From: KMcAuliffe@itic.org
To: "Akhilesh Kumar Trivedi" <advmn@trai.gov.in>
Cc: kdeep@itic.org
Sent: Friday, September 15, 2023 2:53:29 AM
Subject: ITI Counter Comments on the Consultation Paper on Regulatory Mechanism for Over-the-top (OTT) Communication Services, and Selective Banning of OTT Services

Dear Shri Akhilesh Kumar Trivedi,

Please find attached the Information Technology Industry Council's Counter Comments on the Consultation Paper entitled "Regulatory Mechanism for Over-the-top (OTT) Communication Services, and Selective Banning of OTT Services." We appreciate the opportunity to provide a second round of feedback on this matter and would be happy to engage with you further.

Kind Regards,

Katie McAuliffe
Senior Director, Telecommunications Policy
Information Technology Industry Council

Please excuse typos; sent using dictation.

ITI Promoting Innovation Worldwide

September 15, 2023

To,
Shri Akhilesh Kumar Trivedi,
Advisor – Network, Spectrum & Licensing,
Telecom Regulatory Authority of India,
New Delhi, India

ITI Counter Comments on the Consultation Paper titled "Regulatory Mechanism for Over-the-top (OTT) Communication Services, and Selective Banning of OTT Services

The Information Technology Industry Council (ITI) is the premier global advocate and thought leader for the information and communications technology industry. ITI's membership comprises leading technology and innovation companies from all corners of the tech sector, including software, digital services, and internet companies. They are headquartered across Asia, the United States, and Europe, and many are significant investors and employers in India. On behalf of the global information technology sector, we are writing you to share our feedback on the Telecom Regulatory Authority of India (TRAI) released a consultation paper titled Regulatory Mechanism for Over-The-Top (OTT) Communication Services, and Selective Banning of OTT Services ("Consultation"). ITI appreciates the opportunity to participate in this consultation.

We appreciate the efforts taken by the Telecom Regulatory Authority of India ("**TRAI**") with respect to the public consultation process for its consultation paper on "*Regulatory Mechanism for Over-The-Top (OTT) Communication Services, and Selective Banning of OTT Services*" ("**CP**").

We thank TRAI for providing us the opportunity to provide our counter-comments to the CP. To assist with the consultation process, we have, in addition to our original comments, provided our counter-comments to several of the issues raised by stakeholders after examining their inputs published by the TRAI in response to the CP.

In our review of comments, it appears the key arguments in favour of imposing a regulatory framework on OTT communications and selective banning of OTTs are based on the following:

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- ***Substitutability of services***: Telecom services and OTT communication services are substitutable from a consumer perspective as they "*offer same core utility*"[1]. Factors such as underlying technology for delivering OTT services should not be considered while evaluating the substitutability of services.

- '***Same Service Same Rules***': Assuming the substitutable nature of services, they recommend OTT communication services to be regulated at par with TSPs, specifically on the aspects of national security and consumer grievance redressal aspects. Certain stakeholders have recommended bringing OTT communication services under the Universal License (UL) and imposing an authorization framework on them.

- ***Fair Share Fees***: TSPs argue that OTT services put an immense strain on the network infrastructure, but do not contribute towards its development. Accordingly, TSPs argue that OTT services that create traffic should make a fair and equitable contribution to the costs of TSPs' network infrastructure.

- ***Source level Selective Banning***: Selective banning is technically more feasible if carried out on the application layer rather than the network layer.

At the outset, we disagree with these characterizations and reiterate our comments to the CP:

- ***OTT Services are additive not substitutes***: The services provided by over-the-top ("**OTT**") platforms and those by the Telecom Service Providers ("**TSPs**") are not substitutable in nature. The OTTs majority of 'OTT services', are in addition to, and not in derogation or substitution of, traditional telecommunications (or broadcasting) services. OTTs provide bundled services that cannot be separated out into "OTT Communication Services," "OTT Broadcasting services," etc. making defining OTT overall or subsets of OTT for regulatory purposes near impossible. However, the functions of these services are already regulated under the IT Act.

- ***Infrastructure services and application services are not the same***: OTT service providers provide application and content-based services whereas the TSPs primarily control the deployment of the network infrastructure. Further, OTT services operate on the application layer and provide their services over the network layer, which is operated by the TSPs. OTT services and TSPs, therefore, cannot be subjected to a similar regulatory framework.

- ***Symbiotic relationship***: A collaborative relationship already exists between OTT service providers and TSPs, as the content provided by OTT service providers drives demand for network services and thus also benefits TSPs in increased data usage, thus driving up

[1]"Response to TRAI Consultation on Regulatory Mechanism for Over-the-Top Communication Services, and Selective Banning of OTTs", Airtel (1st September 2023), available on: <https://www.trai.gov.in/sites/default/files/Bharti_Airtel_04092023.pdf>, Page no. 2.

their revenues and getting more customers on board. The "fair share" argument has been debunked in numerous contexts. Including by the Competition Commission of India (CCI), which in its *Market Study on the Telecom Sector in India* examined the telecom sector and also the establishment of the Over- the-Top (OTT)[2] service providers in India. This study found that "on balance experts feel a separate regulatory framework is not necessary for OTTs and excessive regulation may stifle technological innovation, and therefore be counterproductive."

- ***Selective banning and internet shutdowns have overall negative consequences***: OTT service providers will require the location information of all users in order to block their services in a specific geographic area. Accessing such user information raises privacy concerns, particularly in light of the recently passed Digital Personal Data Protection Act, 2023. Additionally, the existence of numerous technical workarounds to selective banning such as VPNs, proxy browsers or tunnelling, also render this approach ineffective. Further, the regulatory objective of minimizing the negative consequences of internet shutdowns and preventing misinformation are unlikely to be achieved by selective banning. From daily communication to accessing health, banking, and education services, among others, OTTs are a basic necessity for individuals and business that impact everyday life. The curtailment of OTTs is therefore likely to have similar negative consequences as complete internet shutdowns.[3] Further, selective banning to prevent misinformation also closes avenues for the spread of legitimate and verified information that is the only real counter to misinformation.

ITI believes the regulatory structures already in place can address any concerns related to OTT services, communications related or otherwise. These services, however, cannot receive the same regulatory treatment as the infrastructure they use. To safeguard the future of data innovation, telecoms and applications must remain unbundled from a regulatory lens. Telecom law should regulate the hard infrastructure or 'carriage' layer, and not the software /content layers above. We would emphasize key differences between TSPs and application layer services. TSPs receive exclusive rights and privileges from the Government, such as the right to acquire spectrum, right of way, etc. and they control what is considered critical infrastructure. On the other hand, application layer services are facilitated by such infrastructure and have no actual control over the same. It is crucial to take into account technological distinctions while framing regulations for converged technologies and tailor the regulatory approach to the specific technology being employed/implemented. This is important in order to avoid a situation wherein entities offering such technologies are subject to excessive, broad-brush regulations. Thereby hampering innovation-led commercial growth and the ability of consumers to access such services across diverse platforms.

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[2] Market Study on the Telecom Sector in India, CCI (22nd Jan 2021) available on: https://www.cci.gov.in/images/marketstudie/en/market-study-on-the-telecom-sector-in-india1652267616.pdf, Para 26-27, 58.

[3] Carnegie Endowment for International Peace, Government internet shutdowns are changing. how should citizens and democracies respond has recognized selective banning conducted on the basis of platform-based banning, March 2022, available on: https://carnegieendowment.org/2022/03/31/government-internet-shutdowns-are-changing.-how-should-citizens-and-democracies-respond-pub-86687

ITI would refer back to our initial comments on points related to Substitutability, Same Service, and Banning; however, we would like to take the opportunity here respond to major telecom players and their associations who have submitted that OTT communication players should provide a fair contribution directly to TSPs or have pushed for revenue sharing agreements, for their network infrastructure investments and the network maintenance cost. We will refer to these fair contributions / revenue sharing agreements as network usage fees hereafter. There are a number of aspects that need to be clarified and sometimes corrected, considering the assertions witnessed in some of the responses to the TRAI consultation.

Network Usage Fees

Network usage fees would upend the open internet architecture by allowing internet service providers to double charge for services for which end users have already paid. TSPs have suggested the rate of network traffic as the basis to determine the quantum of a Network Usage Fee payable. However, the revenue generated by TSPs is already linked to the rate of network traffic in the form of data charges that are paid by customers to the TSPs. On the other hand, the OTT services do not receive any revenue directly out of such network traffic. End users pay internet service providers for an internet connection with the expectation that it will allow them to reach all legal content available on the internet, regardless of whether OTTs have paid "network usage fees" or not. OTTs do not "push" traffic at mobile or internet service providers' customers. Rather, end users request content or services enabled by technology companies to be delivered to them by their internet service provider. Mandating "network usage fees" would therefore lead to internet service providers double charging by also levying OTTs for services that end users have already purchased. Additional costs of this nature are ultimately passed downstream to the consumer. This will have the effect of raising the costs of OTTs and other digital technologies for Indian consumers and thereby impeding choice and competition.

Network usage fees would raise harmful barriers to consumer choice and competition as well as create market access barriers for content providers, potentially leading to internet fragmentation. Internet service providers control the last mile of internet delivery to end users, OTTs have no alternative routes to reach these users. Today, digital technologies can create an online service and make it available to anyone around the world. However, if network usage fees were imposed on certain OTTs or other digitized services, they would have to negotiate permission from every single access provider to reach customers. This would likely lead to fragmentation of the content available over the internet, for example, where providers were not able to obtain permission to distribute content in certain areas or those costs were prohibitively high there would be a resulting forced market exit. The Body of European Regulators for Electronic Communications (BEREC) has also concluded that the "sending party network pays" (SPNP) / network usage fee model would give TSPs "the ability to exploit the termination

monopoly and it is conceivable that that such a significant change could be of significant harm to the internet ecosystem."[4]

Relationships between OTT service providers and TSPs / ISPs are already balanced. Inserting a requirement for paid peering / revenue sharing / network usage fees (by whatever name such a system is called) into the market would override the current market-based approach of settlement-free peering and removes the possibility of other agreements and further innovation in traffic management. The most prevalent method of managing network traffic is through settlement free peering agreements. Any regulatory intervention in this regard would limit nearly all interconnection options to paid peering, thereby interfering with providers' ability to manage arrangements according to local needs and could result in lower quality of service, inefficient traffic flows, higher data transmission costs and less resilient networks overall. Such an approach would upend the open internet architecture.

Network usage fees would distort market incentives and give internet service providers disproportionate leverage over OTTs. To compel certain OTTs to pay network usage fees, an internet service provider could be disincentivized to address traffic congestion on its network or to optimize performance by design to the benefit of their customers, effectively restricting end users from receiving the requested service from OTTs at the quality the user desires. This congestion represents powerful leverage for a TSP to force OTTs to pay network usage fees. Internet service providers may also be unwilling to accept co-investment and cost-saving measures offered by content providers that would increase service performance for end users, such as caching and peering, in order to receive maximum network use fees, which would raise the cost of the internet for everyone. This would also mean that the routing for data packets would be decided for economic reasons, to minimize traffic charges, rather than for the primary purpose of technical efficiency which so far, would normally direct the traffic to be delivered in a way that most appropriately serves quality of experience of users.

Network usage fees have shown negative effects in other contexts. This is not the first time TSPs have advocated for a Sending Party Network Pays (SPNP) regime. At the World Conference on International Telecommunications (ITU) in 2012, ETNO proffered the same arguments: they needed revenues from OTTs to fund network upgrades and keep the Internet working smoothly. They were strongly rebuked by many key actors, including BEREC. According to BEREC's 2012 assessment such intervention could have caused significant harm to the internet ecosystem, as ISPs could exploit their termination monopoly.[5]

In 2012, when much of the international telephone network operated on a SPNP model, there was evidence to examine whether a sender-pays structure actually resulted in the telecommunication sector's growth. If the advocates of sender-pays were correct, we might expect countries with high long-distance calling rates to experience faster development of their

[4] BEREC preliminary assessment of the underlying assumptions of payments from large CAPs to ISPs, October 2022, p. 6.

[5] BEREC's comments on the ETNO proposal for ITU/WCIT or similar initiatives along these lines, November 2012.

communications networks than countries with low rates. However, statistics on international calling rates from the United States, as well as statistics measuring the growth of various nations' telecommunication sectors demonstrated the opposite result. Looking at international billing rates against four statistics that measure the development of telecommunications networks: fixed telephone lines per 100 people, mobile subscribers per 100 people, Internet users per 100 people, and broadband subscribers per 100 people, there was little correlation between long distance rates and fixed telephone line construction. For the other three variables, there was a negative correlation. The higher a nation's long-distance rates were, the slower the pace of progress in its telecommunications sector.[6]

Similarly, in its 2022 preliminary assessment, BEREC concluded that there is no adequate justification for any measure intervening in the market considering that the internet has proven its ability to self-adapt to changing conditions, and cope with increasing traffic volumes, changing demand patterns, technology, business models, as well as in the (relative) market power between market players. According to BEREC, "these developments are reflected in the IP interconnection mechanisms governing the internet which evolved without a need for regulatory intervention. The internet's ability to self-adapt has been and still is essential for its success and its innovative capability".[7]

Another example is South Korea's introduction of a SPNP charging mechanism which provides evidence of the negative consequences of introducing internet traffic taxes. As the European Parliamentary Research Service recently noted, "[r]eports and expert views, with some exceptions, tend to agree that the South Korean experiment is failing and leading to reduced diversity of online content, slower digital transformation, higher prices for end users buying internet content, a decline in internet service quality and a decrease of investment in network infrastructure".[8]

TSPs' cost of carrying increased internet traffic is not growing out of control. Claims to the contrary are not new and are not backed by data. In fact, the marginal cost of carrying more traffic is pretty much zero. According to past research and internet service providers' financial disclosures, the OTTs majority (90%) of internet service provider network costs are concentrated in access networks (the "last mile") that provide the final connection to the end user.[9]
An analysis[10] by the Internet Freedom Foundation found that the telecom industry-wide average revenue per user (ARPU) has increased steadily between 2018 to 2023 in India. User engagement with OTT applications is directly proportional to the amount of data consumed over the internet. OTT applications encourage people to purchase data packs and upgrade to higher-tiered data services supplying faster speeds and greater bandwidth. In other words, OTT apps help telecom operators by boosting demand for data usage. The virtuous cycle between the

[6] Eli Dourado, Do High International Telecom Rates Buy Telecom Sector Growth?, November 2012.
[7] BEREC preliminary assessment, 2022, p. 3.
[8] European Parliamentary Research Service, Network cost contribution debate, April 2023.
[9] Analysys Mason, The impact of tech companies' network investment on the economics of broadband ISPs, October 2022.
[10] https://internetfreedom.in/public-brief-on-fair-share/

growth of OTTs and TSPs is well documented.[11] Moreover, as the CCI noted in its 2021 report, over time, the relationship between OTTs and TSPs has become pro-competitive.[12] Through a combination of technological progress[13] and cooperation between internet service providers and content and application providers (e.g., use of caching and compression technology), traffic or usage related costs have not grown, are not expected to grow over time significantly, and will remain a small portion of costs. BEREC has also noted in its recent report that the cost of IP network upgrades linked to increased traffic volume are very low when compared to the total network costs.[14]

There is a direct contradiction in how TSPs report on alleged data growth to shareholders, compared to regulators. Data growth is characterized as 'positive' for shareholders as a sign of healthy business growth, whereas the same data growth is positioned as 'detrimental' to TSPs interests when communicating with regulators. For example, on mobile networks, the cost of data remains low and is falling, according to Analysys Mason.[15] Furthermore, many mobile operators charge per gigabyte for mobile data and offer bundles and/or refer to popular OTTs content in their marketing materials as an incentive for users to purchase broadband services. This business model seems to encourage more data usage rather than less data usage.

Moreover, network traffic is not the driver in network densification and capacity building. Mobile providers are densifying their networks in order to add new subscribers and new services that they will sell to end-users. Without the possibility of these applications on the horizon motivating consumers to seek enhanced connection to the Internet and thus upgrade their subscriptions to Internet access, operators would not feel compelled to invest. This is the virtuous cycle, the symbiotic nature of innovation and investment that drives growth in the connectivity sector.

Many technology companies offering OTT communication services invest heavily in network infrastructure, services, and products that support telecom operators' effective network management and reduce their costs. This includes large data centers for storing content closer to end users. Some OTT service providers also invest in subsea cables that connect global internet traffic and provide networks with high-speed content delivery, resilience, and capacity. That in turn benefits their retail customers.

To elaborate, OTT service providers invest in content, applications, and skills development, for example, which are all essential to meet India's connectivity goals and contribute to the Indian

[11] Unbundling the demand for a Network Usage Fee, Noyanika Batta & Meghna Bal (July 2023) available on: https://static1.squarespace.com/static/5bcef7b429f2cc38df3862f5/t/64b67e01b347d74316ed377d/1689681414242/ESYA-Centre_Report_Network-Usage-Fee_July-2023.pdf Page 5-8.
[12] Market Study on the Telecom Sector in India, CCI (22nd Jan 2021) available on: https://www.cci.gov.in/images/marketstudie/en/market-study-on-the-telecom-sector-in-india1652267616.pdf , Para 58.
[13] For instance, optical technology progress now allows networks to fit X Tbps of traffic over a single fiber. One optic (the connectors) can accommodate 400Gbps now where 10Gbps was the trend 10 years ago. Content providers contribute massively to this cost reduction by working with equipment vendors, which telecom operators can also benefit from.
[14] BEREC preliminary assessment of the underlying assumptions of payments from large CAPs to ISPs, October 2022, p. 8.
[15] Analysys Mason, The impact of tech companies' network investment on the economics of broadband ISPs, October 2022.

economy. Although OTT service providers invest primarily in their business products, they also significantly invest in R&D, content, and services, as well as complementary investments in infrastructure such as undersea cables, data centers etc., within India.[16]

While incumbent TSPs are the primary investors in physical infrastructure (as they should be), if we are to consider the internet ecosystem as a whole, investment should be considered broadly as well. As pointed out by BEREC in its report on 'Preliminary assessment of the underlying assumptions of payments from large CAPs to ISPs' (October 2022) and reiterated in BEREC's 2023 Response to the Exploratory Consultation, the different roles of the players contributing to this ecosystem must be taken into account.[17]

Content Delivery Networks (CDNs), whether built by an OTT service / content provider or a third-party partner, are a layer in the internet infrastructure that pushes OTT services closer to consumers and alleviates the pressure on TSP infrastructure. In the event that a CDN does not have its own data center close enough to the end-user, CDNs pay TSPs for hosting content on the TSP's servers. This improves the end user's experience by reducing latency and improving quality, while also providing a revenue stream for TSPs.

Another example is internet exchange points (including those operated by private entities) wherein they provide cost-effective critical infrastructure and points of interconnection for smaller content and applications providers to route their traffic within India and reach their consumers.

The October 2022 report by Analysys Mason on the 'Impact of tech companies' network investment on the economics of broadband ISPs' shows OTTs have invested almost USD 883 bn in digital / internet infrastructure globally from 2011 to 2021, averaging USD 120 bn annually in recent years and saving ISPs between USD 5 bn to USD 6.4 bn a year.[18]

This mutual interdependence, which is also acknowledged in BEREC's 2022 preliminary assessment and BEREC's 2023 Response,[19] has delivered huge advantage to consumers and users who benefit from unfettered access to a rich ecosystem of online content, applications,

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[16] Regulation of OTT Communications Services: Justified Concern or Exaggerated Fear?, Esya Center (Jan 2023) available on: https://static1.squarespace.com/static/5bcef7b429f2cc38df3862f5/t/63d8b49179bdf80b02924cc6/1675146395190/Esya_Centre_Report_Communications_OTT_Services.pdf, Page 26-27; https://telecominfraproject.com/facebook-partnering-to-build-the-telecom-infra-project/; https://cloud.google.com/blog/products/infrastructure/announcing-the-blue-and-raman-subsea-cable-systems

[17] https://www.berec.europa.eu/system/files/2022-10/BEREC%20BoR%20%2822%29%20137%20BEREC_preliminary-assessment-payments-CAPs-to-ISPs_0.pdf. This view was restated in BEREC's Response to the EU's 2023 Exploratory Consultation: https://www.berec.europa.eu/system/files/2023-05/BoR%20%2823%29%20131b%20Overview%20of%20BEREC%20Response%20to%20Exploratory%20Consultation.pdf

[18] https://www.analysysmason.com/consulting/reports/internet-content-application-providers-infrastructure-investment-2022/

[19] Preliminary assessment of the underlying assumptions of payments from large CAPs to ISPs' (October 2022) BERC. https://www.berec.europa.eu/system/files/2022-10/BEREC%20BoR%20%2822%29%20137%20BEREC_preliminary-assessment-payments-CAPs-to-ISPs_0.pdf. BEREC's Response to the EU's 2023 Exploratory Consultation: https://www.berec.europa.eu/system/files/2023-05/BoR%20%2823%29%20131b%20Overview%20of%20BEREC%20Response%20to%20Exploratory%20Consultation.pdf

and services. It also brings about socio-economic benefits and access to entertainment and information that enriches consumers' lives as well as economic opportunities.

Contrary to some assertions, mandatory fees would undermine net neutrality. If they were introduced, they would be in breach of net neutrality in both the letter and the spirit of the well-accepted and internationally recognized net neutrality principles: these principles are about avoiding discrimination in its many guises and protecting end-users' choice, as well as the ability of online applications to succeed on their own merit - rather than at the mercy of the provider of Internet access.

Besides damaging choice, network usage fees would have adverse effects on consumers. Indeed, consumers currently pay telecom operators directly for access to the entire open web. It's their decisions that drive Internet traffic, not content services themselves. If network fees are introduced, it's likely that consumers would be harmed by less choice, lower quality services and higher prices through content providers passing through network fees to consumers, or by some services simply not being available to consumers any longer.

Conclusion

For the above stated reasons, we believe that TRAI must resist demands for regulation of OTTs, in particular the imposition of a network usage fees. TRAI's regulatory approach must be based on what is best for users, businesses and India's digital economy, and not only for a select few stakeholders that already operate in exclusive markets.

Thank you for the opportunity to provide counter comments to this CP. We hope they will prove helpful in your deliberations.