Subject: Counter Comments By Ayush Agarwal For TRAI's Consultation Paper

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

Dear Sir,

I have attached a PDF file which contains my counter comments which are being sent as part of the ongoing open consultation initiated by TRAI with the subject "Regulatory Mechanism for Over-The-Top (OTT) Communication Services, and Selective Banning of OTT Services". Please consider the attached PDF document for this consultation.

I request TRAI to NOT publish my email address or any other personal information, besides my full name, as part of this consultation.

Thank You!

Regards,
Ayush Agarwal

Ayush Agarwal's Counter Comments

I, Ayush Agarwal, have written this document as a response to TRAI's invitation for counter-comments on their consultation paper on "Regulatory Mechanism for Over-The-Top (OTT) Communication Services, and Selective Banning of OTT Services" and the comments that TRAI has received from TSPs (Telecom Service Providers) like Reliance Jio, Airtel, and Vodafone.

DISCLAIMER: I am an individual and I am not affiliated with any organization, company, entity, or firm as part of this consultation initiated by TRAI. I would argue that the outcome of this consultation should strive to benefit consumers by preserving the principles of Net Neutrality that were established in 2015 in India.

I request TRAI not to publish or reveal my email address as part of this submission.

Introduction

I would like to thank TRAI for extending the last date of submission for counter comments to their consultation paper and to the comments received on this consultation paper. However, it's disappointing that the principals of net neutrality are being questioned yet again by TSPs, which I believe are inherently biased against the principles of net neutrality in India.

The need for this consultation seems to have arisen because the DoT (Department of Telecom) has requested TRAI to

> come out with a policy which will enable the selective banning of OTT services with suitable technological intervention, such as Facebook, WhatsApp, Telegram services during period of unrest/ crisis that are liable to be used by the terrorists or anti-national element/ forces of ferment trouble in the specified regions.

Although the definition of OTT (over-the-top) services is vague at best and overreaching at worst, TRAI has said that this consultation paper is focused specifically on "OTT communication services" and the "selective banning of OTT communication services" in point number 2.38 on page 24 of TRAI's consultation paper. Considering how TRAI is focused on this specific domain of OTT services, it seems that the comments submitted by TSPs have also taken the liberty to express opinions about the regulation of "OTT application services", such as Netflix, Amazon Prime, and YouTube, which are not the focus of this consultation paper according to TRAI. This seems to have been done by TSPs to argue in favor of the "fair share" argument. **I would request TRAI to not focus on the comments made by TSPs on "OTT application services" to stay focused on the topic at hand. The comments made by TSPs on OTT application services, like Netflix, are an effort to distract the public and TRAI from the topic at hand and yet another attempt to erode Net Neutrality principles in India. Any such comments made by TSPs as part of this consultation process should be discarded**.

OTT Communication Services

The ITU defines OTT communication services as "a direct technical/functional substitute for traditional international telecommunication services" and TSPs have used this definition to argue in favor of "Same Service, Same Rules" and "Fair Share" arguments. However, **I believe that modern OTT communication services like WhatsApp, Microsoft Teams, Slack etc. are NOT a direct technical/functional substitute for traditional telecommunication services like SMS and voice calls", Slack etc. are NOT a direct technical/functional substitute for traditional telecommunication services like SMS and voice calls**.

Absence of Feature Parity

Although it might seem tempting to club SMS and OTT communication services like WhatsApp and Microsoft Teams under the same category, doing so is quite reductive and dismissive of the massive technological progress and innovation that OTT communication services have made and changed the lives of billions of people. The technical limitations of SMS services are readily apparent once we try to pit them against OTT communication services:

- SMS services offered by TSPs still suffer from conservative character limits per SMS
- TSPs still impose restrictions on the number of SMSes that a consumer may send depending on their subscription plan
- There is no indication that SMSes that are sent have been read by the intended recipient
- There is no method to interact with multiple recipients in real time when sending and receiving SMS messages

Similarly, voice calls offered by TSPs cannot be positioned as a "direct technical/functional substitute" of voice calls made using OTT communication services like WhatsApp for the reasons mentioned below:

- voice calls made using OTT communication services can be significantly better in quality, voice clarity, and reliability than traditional voice calls offered by TSPs
- voice calls made using OTT communication services can be easily switched to video calls or conference calls without any interruptions or call hold durations
- some OTT communication services like Microsoft Teams also offer the ability to share the screen of the computer or the smartphone of the participant(s) in the call; this is not possible using traditional voice calls offered by TSPs

I've often found myself in situations when the 4G and 5G signal quality offered by TSPs wasn't sufficient or reliable enough to make a voice call to my family and friends with *sufficient voice clarity*. However, because I had access to the Internet using broadband WiFi made it possible to call them. The issue of call drops is still not resolved completely and I sometimes experience call drops when talking to my family. However, this is not the case with voice calls made using OTT communication services as long as reliable Internet access is present on the devices being used.

The fact that the work-from-home trend has been enormously successful in India is significantly because of applications like Slack and Microsoft Teams which offer advanced communication features that make it possible for large companies to run smoothly and

effectively even in the absence of physical offices and employees attending such offices. The ability to have multiple channels or rooms to segregate conversations based on relevance and context, the ability to call specific people while chatting to someone else, and the ability to share screen of a computer and even offer remote access to a computer to a colleague are all revolutionary and has helped India to progress digitally, even during the unfortunate events such as the COVID-19 lockdowns.

If SMS and voice call services offered by TSPs intend to position themselves as a "direct technical/functional substitute" for OTT communication services for arguing in favor of "same service, same rules" and "fair share" arguments, they must be at feature parity with prominent OTT communication platforms like WhatsApp and Microsoft Teams. However, we know this is the not the case at present. It's quite natural for progress and technical innovation to deprecate services that are inferior and inefficient or unsuitable for purposes compared to modern alternatives. **It would be quite strange if post offices and delivery services like Blue Dart start demanding their "fair share" from TSPs for offering SMS and voice calls, which may be presented as "direct technical/functional substitutes" of physical letters**.

Conflict of Interests in "Fair Share"

One of the prominent arguments made by TSPs like Reliance Jio has been

> the non-investing OTTs enjoy huge direct/indirect benefits and revenues by utilizing the TSPs' network

and

> It is no secret that OTT Players consume humongous amounts of bandwidth, which puts tremendous pressure on the network infrastructure established by the TSPs, without contributing an iota to this cost.

These are extremely misleading arguments. First and foremost, it should be clear that consumers pay for and consume "humongous amounts of bandwidth". An OTT service does not initiate the transfer of internet traffic at any point in time, unless explicitly agreed by a consumer. The payment for bandwidth consumption is already made by consumers as per their preference of the internet speed that they desire. Moreover, TSPs like Reliance Jio and Airtel engage in misleading advertising by calling their residential broadband plans as offering "unlimited" data but in reality, they apply "commercial usage policy" on these plans and impose a cap of approximately 3300GB per month, which seems arbitrary. These terms and conditions are not made clearly visible to consumers when they sign up for broadband plans from these TSPs.

₹1499x3 +GST

Plan validity	Bill cycle (3 Months)
Speed	300 Mbps (300 Mbps Upload 300 Mbps Download)
Data	Unlimited
Voice	Free
On-demand TV	550+ TV channels

Subscriptions

Netflix (Basic)

Amazon Prime

Disney+ Hotstar

Vo Selec JioCir

Sony Liv

ZEE5

Voot Kids (Via JioCinema)

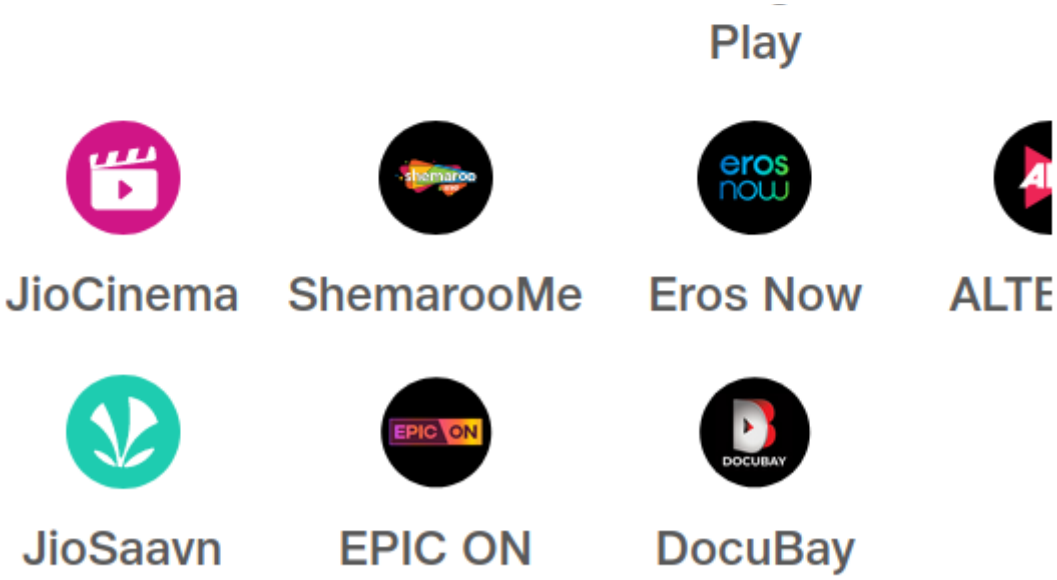
Sun

Hoichoi

Universal +

Lionsgate

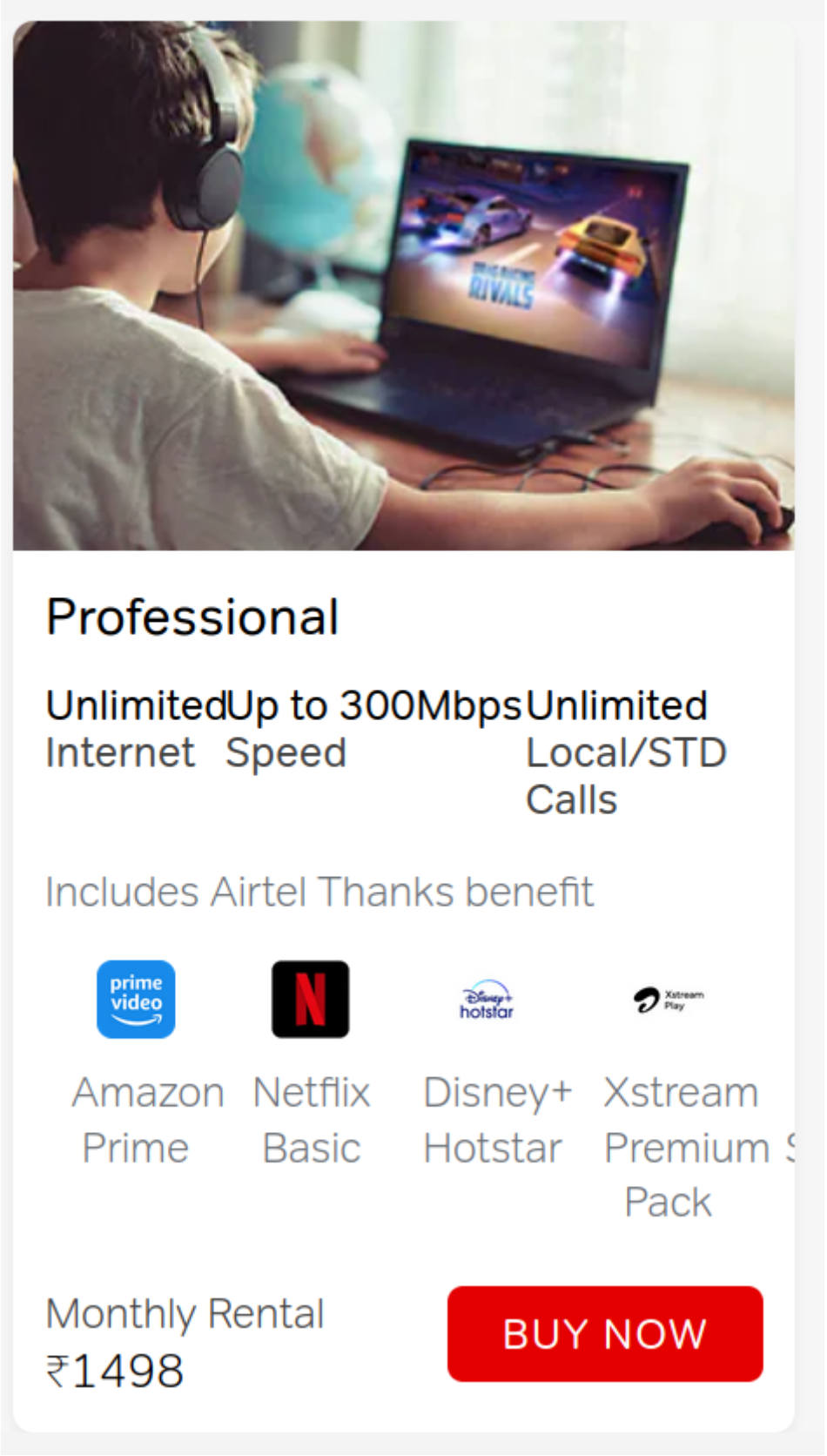
Disco



Notes

- Commercial usage policy applicable on all Unlimited plans

Reliance Jio mentions that "commercial usage policy" is applicable but doesn't specify the data cap applicable to their "unlimited" plans as part of this policy.



Airtel Xstream Fiber Plan Details

1. All rentals are exclusive of taxes. GST of 18% applicable on the rental and activation fee.
2. Installation fee of Rs. 1000 applicable on monthly plans while on subscription to 3m/6m/12m plans will be waived off. On 6m and 12m plans, subscriber will get an additional discount of 7.5% and 15% respectively on select plans.
3. With a view to give all Customers optimum Service and protect their interest, the Plan offered by Airtel shall be subject to Fair Usage Policy (FUP) as formulated and implemented by Airtel from time to time.
4. The Plan offered by Airtel shall be subject to Fair Usage Policy (FUP) which shall be imposed upon consumption of 3333GB in a billing cycle post which the speed of the data shall be reduced to 1 MBPS. The FUP may be amended and implemented by Airtel from time to time, at its sole discretion

Airtel doesn't even mention that their Fair Usage Policy is applicable on the same block

where their plans are advertised.

If TSPs define these "commercial usage policies" and ask payment from customers for approximately 3300GB of data per month, terms like consumption of "humongous bandwidth" make no sense. After all, **even if a consumer consistently uses 3300GB per month, they would be doing so within their rights as a consumer after making an appropriate payment for it. If TSPs are concerned about "humongous bandwidths" being consumed by users, are they reluctant or discontent to comply with their own terms and conditions, even after performing misleading advertising?**

Reliance Jio proposes that

> Contribution of OTTs to network costs can be based on assessable criteria like volume of traffic generated by OTT player, turnover threshold, number of users and other criteria. Further, in case the Authority and the Government feel that this levy on all the OTTs may not be conducive for the Indian start-up ecosystem's aspirations, then this levy can be restricted to significant OTT players only.

> The costs may be decided basis mutual arrangement between the OTT Providers and TSPs. However, both parties should ensure that the OTT services on TSP network are made available to the subscribers in full compliance with guiding principles of Net Neutrality ("NN") and there should be no discrimination, restriction, or interference in the treatment of content including practices like blocking, degrading, slowing down or granting preferential speeds or treatment to any content

How do we define "significant" OTT players? Who decides what the appropriate volume of traffic generated would be for an OTT player to be classified as "significant"? If TSPs decide such a criteria, does TRAI desire to ensure regulatory oversight on these criteria or will TSPs be given the freedom to decide these criteria based on whatever suits them best, irrespective of consumer benefit? If we restrict the discussion on this consultation paper to to OTT communication services only, as TRAI intends, OTT communication services may be used quite significantly in times of emergencies and crisis, such as when our nation faced the COVID-19 pandemic in 2020. If the volume of traffic of such OTT communication services crosses an arbitrary threshold defined by TSPs, will those OTT communication platforms be suddenly required to pay TSPs to remain operational at a time of crisis? If not, will TSPs make exceptions to formally defined criteria whenever they feel like it?

Even if such criteria are ratified formally, are TSPs and TRAI prepared to revise these criteria keeping in mind the rapidly evolving nature of the Internet, consumer interest, and Net Neutrality? As we'll see in the next few paragraphs, Reliance Jio is happy to propose introducing differentiated services for consumers while talking about Net Neutrality, which seems quite hypocritical.

Reliance Jio proposes to erode Net Neutrality principles by proposing the following:

> We understand that some OTT service providers will need and prefer differentiated service so that their users get the desired experience. We believe that the same can be provided under existing regulatory ambit and can create a win-win situation for TSP and OTT service provider with user being the ultimate

> beneficiary through better network infrastructure. Consumers also benefit from differentiated services aligned as per their preferences.

If there's one thing that we learned from the 2015 consultation on Net Neutrality, it's that **consumers NEVER benefit from differentiated services**. Although TSPs and OTT providers may prefer providing differentiated services to earn more money, any initiative that provides differentiated services, such as Internet.org by Facebook (now called Meta), is a major disservice to users and to the technological progress of our nation as a whole.

A differentiated service model creates perverse incentives for both TSPs and OTTs to offer preferential, or discriminatory, treatment to OTT communication services. A consumer who is either aware or ignorant of this differentiated service model is helpless to make a neutral choice. A consumer shouldn't be asked to select a preferential service, even if multiple options of preferential services are offered.

Some TSPs like Vodafone have argued that they have suffered financial losses due to the proliferation of OTT communication platforms. However, they seem to ignore the fact that even though the usage of SMS and traditional voice calls may have declined, the demand for internet data has exponentially increased in the past several years. This is evident in the reports made public by the Internet Freedom Foundation on the their website. The following hyperlink highlights how the average revenue per user and the EBITDA margins of TSPs has increased.

Public Brief on Fair Share by Internet Freedom Foundation

To conclude this section, I believe that **it's impossible for TSPs to not have financial conflict of interest that hurts consumers when they demand their "fair share" from OTT communication platforms**. If a payment is made, it's natural for OTT communication services to expect some form of "compensation", which starts a slippery slope of perverse incentives that harm consumers. This proposition stands in addition to my proposition that **TSPs do not provide services that have feature parity with OTT communication services, so demanding "fair share" is disingenuous and invalid to begin with**. Any form of collaboration between OTTs and TSPs, except those made for improving delivery efficiency such as peering and caching and for resolving technical issues, are doomed to be harmful for consumers and a threat to Net Neutrality in India.

Futility of "Same Service, Same Rules"

I've already made an attempt to establish how the "same service, same rules" argument doesn't work in the **Absence of Feature Parity** section in this article. Let's imagine that OTT communication services were completely absent and didn't exist during the COVID-19 crisis when a large section of the employed population in India was forced to work from home. Could they have continued to work from home using SMS and traditional voice calls? Can TSPs claim to replace OTT communication services like E-Mail using traditional TSP services? I believe the answers to these questions are quite apparent.

TRAI invited comments on the question about whether there is a need to bring OTT communication services under any licensing or regulatory framework and TSPs like Reliance Jio have responded by saying:

> OTT Communication Services should be brought under the licensing and regulatory framework

> This can be achieved by either completely removing the financial obligations on TSPs or bringing the OTT communication services under Unified License regime and levy of the same License fee and other charges, which is optimum solution, as submitted above.

In the rapid and dynamically evolving landscape of OTT communication services on the Internet, I would argue that it's futile, and harmful, to try and adopt a whitelist approach. The OTT communication services that are being used and are popular today may not be popular a few years from now. In addition, as mentioned earlier, the definition of OTT communication services is vague considering how OTT application social media services such as Facebook and Instagram provide communication services as part of a larger offering. In such cases, the communication service is just one of the many features that an application service may offer. Some OTT players like Swiggy, PayTM, and PhonePe also offer features that resemble OTT communication services. Any attempt to regulate OTT communication services will end up generating confusion and overreach considering the vague nature of the definition of "OTT communication services".

Some OTT communication services like WhatsApp offer privacy to their consumers by offering end-to-end encryption of messages on their platform. It's imperative to realize that encryption is something people use all the time when they use any digital device, such as a smartphone, a personal computer, or a laptop. When we send money to a friend or a family member using the UPI platform developed by NPCI or when we use Internet Banking services using the website of a bank, we use and rely on encryption to keep our data safe. Any weaknesses in encryption algorithms used by the public, whether intentional or unintentional, is also a weakness for nefarious actors to exploit. This is a widely accepted fact among the community of cryptographers. Moreover, any attempts to weaken encryption standards also breeds mistrust and disdain from both the national public and the international community, as observed when the National Security Agency of the USA tried to standardize their Simon and Speck algorithms.

Distrustful U.S. allies force spy agency to back down in encryption fight

If we demand OTT communication services to compromise their encryption and security by bringing them under the Unified License regime like Reliance Jio suggests, they are likely to withdraw their services from India. This can be observed as Apple suggested that it would withdraw its FaceTime and iMessage service from the United Kingdom if they pass laws to compromise the security of these OTT communication services.

Apple suggests iMessage and FaceTime could be withdrawn in UK over law change

These actions would only serve to hurt innocent civilians who rely on encryption to ensure their privacy and security. In addition, regulation of OTT communication services would only encourage terrorists and other anti-national elements to use other OTT communication services that are not under regulation. It's also not inconceivable for such elements to simply develop their own platform with encryption built-in, considering how encryption libraries like libsodium are widely available for anyone to use.

libsodium, a modern, portable, easy to use crypto library

In conclusion to this section, I would say that any attempts to regulate OTT communication services using any form of whitelisting approach is likely to prove detrimental to the digital progress of our nation.

There seem to be primarily two kinds of intent to regulate OTT communication services:

- the intent by TSPs to extract financial compensation from OTT communication services using arguments like "same service, same rules" and "fair share"
- the intent by DoT and TRAI to regulate OTT communication services to prevent terrorists and anti-national elements from evading law enforcement and to prevent the spread of misinformation and unrest in times of crisis

The intent by TSPs is harmful and biased as I have already attempted to showcase in this section and the sections written before. These intentions are detrimental to Net Neutrality in India and the welfare of consumers.

To prevent terrorists, anti-national elements, riots, and the spread of misinformation from evading law enforcement, the government should work and collaborate with OTT communication platforms to try and find common ground to implement as much of the Information Technology Act, 2000, as possible without compromising the safety of our citizens. Several OTT communication services already collaborate with the government to provide useful metadata about suspects and have also implemented measures to curb the spread of misinformation, such as WhatsApp limiting the number of times a message can be forwarded.

About Forwarding Limits - WhatsApp

Moreover, law enforcement agencies still have the tools of surveillance and on-the-ground investigation at their disposal which are still effective, even in the age of encrypted OTT communication services. The arrest of Ross Ulbricht, the operator of a darknet website called Silk Road used for selling narcotics and other illegal products, is a testament to how effective law enforcement can be, even without compromising encryption on OTT communication services and platforms.

The Arrest of Ross Ulbricht

Selective Banning of OTT Communication Services and Websites

I would like to start this section by saying that I vehemently oppose shutting down Internet services in any form or manner irrespective of the scale of the shutdown in terms of geography. As TRAI has already recognized in their consultation paper, shutting down the Internet causes immense losses to multiple sectors such as healthcare, journalism, education, and businesses that rely on the Internet for their day-to-day operations. A blanket shutdown of the Internet in any region is a knee-jerk reaction that creates more problems than it solves. Moreover, it seems that some states in India have started shutting down the Internet for absolutely frivolous reasons such as preventing cheating in exams.

Internet goes dark for millions in Indian state’s bid to stop exam cheats

Such absurd measures are completely contrary to the Digital India campaign, to our digital progress as a nation, to businesses which our government is trying to attract for the "Make in India" campaign, and to citizens which rely on the Internet to earn a living. I welcome TRAI's intent to explore the option of selective banning of OTT communication services and websites.

I agree with the following comment made by Airtel about selective banning of OTT services:

> we suggest that the Government should consider source-level blocking, i.e., it should directly engage with the OTT service provider or website or hosting server/operator in question so that the desired outcome may be achieved without any significant difficulties

The selective blocking of services and websites at the "source-level", **with reasonable justification using clear demonstration of violation of our national laws**, is the most effective measure that can be employed by our government. However, in cases where "source-level" blocking may not be feasible, the government can collaborate with TSPs to block services and websites using one, or many, of the following measures — blocking the service/website in question on the DNS servers of TSPs, blocking the IP addresses of the service/website in question on the firewall equipment of TSPs. In addition, collaborating with OTT platforms can often result in the compliance of government orders, such as removal of 1.9 million videos on YouTube in India.

India tops YouTube's charts for removal of videos violating its community guidelines

I would like to stress that whenever a website is blocked by orders from DoT or the government, TSPs should display a document or an image of the legal order on the blocked website page rather than displaying a generic message on the blocked website in question saying that "this website has been blocked as per orders from Department of Telecom". This generic message offers no way for a consumer to verify whether a website or a service has truly been blocked by legal orders from the Department of Telecom.