



Koan Advisory Group's Response to TRAI Consultation on "Regulation of OTT Communication Services and Selective Banning of OTT services"

The Telecom Regulatory Authority of India (TRAI) released a consultation paper (CP) on [Regulatory Mechanism for Over-The-Top \(OTT\) Communication Services, and Selective Banning of OTT Services](#) on 7 July 2023. We appreciate and thank TRAI for opening this issue for public discussion. Please see our response below.

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

The definitions for OTT cited in the CP rely only on functional substitutability as a criterion for the definition of OTTs. However, OTTs are not perfect substitutes for traditional communication services for several reasons. There is no need to define OTT services. The extant regulatory framework under the Information Technology Act, 2000 regulates the activity of intermediation and stipulates obligations and due diligences based on the activity performed. The IT Act framework adequately addresses user harms and risks highlighted in the CP and there is no regulatory failure that requires the TRAI to intervene in internet governance.

TSPs and OTTs are not functional substitutes even though they offer similar services. OTT is a broad term that covers all applications and services that ride on top of or over the core network layer of the internet, different from traditional distribution networks that enable communication on the network layer. TSPs offer any-to-any voice services and data, operate in the network layer and enjoy exclusive rights. They have exclusive rights over the spectrum they acquire, right to obtain telecom numbering resources, right to interconnect with the Public Switched Telephone Network (PSTN), and the right of way to set up infrastructure.¹ In contrast, OTTs operate in application layer and do not enjoy any exclusive rights. They rely on communication infrastructure networks to provide services to the end-users² and includes OTT Communication Services, Online Curated Content Providers, and other digital/mobile applications.

TSPs can offer any service that OTTs offer but application/content service providers cannot offer network connectivity. Several telcos provide OTT services and have an advantage because barriers to entry in digital markets are low. Telcos have large subscriber bases that they can leverage to boost subscriptions in OTT markets. The Competition Commission of

¹ TSPs enjoy several exclusive rights conferred on them through their licences, such as the right to acquire spectrum, the right to obtain numbering resources, the right to interconnect with the PSTN, and right of way to set up infrastructure. See Noyanika Batta, 'Regulation of OTT Communications Services: Justified Concern or Exaggerated Fear?' January 2023, pg 13, available at:

https://static1.squarespace.com/static/5bcef7b429f2cc38df3862f5/t/63d8b49179bdf80b02924cc6/1675146395190/Esya_Centre_Report_Communications_OTT_Services.pdf#page=13

² *ibid.*



India in its market study on the telecom sector observed that telcos can develop their own OTT services, but OTT services did not have the same flexibility to build infrastructure.³

One of the definitions in the CP cite a 2016 report by the Body of European Regulators for Electronic Communications (BEREC) that considered a taxonomy based on functional substitutability.⁴ However, BEREC has moved away from the taxonomy and refers to applications provided over the application layer to end-users as Content and Application Providers or CAPs.⁵

Online application providers that the CP refers to as OTTs are already regulated as intermediaries under the extant framework of the Information Technology Act, 2000. Under the Allocation of Business Rules, 1961, the Ministry of Electronics and Information Technology (MeitY) administers the Information Technology Act, 2000 and other policy matters and laws related to information technology, the internet, and services they enable, including OTTs.⁶ Information Technology Act, 2000 and the Information Technology (Intermediary Guidelines and Digital Media Ethics Code) Rules, 2021 have separate obligations for intermediaries or conduits that enable information exchange, and additional responsibilities on social media intermediaries, online curated content providers. Similarly, the 2023 Amendments to the 2021 IT Rules stipulate additional obligations related to online games advertising for all intermediaries and creates a new class of Online Gaming Intermediaries (OGIs).

The framework regulates the activity of intermediation and stipulates due diligence obligations to mitigate risks that arises from the activity. Similarly, the activity of making online curated content or online games that involve money is regulated through additional obligations that seek to address the risk that stems from those activities. At this stage, a parallel regulatory regime that regulates OTTs as an entity will disrupt the digital ecosystem.

MeitY has set a target of unlocking 1 trillion-dollar value from India's digital economy by 2025.⁷ Any disruption in the governance framework for internet services is likely to have an adverse effect on the digital economy. Internet usage in India is still growing. In September 2022, India had 800 million wireless broadband subscriptions⁸ which is expected to grow beyond 1 billion by 2025.⁹ 90% of active users use the internet for online communications like

³ CCI Market Study on Telecom Sector, para 59, available at:

<https://www.cci.gov.in/images/marketstudie/en/market-study-on-the-telecom-sector-in-india1652267616.pdf#page=28>

⁴ Body of European Regulators for Electronic Communications, Report on OTT services (January 2016), available at: <https://www.berec.europa.eu/en/document-categories/berec/reports/berec-report-on-ott-services>

⁵ Body of European Regulators for Electronic Communications, BEREC preliminary assessment of the underlying assumptions of payments from large CAPs to ISPs (October 2022), available at:

https://www.berec.europa.eu/system/files/2022-10/BEREC%20BoR%20%2822%29%20137%20BEREC_preliminary-assessment-payments-CAPs-to-ISPs_0.pdf

⁶ Allocation of Business Rules, 1961.

⁷ MeitY, India's Trillion Dollar Opportunity, (February 2019), available at:

https://www.meity.gov.in/writereaddata/files/india_trillion-dollar_digital_opportunity.pdf

⁸ TRAI Telecom Subscription Data (December 2022), available at:

https://www.trai.gov.in/sites/default/files/PR_No.13of2023.pdf

⁹ Ministry of External Affairs Report, India to have nearly 1 billion Internet users by 2025 (May 2022), available at: <https://indbiz.gov.in/india-to-have-nearly-1-billion-internet-users-by-2025-report/>



text, voice, and video chats. Entry barriers and compliance burdens could decelerate this growth because it will disincentivize the entry of new entrants (especially smaller local entrants), new offerings, and innovation.¹⁰ Moreover, it would hurt telecommunications service providers in the long run because OTTs drive data consumption and subscriptions. Existing frameworks in the digital sector adequately address governance challenges in digital, and there is no need for a regulatory overhaul.

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.

As stated above, definitions and taxonomy that the CP cites look at functional substitutability as the only criteria but functional substitutability between OTT services and traditional services are a misconception. There are significant differences between TSPs and OTT services, which merits differential regulatory treatment. A reasonable classification of digital services with a nexus to the object of the legislation already exists within the IT Act framework. There is no such rational nexus between a classification for OTT services to the Telecom Regulatory Authority of India Act, 1997, or the Indian Telegraph Act, 1885.

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.

There is no clear definition of OTT communication services. They cannot be based on substitutability with communication using traditional network distribution because they are fundamentally different modes of communication. Further, text or video communication between users is an integral part of most digital services and applications today, that they deploy to augment their primary service, like video-KYC verification by fintech applications or consumer interfaces on e-commerce platforms or comments on a news publishing website.

The Australian Competition and Consumer Commission (ACCC) found that the technical shortfall OTT communication faces in terms of enabling any-to-any connectivity limits the substitutability of traditional communications and OTT communications.¹¹ OTT communication applications cannot operate without access to networks that TSPs enable, and they have a symbiotic relationship. Rich interactive applications like OTT communications drive demand for network and data use that benefit networks¹², and networks facilitate the infrastructure for OTT communications to run.

¹⁰ Global Network Initiative, Closing the Gap: Indian Online Intermediaries and a Liability System Not Yet Fit for Purpose (March 2014), available at: https://copenhageneconomics.com/wp-content/uploads/2021/12/Closing-the-Gap---Copenhagen-Economics_March-2014.pdf

¹¹ Australian Competition and Consumer Commission, Communications Sector Market Study (April 2018), available at: https://apo.org.au/sites/default/files/resource-files/2018-04/apo-nid139446_1.pdf

¹² Brian Williamson, Deconstructing the “level playing field” argument – an application to online communications (May 2017), available at: <http://static1.1.sqspcdn.com/static/f/1321365/27575015/1495793366237/LPFMay24.pdf>



In 2017, the Competition Commission of India (CCI) noted that instant communication applications like WhatsApp are not in the same relevant market as traditional electronic communications.¹³ The CCI cited key differences in functionalities OTT communication services and traditional communication networks enable, pricing conditions (OTT communications are free), and device used to access either (any phone for traditional communications vs. smart devices for OTT communications). Further, the CCI also found that consumers have limited choice in switching between the telecommunication networks because of associated switching costs while services on the communication network such as OTTs are highly competitive, often cost-free, and there are no limitations on using multiple services at the same time.¹⁴

It is impractical to distinguish between communication and non-communication activities among OTTs and create a category of OTT communication apps. Online services provide an enhanced experience that goes beyond text or video communication and often use communication to augment other services like in case of ride-sharing applications or e-commerce platforms.

The ITU¹⁵ and jurisdictions like the European Union¹⁶ and Australia¹⁷ adopt a differential approach towards OTT communication applications which is light touch because of essential differences with traditional communications and exclude applications that only enable communications to augment another service.¹⁸ Singapore distinguishes between Facilities-based Operations (FBO)¹⁹ or Services-Based Operations (SBO)²⁰ and requires OTT communication apps to operate under SBO license. However, video OTTs that may have a communication functionality do not require the SBO license and receive an automatic permission.²¹ Similarly, South Africa also prescribes two categories of licenses under the Electronic Communication Act, 2005 for Electronic Communications Network Service (ECNS) and Electronic Communication Service (ECS),²² but does not license video OTT services.²³ The ITU recommends separate regulatory frameworks for OTT communication

¹³ *Vinod Kumar Gupta Vs. Whatsapp Inc* [Competition Commission of India, 01-06-2017] para 11.

¹⁴ *Ibid* para 19.

¹⁵ ITU-T Technical Paper 'Economic impact of OTTs' (2017), pg 9, available at: https://www.itu.int/dms_pub/itu-t/opb/tut/T-TUT-ECOPO-2017-PDF-E.pdf

¹⁶ European Electronic Communications Code, 2018, available at: https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=uriserv%3AOJ.L_.2018.321.01.0036.01.ENG

¹⁷ Telecommunication and Other Legislation Amendment (Assistance and Access) Act 2018, available at: <https://www.legislation.gov.au/Details/C2018A00148>

¹⁸ ITU-T Study Group 3, Recommendation ITU-T D.1102 (2021/12): Customer redress and consumer protection mechanisms for OTTs, available at: <https://www.itu.int/ITU-T/recommendations/rec.aspx?rec=14730>

¹⁹ Singapore Infocomm Media Development Authority, Guidelines for Submission of Application for Facilities-Based Operations License, available at: <https://www.imda.gov.sg/-/media/Imda/Files/Regulations-and-Licensing/Licensing/Telecommunication/Facilities-Based-Operations/FBOGuidelines.pdf>

²⁰ Singapore Infocomm Media Development Authority, Guidelines for Submission of Application for Services-Based Operations License, available at: <https://www.imda.gov.sg/-/media/Imda/Files/Regulations-and-Licensing/Licensing/Telecommunication/Services-Based-Operations/SBOGuidelines.pdf>

²¹ Content Code, available at: <https://www.imda.gov.sg/-/media/imda/files/regulation-licensing-and-consultations/codes-of-practice-and-guidelines/acts-codes/ott-vod-niche-services-content-code-1mar2018.pdf>

²² Section 1, Electronic Communications Act, 2005.

²³ Noyanika Batta, 'Regulation of OTT Communications Services: Justified Concern or Exaggerated Fear?' January 2023, pg 33, available at:



services like a collaborative framework for OTTs²⁴, enabling environment for voluntary commercial arrangements between telecommunication network operators and OTT providers²⁵, and customer redress and consumer protection mechanisms for OTTs

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.

Please see our response to Q3 and Q4 above.

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.

OTT communication services are regulated and subject to several obligations under at least 20 Union laws including the Information Technology Act, 2000, the Consumer Protection Act, 2019, the Indian Penal Code, the Copyright Act, 1957, and the Indian Penal Code, 1860. Table I below captures existing regulations that covers aspects listed in the CP.

The regulatory rationale underpinning the regulation of legacy telecommunications networks does not apply to OTT apps and OTT services are already subject to regulatory obligations and compliances under the existing laws. There are several mechanisms to address all the aspects mentioned in the CP.

Economic and Quality of Service aspects are determined by market forces and there is no evidence of market failure that justifies any regulatory intervention. If there is evidence of any other user harm or market failure, it can be adequately addressed under ongoing consultative processes under the Digital Personal Data Protection Act, 2023, or through the proposed Digital India Act, or by the Competition Commission of India on the basis of a market study.

<https://static1.squarespace.com/static/5bcef7b429f2cc38df3862f5/t/63d8b49179bdf80b02924cc6/1675146395190/Esya+Centre+Report+Communications+OTT+Services.pdf#page=33>

²⁴ ITU-T Study Group 3, Recommendation ITU-T D.262 (2019/05): Collaborative framework for OTTs, available at: <https://www.itu.int/ITU-T/recommendations/rec.aspx?rec=13595>

²⁵ ITU-T Study Group 3, Recommendation ITU-T D.1101 (2020/08): Enabling environment for voluntary commercial arrangements between telecommunication network operators and OTT providers, available at: <https://www.itu.int/ITU-T/recommendations/rec.aspx?rec=14269>

ASPECTS	APPLICABLE PROVISIONS
Security	<ul style="list-style-type: none"> • S.69 of the IT Act • Information Technology (Procedure and Safeguards for Interception, Monitoring and Decryption of Information) Rules, 2009 • Information Technology (the Indian Computer Emergency Response Team and Manner of Performing Functions and Duties) Rules, 2013 • Indian Penal Code • Companies (Management and Administration) Rules, 2014
Privacy & confidentiality	<ul style="list-style-type: none"> • Digital Personal Data Protection Act, 2023 • Section 43A of the IT Act • Information Technology (Reasonable Security Practices and Procedures and Sensitive Personal Data or Information) Rules, 2011 • Sectoral guidelines by the Reserve Bank of India, Insurance Regulatory and Development Authority of India, the Department of Telecommunication, Securities and Exchange Board of India, the National Health Authority of India etc.
Safety	<ul style="list-style-type: none"> • Section 43 of the IT Act • CERT-In Directions of April 2022 for a Safe and Trust Internet
Consumer Grievance Redressal	<ul style="list-style-type: none"> • The Consumer Protection Act, 2019. • The Consumer Protection (E-commerce) Rules, 2020. • Information Technology (Intermediary Guidelines and Digital Media Ethics Code) Rules, 2021)
Blocking	<ul style="list-style-type: none"> • Section 69A of the IT Act • Information Technology (Procedure and Safeguards for Blocking for Access of Information by Public) Rules, 2009

Table I: Regulations applicable to OTTs

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:

The government has removed licensing and regulatory constraints from several areas including telecom since liberalization. The government has consistently held the view that competition facilitates innovation in the sector and leads to benefits like better coverage



and access to high-quality services. Since 1992, the government has relaxed licensing conditions for networks and exercised forbearance in case of services. The DoT has regulated networks and not services. This policy approach has enabled access to a wide variety of services on top of robust connectivity infrastructure. India’s policy stance on content-carriage separation, separation of network licenses and service delivery, and forbearance on OTT regulation should continue.

Regulating frameworks in telecommunications stem from the rationale that spectrum is a scarce natural public resource that countries must regulate in public interest. Judgements by the Supreme Court of India recognise the government’s trusteeship over natural resources.²⁶ The government licenses TSPs as the public trustee of spectrum and TSPs obtain the right to acquire spectrum when they obtain a license. OTT communication applications have no such right. Conversely, TSPs can decide the services that may operate on their network and essentially gatekeep an OTT application’s connectivity. The government imposes obligations on TSPs in the form of license conditions which we cannot divorce from the right to acquire spectrum. A licensing framework for OTT communication services would impose duties without the concomitant right to acquire, own, or control spectrum. For the same reason, the 2018 ACCC report found that there is “*no basis for requiring equivalent regulatory treatment*”.²⁷ The Telecom Regulatory Authority of India (TRAI) had also recognized the separation of the network layer and the content/application layer in its 2020 Recommendations on ‘Regulatory Framework for Over-the-Top (OTT) Communication Services’.²⁸ This is consistent with the telecom regulator’s position in its 2015 Consultation Paper on OTT Regulation²⁹.

The Indian government has progressively liberalized regulatory frameworks since 1994. Since the 2012 Telecom Policy, the government has held that view that network licensing is separate from service delivery to end-users, and that licensing frameworks must not extend to content regulation. In the National Digital Communications Policy 2018 the DoT committed to “*remove regulatory barriers and reduce regulatory burden that hampers investments, innovation and consumer interest...*”.³⁰ The TRAI had also recommended forbearance on OTT regulation in 2020. The TRAI’s 2020 Recommendations on a Regulatory Framework for OTT Communication Services noted that “*any regulatory intervention may have an adverse impact on the industry as a whole*” and market forces should be allowed to operate.³¹ The CP

²⁶ *M.C. Mehta v. Kamal Nath and Ors.* (1997) 1 SCC 388 para 116; *Reliance Natural Resources Ltd vs Reliance Industries Ltd.* (2010) 7 SCC 1 para 114.

²⁷ Note 8 on page 42.

²⁸ TRAI Recommendations on ‘Regulatory Framework for Over-the-Top (OTT) Communication Services’ (2020), available at: https://trai.gov.in/sites/default/files/Recommendation_14092020.pdf

²⁹ TRAI Consultation Paper on ‘Regulatory Framework for OTT Services’ (2015), available at: <https://www.trai.gov.in/sites/default/files/OTT-CP-27032015.pdf>. In para 2.1, the TRAI defines an OTT “*as a service provider offering ICT services, but neither operates a network nor leases network capacity from a network operator. Instead, OTT providers rely on the global internet and access network speeds to reach the user*”.

³⁰ 8, Preamble to the National Digital Communications Policy 2018, available at: https://dot.gov.in/sites/default/files/2018_10_29%20NDCP%202018_0.pdf

³¹ TRAI Recommendations on Regulatory Framework for Over-The-Top (OTT) Communication Services (2020), para 2.4., available at: https://trai.gov.in/sites/default/files/Recommendation_14092020.pdf



does not demonstrate reason or evidence to track back on this approach which has led to organic sectoral growth, and protected consumer interest.

Table II below captures the GOIs liberal outlook on the telecom and the digital sectors from 1992 - 2020.

Policy intervention	Telecom regulation	Value-add and other service providers	Rationale
1992 ³²		Value-added services like e-mail and data services opened to private investment.	To achieve standards comparable to international facilities. ³³
1994 Telecom Policy ³⁴	Private sector allowed to provide basic telecom services.	Operate under license on a non-exclusive basis	Make use of private resources to expand connectivity and achieve universal coverage. ³⁵
1999 Telecom Policy ³⁶	Migration from Fixed Fee regime to a Revenue Share Agreement regime to collect license fees from TSPs.	Other Service Providers may operate on access provider infrastructure without a license.	Creation of modern efficient communication infrastructure ³⁷
2003 ³⁸	Unified Access Service License to provide both fixed and/or mobile services under the same license. Spectrum delinked from licenses.		
2012 National Telecom Policy ³⁹	Simplify the licensing framework.	Explicitly states that licensing frameworks will not cover content regulation.	Extend converged high-quality services across the nation including rural and remote areas. ⁴⁰

³² Telecom Sector Profile, Report No. 5 of 2005, pg 2, available at: https://cag.gov.in/uploads/old_reports/union/union_compliance/2004_2005/Commercial_Audit/Report_No_5/Telcom_sector_profile.pdf#page=2

³³ National Telecom Policy, 1994, 'Value Added Services', para 8: available at: <https://dot.gov.in/national-telecom-policy-1994>

³⁴ National Telecom Policy, 1994, available at: <https://dot.gov.in/national-telecom-policy-1994>

³⁵ National Telecom Policy, 1994, 'Resources for the Revised targets', para 6: available at: <https://dot.gov.in/national-telecom-policy-1994>

³⁶ New Telecom Policy, 1999, available at: <https://dot.gov.in/new-telecom-policy-1999>

³⁷ New Telecom Policy, 1999, '2.0 Objectives and targets of the New Telecom Policy 1999', available at: <https://dot.gov.in/new-telecom-policy-1999>

³⁸ A Repository on Internet & Society, The Centre for Internet & Society, pg 233, available at: <https://cis-india.org/internet-governance/files/internet-institute-repository#page=233>

³⁹ 2012 National Telecom Policy, Objective no. 11, pg 6, available at: https://dot.gov.in/sites/default/files/NTP-06.06.2012-final_0.pdf#page=6

⁴⁰ 2012 National Telecom Policy, Objective no. 11, pg 6, available at: https://dot.gov.in/sites/default/files/NTP-06.06.2012-final_0.pdf#page=6



2016 Unified License (VNO) introduced. ⁴¹	UL licensees may offer services throughout the country and choose the services they want to offer.	OTT services not brought within any licensing framework.	Facilitate delinking of the licensing of networks from the delivery of services to the end users. ⁴²
2020 TRAI Recommendations on OTT regulation. ⁴³		No need for OTT regulation at this stage. Market forces should be allowed to operate.	Any regulatory intervention may have an adverse impact on the industry as a whole ⁴⁴

Table II: Progressive Liberalization of the Telecommunications Sector

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.

OTTs and TSPs already have a mutually beneficial relationship and collaborate and infrastructure expansion. There is no need for a regulator-prescribed collaboration or intervention into Business-to-Business conduct. It should be on the basis of market-based negotiation and voluntary commercial arrangements.

The ITU recommends separate regulatory frameworks for OTT communication services like a collaborative framework for OTTs⁴⁵, enabling environment for voluntary commercial arrangements between telecommunication network operators and OTT providers⁴⁶, and customer redress and consumer protection mechanisms for OTTs.

TSPs advocate for transposing legacy communication regulations on OTT communication services, and payment by OTT services for traffic on the network in the form of Network Usage Fees (NUF), Interconnect Usage Charges (IUC), or a Broadband Infrastructure Levy. However, the contention that OTT growth comes at a cost to TSPs is incorrect.

The revenue of TSPs increase with the increase in data traffic. Airtel reported a 27 percent increase in its revenue from mobile services in the first quarter of FY23, attributing it to

⁴¹ Guidelines for grant of UL (VNO), pg 1,5, available at:

https://dot.gov.in/sites/default/files/2018_08_31%20UL%20VNO%20G.pdf?download=1#page=1 :

⁴² Guidelines for grant of UL (VNO), para 1, pg 1, available at:

https://dot.gov.in/sites/default/files/2018_08_31%20UL%20VNO%20G.pdf?download=1#page=1

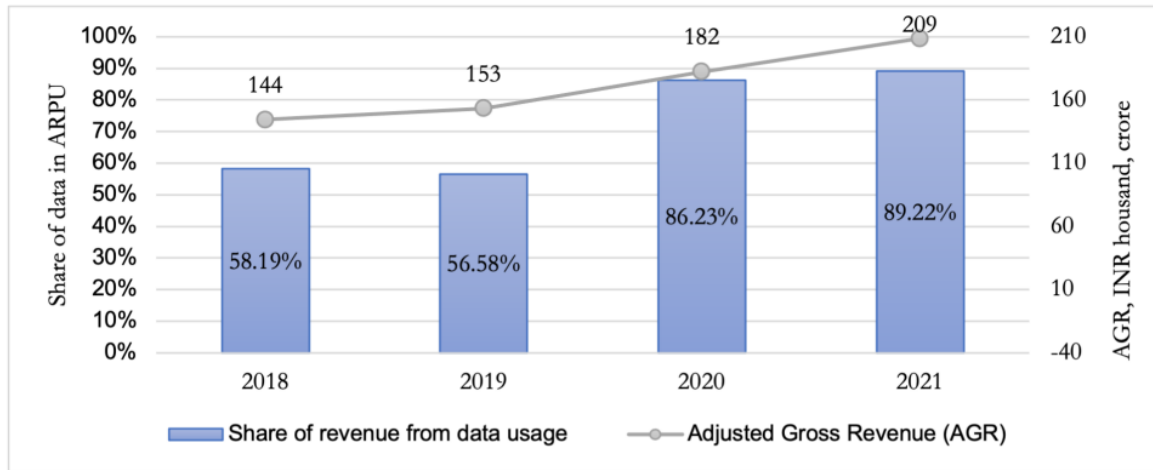
⁴³ TRAI Recommendations on Regulatory Framework for Over-The-Top (OTT) Communication Services (2020), pg 11, available at: https://traigov.in/sites/default/files/Recommendation_14092020.pdf#page=11

⁴⁴ TRAI Recommendations on Regulatory Framework for Over-The-Top (OTT) Communication Services (2020), pg 9, available at: https://traigov.in/sites/default/files/Recommendation_14092020.pdf#page=9

⁴⁵ ITU-T Study Group 3, Recommendation ITU-T D.262 (2019/05): Collaborative framework for OTTs, available at: <https://www.itu.int/ITU-T/recommendations/rec.aspx?rec=13595>

⁴⁶ ITU-T Study Group 3, Recommendation ITU-T D.1101 (2020/08): Enabling environment for voluntary commercial arrangements between telecommunication network operators and OTT providers, available at: <https://www.itu.int/ITU-T/recommendations/rec.aspx?rec=14269>

growing consumption of mobile data.⁴⁷ Similarly, Reliance Jio achieved its best-ever quarterly revenues at Rs 27,527 crores in June 2022, with total data traffic in the quarter growing by 27.2 percent.⁴⁸ Figure I below demonstrates the steady rise in telecom revenues from data subscriptions since 2018



Source: TRAI performance indicator reports

OTTs drive TSP revenues because they are bandwidth-intensive services that drive the demand for data services. Infrastructure investments would not lead to returns in the absence of demand generated by OTTs. Further, networks can handle significant increase in traffic without additional costs through innovations like caching and peering, and infrastructure upgrades like deep-sea cables and Content Delivery Networks (CDNs). OTTs contribute towards these upgrades and improve the efficiency of existing networks.

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.

Selective banning of OTT applications in a specific geography can be applied at either at the OTT player level or at the telecom operator level as per experts.⁴⁹ However there are practical technical challenges.

At the network layer

⁴⁷ Bharti Airtel, 'Q1'23 Highlights-India', Quarterly Highlights; M. Kalawatia, 'Why OTTs, telcos mustn't lock horns over infra cost-sharing', The Print (August 2022), available at: <https://theprint.in/opinion/why-otts-telcos-mustnt-lock-horns-over-infra-cost-sharing/1102206/>

⁴⁸ Reliance Industries Limited, 'Consolidated Results for Quarter ended 30th June 2022', Media Release (July 2022).

⁴⁹ Parag Kar, Selective Banning of OTT Application, MEDIUM, 08 July, 2023, available at: <https://paragkar.medium.com/selective-banning-of-ott-application-e06a740ab69d#:~:text=The%20idea%20is%20to%20prevent,operating%20while%20leaving%20others%20untouched.>



Through IP addresses: At the network level blocking can be done using the destination IP addresses of all the servers⁵⁰ used by the OTT player. However, no OTT will share their IP addresses to prevent hacking, denial of service attack and other such cyber security incidents.

Secondly, the destination IP addresses of the OTT servers are dynamically changed to prevent tracing (by hackers).⁵¹ IP blocking is most effective only when the content is hosted in a particular server in a specific data center, or a very specific set of files are of concern.⁵² IP-based blocking is not very effective for larger hosting services distributed across many data centers or which use content distribution networks (CDNs) to speed access.

Through URL mapping: Even if these IP addresses are accessed in real-time through URL mapping (by physically checking each and every URL where they are heading), it will still be a significant challenge for telecom operators to use them for the purpose of blocking. URL blocking requires the ISP to intercept and control traffic between the end-user and the Internet. It is expensive because it requires a high level of resources to give acceptable performance.⁵³

Deep Packet Inspection (DPI)- It uses devices between the end user and the rest of the Internet that filter based on specific content, patterns, or application types. This type of network blocking is intensive and thus expensive because all content must be evaluated against blocking rules. DPI blocking requires a signature or information about the content to be effective. This may be keywords, traffic characteristics (such as packet sizes or transmission rates), filenames, or other content-specific information. However, it is not effective when the traffic is encrypted, which is often the case.

At the application layer

For the OTT player to block services in a specific area/geography it will need the location information of all the users. The location information can be at the GPS level or at the Cell ID⁵⁴ level. Access to both these pieces of information will pose significant challenges. Imposing a government mandate to enable location sharing will attract privacy concerns even under normal circumstances. OTTs will have to ask consumers for consent to access their location and then ban those that are within the specified area or under a government mandate will be compelled to access location of users.

Use of Virtual Private Networks (VPNs)

The technological advantages of VPN services may make the process of selective banning redundant. Russian citizens still use Facebook and Instagram through VPNs despite the ban on such apps. Recently the Manipur High Court evaluated the challenge with respect to VPNs in light of the unrest within Manipur. It formed a 12-member expert committee to explore the

⁵⁰ The OTT players might have many servers, and some with the purpose of driving redundancy and efficiency. For e.g. Video OTTs such as Netflix use Content Delivery Networks which are to reduce latency.

⁵¹ Analysts initially [pointed](#) out that it is not possible to enforce selective banning owing to dynamic IP addresses.

⁵² Internet Society on Internet Content Blocking, available at:

<https://www.internetsociety.org/resources/doc/2017/internet-content-blocking/>

⁵³ Internet Society on Internet Content Blocking, available at:

<https://www.internetsociety.org/resources/doc/2017/internet-content-blocking/>

⁵⁴ A cell ID number is a unique identifier assigned to each cell tower by a cellular network. This identifier is used to distinguish one cell tower from another and is crucial for routing calls and text messages to the correct tower.



possibilities of restoring internet access with a block on social media websites and a block on VPN. However the Internet service providers (ISPs) in the committee told the court that blocking VPN services was not practical because “VPNs keep popping up and cannot be controlled.”⁵⁵ The High Court directed the government to lift the internet ban with restrictions.⁵⁶ Thus, the government allowed limited internet access i.e. conditionally allowing broadband service while retaining the ban on mobile internet.⁵⁷ It also laid down terms and conditions for lifting the ban on broadband service, including blocking social media websites and VPNs at the local level by asking the service providers to collect undertakings from internet subscriber i.e. the users.⁵⁸

In addition to technical challenges there are also legal and policy challenges regarding selective banning of OTT services. Selective banning will likely curb fundamental rights under 19 (1) (a) and 19 (1) (g). Hence, it will be important to ensure that the principle of proportionality is satisfied before the government adopts selective banning as a tool to restrict fundamental rights. As noted by the Supreme Court⁵⁹, Article 19 (2) to 19 (6) which are restrictions on fundamental rights must be tested on this principle of proportionality. According to the principle, the government can restrict fundamental rights to achieve a legitimate goal provided that the said restrictions are minimum, and the government has no better alternatives. The government has to ensure that selective banning is the least restrictive measure to curb fundamental rights and no better alternative is available to seek the government's aim i.e. curb misinformation during unrest.

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.

No, there is no need to put a place in 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. Before proposing selective banning, the TRAI should assess if there is any other lesser restrictive mechanism. It must exhaust all practical options to have content addressed at the source, or any other alternative means to blocking.⁶⁰

⁵⁵ Pleas for restoring Internet to be heard in chambers: Manipur High Court, The Hindu, 07 July, 2023, available at: <https://www.thehindu.com/news/national/pleas-for-restoring-internet-in-manipur-to-be-heard-in-chambers-manipur-hc/article67049366.ece>

⁵⁶ Manipur partially lifts internet ban, announces conditional restoration of broadband, THE INDIAN EXPRESS, 26 July, 2023, available at: <https://indianexpress.com/article/india/manipur-govt-ban-broadband-internet-services-lifted-8859496/>

⁵⁷ Internet ban in Manipur partially eased; conditions laid down for broadband services, THE HINDUSTAN TIMES, 25 July 2023, available at: <https://www.hindustantimes.com/india-news/internet-ban-in-manipur-partially-eased-conditions-laid-down-for-broadband-services-101690281916519.html>

⁵⁸ Internet subscribers have to ensure the removal of any existing VPN software from the system and not install any new software or VPN App, according to the order. However, the same seems difficult to enforce.

⁵⁹ Om Kumar And Ors vs Union Of India, 2000, Special Leave Petition (Civil) 21000 of 1993, available at: <https://indiankanoon.org/doc/1285195/>

⁶⁰ Internet Society on Internet Content Blocking, available at: <https://www.internetsociety.org/resources/doc/2017/internet-content-blocking/>



As per Internet Society, all blocking techniques suffer from over-blocking and under-blocking i.e., blocking more than is intended and, at the same time, less than intended. They also cause other damage to the internet by putting users at risk (as they attempt to evade blocks), reducing transparency and trust on the Internet, driving services underground, and intruding on user privacy.

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.

AND

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.

Please see our response to Q10 and Q11 above.

We hope our submission aids with your decision making. Additionally, we hope to continue to contribute to such consultations in the future and remain at your disposal for any clarifications.