internet deals with spam using the following mechanism. For example:

- **Use signals for determining spam**, and develop a trust score for each marketer/email address: Email spam filters determine spam by attributing a trust score to messages, by
 - analysing headers, text content, reference to a publicly available IP address and domain name filters, and determining spam using algorithms. [\[source\]](#)
- **Use verification to identify trustworthy businesses:** Social Media Networks use verification systems to identify trustworthy marketers. Verified users have a tick mark next to their IDs.
- Allowing for easy reporting and blocking of spammers

The TRAI can address issues related to spam by levying hefty penalties on telecom operators when spam originates on their networks on the transaction pipe. In addition, given that spam and scam is largely a function of the telecom operators inability to restrict selling of SIM cards in bulk to spammers and scammers, the TRAI should consider mechanisms for additional penalties on telecom operators.

We had also made the following recommendations regarding spam during the consultation on CNAPs:

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- Enable CNAPs for telemarketing businesses, to help them create an environment of trust: they'll have trusted numbers with verified tick marks
 - Develop a trust score for mobile numbers, allowing users to report spam. Allow telecom operators to enable users to mark callers as spam, and potentially, depending on a trust score mechanism they've developed, disable telemarketer numbers.
 - Ensure that telemarketers adopt specific numbering schemes for marketing purposes, and create awareness that any numbers not of that numbering scheme are not to be trusted.
 - Allow telemarketers to screen SMS's for spam, and mark content as junk.
 - Work with established telemarketers and brands to create an environment of trust for consumers.
2. **Verification of users:** As such we see no compelling reason to require online services to verify users.
- 2.1. **Users are already verified by telecom operators:** Many Internet services collect and store the mobile number as a means of verifying identity of users, which they validate using an OTP, especially since many Indian users do not have an email address. For purchase of mobile numbers, users already go through an extensive biometric verification process via ASTR, which we believe is a disproportionate requirement and violates users fundamental right to privacy. There's no real need to additionally verify each user.
- 2.2. **Goes against data minimisation:** More verification means more collection of personal data, and this thus leads to the creation of more honeypots for hackers to target. A basic question to ask: do we really want Whatsapp and Telegram, or even WeChat to collect a users Aadhaar or facial data? This would be a terrible idea to follow through on and we urge the TRAI to recommend that online services should not be required to do user verification.
- 2.3. **A question of proportionality and linkage with harm:** We need to look afresh at the idea of verification, given that is a fairly broad phrase. When can a user be anonymous? When can they be pseudonymous? When do they require an email address to verify? When should a mobile number be required? When should biometric data be collected? If we look at the spectrum of verification: from anonymity to authentication to verification and identification, under what circumstances, based on what kind of harms, should which process be deployed? Verification is a spectrum, and policymaking should be more specific in terms of which method to use to address which potential harms, instead of a blanket recommendation of verification.

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D. Network Fees

Q8. Whether there is a need for a collaborative framework between OTT communication service providers and the licensed telecommunication service providers? If yes, what should be the provisions of such a collaborative framework? Kindly provide a detailed response with justification.

Q9. What could be the potential challenges arising out of the collaborative framework between OTT communication service providers and the licensed telecommunication service providers? How will it impact the aspects of net neutrality, consumer access and consumer choice etc.?

What measures can be taken to address such challenges? Kindly provide a detailed response with justification.

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- 1. Internet access is the most open and neutral form of carriage:** The Internet allows all users to create: every user can take videos, shoot photographs, record audio, and create interactive services, without discriminating whether a user is a commercial or a non commercial entity. This was recognized by the Indian telecom regulator TRAI in the explanatory memo to its February 2016 discriminatory data pricing regulations when it observed: “.. *First, unlike traditional markets where there are, for the most part, distinct producers and consumers, on the internet, users are also content producers.*”

Thus, the TSP should remain neutral, and any prevention of VoIP services by the TSP would be a violation of Net Neutrality, and potentially the TRAI's differential pricing rules. Policy should allow every Indian citizen to create a new bundle of services, whether for commercial or non commercial purpose, integrating VoIP without needing permission.

- 2.** In its order on “Prohibition of Discriminatory Tariffs for Data Services Regulations, 2016”, the TRAI 3. Prohibition of discriminatory tariffs.- (1) No service provider shall offer or charge discriminatory tariffs for data services on the basis of content. **Any charging of network fees on the basis of content or type of service would violate this order.**
- 3.** At the core of this debate is the issue of how we let one business (a network operator) regulate the consumer's ability to access another (app or website), given that the availability to provide Internet access (spectrum and right-of-way access) is not unlimited, and exclusively lies with a few entities (network operators).

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A genuine free market requires restrictions on the ability of large predatory companies (like telecom operators), whether multinational or otherwise, to create monopolies.

4. **TSPs/ISPs can best serve Digital India by being neutral exchanges of data:** The switch from analog to digital provides us with fresh opportunity, in its interactivity.

We have the potential in India to have a billion creators, and give them the currently have the freedom to chop, change and remix audio, video, text and interactivity to reimagine new experiences for other users, who are also creators. Even today, innovators are creating completely new experiences based on the digital medium. India has the potential and the talent to create such experiences, and creators should not be denied the opportunity, by sticking to an outdated regime which limits creation to only a few players, and the utilization of spectrum to just a few distributors, thereby limiting most Indian to the act of consumption.

This is best evidenced by Internet Service providers, in their role of transferring data packets between users⁸: For users to have confidence in the operation of an exchange, the exchange needs to be neutral. Thus, any attempt from the TSP's to prevent or throttle VoIP services, or limit via registration would be a violation of their role as a neutral exchange for data packets.

5. **Online services are not "Free riding":** Despite illiterate/malevolent claims from telecom operators that online services are "free riding" on their networks, the fact is that Internet is a network of networks, and every user pays for Internet access, whether they are a business or not. What the TSPs know but conveniently ignore, is that every user pays their immediate ISP. If I'm running a service, I pay for hosting/server space AND for bandwidth. ISPs have interconnection agreements, based on which, that revenue is shared for peering. A user who receives this data also pays their immediate ISP. Thus, if TSPs/ISPs charge a network usage fees, it means that the service provider is being double charged.
6. **Violation of Differential Pricing ruling:** The TRAI has in its landmark differential pricing order, emphasised the need for non discriminatory practices from ISPs/TSPs, including prevention of zero rating and restriction on differential pricing. Enabling network fees would undo this landmark move from the TRAI.
7. **Network fees will cause market distortions:** Professor Vishal Misra had [demonstrated](#) [video] in his presentation on zero rating from a competition perspective, that this practice did cause market distortions in other markets. Network Fees will have the same impact. There is no scope for a "collaborating arrangement" between TSPs and ISPs.

⁸ As articulated by Professor Ajay Shah:
<http://www.medianama.com/2016/07/223-internet-marketplaces-net-neutrality/>

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8. **Collaborative arrangements/Network fees will undo unbundling of Internet access:** The internet flourishes because access is unbundled from what users access on the Internet. An attempt was made in the past, by CDMA service providers, to bundle handsets and services, and content and services. The market rejected it in favour of the unbundled option of an open Internet, and the usage of devices. The competition in both the Internet and devices have allowed for the growth of Internet usage in India, and the benefits arising to the nation from digitisation. The TRAI should not undo this by recommending collaborative arrangements.
9. **Network usage fees based on traffic:** It has been suggested in some articles that a network usage fee may be applicable to video sites, including Netflix, because consumption of video means that telecom operators have to invest more in infrastructure. This is currently applicable in South Korea, and is being discussed in the EU as well. Dr. Dae Keun Cho, practice leader of the TMT team at Lee & Ko and professor of public policy at Sogang University, has said that “I think it is necessary to admit that if a company uses another company's resources for its own business, it is natural to pay for it. Google and Netflix must use the ISP's network to deliver their content to end users. It is obvious that Google and Netflix must borrow ISP's networks to complete their business models. And for common customers, ISPs are obligated to deliver their customers' traffic, and CPs like Google and Netflix are obliged to pay a fee to ask ISPs to do their traffic.” There is an inherent flaw in this way of thinking:
 - a. **Discrimination on the basis of type of user is antithetical to how the Internet operates:** On the Internet all users are both creators and consumers.

In the explanatory memorandum to its order on “Prohibition of Discriminatory Tariffs for Data Services Regulations, 2016”, the TRAI says that:

“(a) First, unlike traditional markets where there are, for the most part, distinct producers and consumers, on the internet, users are also content producers. Social media websites, for example, are built largely based on user content. Regulation will thus have to be cognizant of this fluidity.”

AND

“allowing the keepers of the infrastructure to differentiate on the basis of content, would impose negative externalities on the rest of the network as internet serves as infrastructure for many other markets. This is especially so since the internet is a fluid and dynamic space where a user could be a simple subscriber at one moment (when she accesses the internet through a data pack), and become a content provider (when she

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writes a blog post) at the next.

- b. Everyone pays their edge ISP and charging differentially will compromise the architecture of the Internet :** The Internet is a network of networks, and everyone pays their edge ISP. If a user is viewing Netflix, she is pulling that data from Netflix' serversNetflix has to pay for bandwidth to its immediate ISP and at the user end, the user pays their ISP. Each ISP also gets money for peering and interconnect from other ISPs. Thus demand for additional payment is double dipping.

In the explanatory memorandum to its order on “Prohibition of Discriminatory Tariffs for Data Services Regulations, 2016”, the TRAI recognises the nature of how the Internet operates:

A particular TSP which is offering data services to the consumer does not control the internet infrastructure in its entirety. It is dependent on several other networks to facilitate this task. Thus, allowing a TSP which is at one edge of the internet to charge differentially for data that it does not alone process, could compromise the entire architecture of the internet itself. Were other TSPs across multiple tiers allowed to do this, then the openness of internet as we know, would be altered. **Allowing price differentiation based on the type of content being accessed on the internet, would militate against the very basis on which the internet has developed and transformed the way we connect with one another.**

Thus, the TRAI should not alter the basis on which the Internet has developed by allowing charging on the basis of the type of content or service.

- c. Users upgrade because they want to consume bandwidth heavy content:** Secondly, if consumers demand Netflix, telecom operators are being paid by them to service that demand. In fact, consumers upgrade devices and connectivity, including paying for higher tiers of Internet access (for example, upgrade from 2G to 4G, or from 50 MBPS to 100 or 300 MBPS, or from cable Internet to fiber to home) because of bandwidth heavy applications.
- d. Telecom operators don't have a bandwidth problem. They have a congestion problem:** The problem for telecom operators is that when thousands of people congregate in a particular area, for example in Connought Place/ Rajiv Chowk in Delhi. Thousands of pings tend to overload

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the base stations and Internet connectivity doesn't work. In situations such as these, telecom operators globally have offloaded traffic to WiFi, which Indian telecom operators have failed to invest in. Internet companies should not be forced to pay for the inability of Indian telecom operators to adequately service their customers.

10. Contribution to USOF would have no rationale and would amount to double charging:

- a. Indian users contribute to USOF already: Internet usage charges being paid by users for using VoIP and messaging services **contribute directly to telecom operator revenues**. Appropriate taxes are being paid by telecom operators from revenue earned by provisioning these services. Additionally, Indian Internet users contribute via telecom operators to the USO Fund.
- b. No clear rationale for Internet services to contribute to USOF: Any additional charges levied like a contribution to the USO Fund needs to have a rationale: online messaging and calling services do not have access to spectrum, nor do they use any public resources. They do not use network infrastructure: both spectrum and network infrastructure is used by Indian subscribers to ISPs/TSPs.
- c. **No clear rationale for communications apps to contribute to USOF:** for telecom operators like Airtel, there has been clear growth in revenues and EBITDA profitability with the growth in Internet usage. Thus any fears of decline in revenues is already misgiven. The TRAI needs to demonstrate that there is lack of funds with the USO Fund, and that the USO Fund is the most efficient way of improving telecom infrastructure in the country. Since the launch of Reliance Jio, it is private investment in infrastructure by Jio and Airtel that have improved Internet connectivity in India. Other telecom operators like Vi have suffered owing to hyper competition in telecom and their own poor management of their business, in contrast with Airtel and Jio. Online businesses and Indian consumers should not have to bear the consequences of what is clearly a situation where Vi has lost marketshare to Reliance Jio and Airtel, and possibly lacks the funds to invest further infrastructure.

There is no reason for the TRAI or the Indian government to tax Internet businesses or consumers because telecom operators have been poor at managing their business, or have raised more debt than they should have.

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E. Issues Related to Selective Banning of OTT Services

Q10. What are the technical challenges in selective banning of specific OTT services and websites in specific regions of the country for a specific period? Please elaborate your response and suggest technical solutions to mitigate the challenges.

Q11. Whether there is a need to put in place a regulatory framework for selective banning of OTT services under the Temporary Suspension of Telecom Services (Public Emergency or Public Safety) Rules, 2017 or any other law, in force? Please provide a detailed response with justification.

Q12. In case it is decided to put in place a regulatory framework for selective banning of OTT services in the country, -

(a) Which class(es) of OTT services should be covered under selective banning of OTT services? Please provide a detailed response with justification and illustrations.

(b) What should be the provisions and mechanism for such a regulatory framework? Kindly provide a detailed response with justification.

Q13. Whether there is a need to selectively ban specific websites apart from OTT services to meet the purposes? If yes, which class(es) of websites should be included for this purpose? Kindly provide a detailed response with justification.

Q14. Are there any other relevant issues or suggestions related to regulatory mechanism for OTT communication services, and selective banning of OTT services? Please provide a detailed explanation and justification for any such concerns or suggestions.

A few things to consider here:

1. **Banning of selective apps at an ISP level is not easy:**
 - a. Usage of VPNs: Users will have the ability to use VPNs to use the apps that they want. For example, even in China, where WhatsApp is banned, people can access the service using VPNs.
 - b. IP based blocks won't work: If the blocking is IP based, then service providers can choose to use dynamic IPs to bypass the ban.
 - c. Banning of a single app in a single district will require infrastructure investment by telecom operators, while it may be possible to do this at a circle level.
2. **There's no data to suggest effectiveness of Internet Shutdowns or app bans:** As such, there is no data available that indicates that Internet Shutdowns or app bans are effective in ensuring public order. If anything, the extended shutdown in Manipur indicated that the Internet shutdown there enabled lack of transparency

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and accountability, and was seen as a means of evading public scrutiny. It's worth pointing out that there have been several instances where the Internet has been shut down in a part of India for over 100 days: in Darjeeling, Kashmir and Manipur. Every Internet shutdown, and indeed, banning of apps, is a suspension of our fundamental right to free speech. It is a matter of national shame that India has the highest number of Internet shutdowns, and for many years, we had over 100 Internet shutdowns a year. In some cases, the Internet was shut down to prevent students from cheating in exams. Before any recommendations are made for either Internet Shutdowns or banning of apps, there needs to be evidence based policy making: what is the effectiveness of such shutdowns? What is the harm sought to be prevented? A situation where the central government says it has no information on even the number of Internet shutdowns cannot be allowed to persist.

3. **Bad actors will use other apps:** If, for example, the purpose of selective banning of apps is to prevent bad actors such as terrorists from using a particular app to communicate, this exercise is flawed. Today, anyone can pick up open sourced code and create a messaging app. With federated messaging protocols like Jabber/XMPP and Waku/XMTP, it's not possible to ban all messaging applications. You'll only end up banning the applications that people need to get access to communicate with their loved ones across the country or the world.
4. **Messaging is a key part of many apps:** Payments apps allow two parties to communicate with each other. Email is a form of messaging. Games like Clash of Clans allow users to message each other. Several hundreds of thousands of online forums allow people to direct message each other without the need for an app. Services like Facebook, Twitter, Instagram also allow users to message each other. If the objective is to prevent two people from communicating with each other, the Internet has millions of alternatives. This is an exercise in futility.
5. **Discrimination against a single app or a category of apps may be challenged in court:** An act of banning an app selectively amounts to discrimination against a single app or a category of apps, and such selective banning can be challenged in courts under Article 21 of the Indian constitution. If a particular app is banned, or a category of apps, then there needs to be causality determined between the usage of these apps and the issue sought to be prevented.
6. **Needs to pass the test of proportionality:** given that banning of specific apps, whether video apps or messaging, is a restriction on the freedom of speech of those individuals, such bans need to pass the test of proportionality.
7. **Widely used apps are often critical for essential services:** Apps such as WhatsApp are often widely used and are a means of seeking advice from doctors and video consultations, staying in touch with loved ones, or merely
8. **Messaging apps allow law enforcement a means of private communications:** Law enforcement agencies, for example in instances where there are national

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security concerns or during riots, rely on messaging apps to keep channels of communications open.