



Telecom Regulatory Authority of India



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

New Delhi, India
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CHAPTER 1

INTRODUCTION

1.1 Background

The Department of Telecommunications (DoT), vide a reference letter dated 3rd March 2016, sought the recommendations of the Telecom Regulatory Authority of India (the Authority) on Net Neutrality and other related aspects such as economic, security and privacy issues, and regulatory framework for OTT services similar to services provided by Telecom Service Providers (TSPs), etc. (refer to **Annexure I**). Considering the complexity of the issues, referred to in DoT's letter, and other interrelated issues, the Authority chose to deal with specific issues through distinct consultation processes. The Authority has already issued the following recommendations and regulations pertaining to issues referred to in DoT's reference letter dated 3rd March, 2016:

Date	Recommendations and Regulations
8 th Feb 2016	The Prohibition of Discriminatory Tariffs for Data Services Regulations, 2016.
24 th Oct 2017	The recommendations on "Regulatory framework for Internet Telephony" sent to DoT.
28 th Nov 2017	The recommendations on "Net Neutrality" sent to DoT.
16 th July 2018	The recommendations on Privacy, Security and Ownership of Data in the Telecom Sector sent to DoT.

1.2 Consultation Process and Responses of the Stakeholders

On 12th November 2018, TRAI issued a consultation paper on the residual issue, i.e., Regulatory Framework for Over-the-top (OTT) communication

services, and raised various issues for comments and counter-comments from stakeholders. Last date for submission of the comments was 7th January 2019, and for the submission of counter-comments was 21st January 2019. Total 89 comments and 12 counter-comments were received from the stakeholders. Subsequently, two Open House Discussions (OHDs) were held, one on 24th April 2019 at Bangalore and the other on 20th May 2019 at Delhi, where stakeholders participated and deliberated on the issues. Various representatives of stakeholders such as Telecom and Internet Service Providers, Broadcasters, Internet Application Providers' associations, Consumers responded to issues raised in the consultation paper. Detailed comments and counter-comments submitted by stakeholders are available on TRAI's website: www.trai.gov.in. Key responses received from the stakeholders on the issues raised in the consultation paper are as below:

- i. **Substitutability Primary criterion for comparison of regulatory or licensing norms and lists of such services:** Some stakeholders suggested lists of services based on “functional substitutability” such as Voice telephony (VoIP), messages (SMS), Video calls, and Instant messaging service. According to them, functional substitutability may be the primary criterion for comparison of regulatory or licensing norms. However, other stakeholders highlighted that OTTs and TSPs operate in different layers, and OTTs are not substitutable but dependent on TSPs for network access. TSPs have exclusive rights like spectrum, interconnect with PSTN, network infrastructure, and obtain numbering resources.
- ii. **Issue of non-level playing field between OTT providers and TSPs, impact on infusion of investments in the telecom networks and regulatory approach for OTT communication service providers:** Some stakeholders agree that the issue of non-level playing field exists, and they proposed that OTT regulatory regime should mandate compliance to requirements such as various regulatory requirements. While some stakeholders commented that no such issue exists as OTT

operates in an extremely competitive market, OTT providers do not control infrastructure, and TSPs can directly use spectrum. Most of the stakeholders proposed that reducing the legacy regulatory barriers on TSPs, especially license fees, spectrum usage charges, other levies, and taxes, may improve the business case for TSPs. Some stakeholders suggested that regulatory or licensing imbalance is impacting infusion of investments. Some stakeholders suggested that OTT service providers may participate in infusing investment in the telecom networks by working out commercial arrangements with TSPs and allowing TSPs to offer OTT packs to consumers. However, some stakeholders commented that licensing imbalance is not impacting any infusion of investments, and OTT providers have increased the investment of TSPs by building physical facilities such as data centres, fibre networks, servers, and routers. TSPs charge customers a regular direct subscription fee, and OTT works on zero pricing. TSPs benefited due to increased data usage by consumers with the use of OTT services.

- iii. ***Issues related to Interoperability, lawful interception of OTT communication and accessibility of emergency services:*** Majority of the stakeholders highlighted that interoperability may not be mandated among OTTs and should be left for market forces. Regarding interception of OTT communication services, some stakeholders commented in favour and submitted that OTT service providers collect and store personal information of the end users in their data servers located abroad, in turn leading to issues and dangers relating to data protection and national security. They have argued that it becomes difficult to retrieve the data due to jurisdictional issues. While some stakeholders suggested that the issue related to interception of OTT service providers whose data reside outside India may be resolved via the Clarifying Lawful Overseas Use of Data (“CLOUD”) Act¹ of USA and the Budapest Convention² arguing that these are effective solutions for cross-border data transfers. Other

¹ <https://www.justice.gov/opa/press-release/file/1153446/download>

² <https://www.coe.int/en/web/cybercrime/the-budapest-convention>

stakeholders proposed that data should be accessible in India-based servers. A few stakeholders mentioned that The Code of Criminal Procedure, 1973, (CrPC)³, and The Information Technology Act 2000⁴ have sufficient rules that apply to OTT providers and other intermediaries. With regards to emergency services, some stakeholders representing consumers, and media services, agreed with the requirement of provisions for emergency services to be made accessible via OTT platforms. While most of the stakeholders opposed any measure for provisioning of emergency services.

³ <http://legislative.gov.in/sites/default/files/A1974-02.pdf>

⁴ <https://www.meity.gov.in/content/information-technology-act-2000>

CHAPTER 2

APPROACHES ADOPTED IN OTHER JURISDICTIONS

2.1 Different approaches are being adopted in other jurisdictions for regulating OTT service providers like services provided by TSPs. Various countries have attempted to take measures regarding this issue. Jurisdictions like the European Union (EU) and Australia have enacted laws for electronic services, but they are still in the nascent stage of implementation. EU Directive on “European Electronic Communications Code⁵” was released on 11th December 2018, and the last date for adoption of new code by member states is 20th December 2020. “Telecommunication and Other Legislation Amendment (Assistance and Access) Act 2018”⁶ enacted by Australia in December 2018, covers carriage service providers as well as the providers who provide an electronic service that has one or more end users in Australia, but it is under review⁷. Indonesia⁸ has drafted some regulatory provisions but the final status of these is pending or in the proposal state. Few countries have specific laws and policies for regulating VoIP services, like the United States of America⁹ and Qatar¹⁰. Some other countries like Russia¹¹, China^{12,13}, United Arab Emirates¹⁴, and Iran¹⁵ are using restrictive approaches by banning the OTT services using other national laws or court orders. Brazil¹⁶ has not enacted any regulatory framework but is debating whether OTT services should be regulated. It is found that various countries such as Argentina, Chile, Israel, South Korea, South Africa, Kenya, Ghana,

⁵ https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=uriserv%3AOJ.L_.2018.321.01.0036.01.ENG

⁶ <https://www.legislation.gov.au/Details/C2018A00148>

⁷ https://www.aph.gov.au/Parliamentary_Business/Committees/Joint/Intelligence_and_Security/AmendmentsTO_LAAct2018

⁸ <https://www.lexology.com/library/detail.aspx?g=44d84bcc-652d-4a5a-a3e3-4778fae2e383#:~:text=The%20Draft%20Regulation%20requires%20an,4%2F%202017.&text=Under%20the%20Draft%20Regulation%2C%20both,providing%20their%20services%20in%20Indonesia.>

⁹ <https://www.fcc.gov/public-safety-and-homeland-security/policy-and-licensing-division/general/communications-assistance>

¹⁰ <http://www.motc.gov.qa/en/news-events/news/qatar-voice-over-internet-protocol-voip-policy>

¹¹ <https://globalfreedomofexpression.columbia.edu/cases/roskonnadzor-v-telegram/>

¹² <https://www.nytimes.com/2017/09/25/business/china-whatsapp-blocked.html>

¹³ http://eng.mod.gov.cn/publications/2017-03/03/content_4774229.htm

¹⁴ <https://www.thenational.ae/uae/government/no-change-in-voip-policy-says-uae-telecoms-regulator-1.692178>

¹⁵ In 2014, Iran Judiciary ordered the blocking of Viber, Tango, WhatsApp etc. <https://www.ncr-iran.org/en/news/iran-viber-tango-and-whatsapp-to-be-blocked/>

¹⁶ <https://medium.com/privacy-international/the-battle-for-encryption-in-brazil-fd69c9cc6553>

Thailand, Sri Lanka, Japan have not adopted any formal regulatory approach for OTT services. Countries such as South Korea, Japan, China, have provided apps such as KakaoTalk¹⁷, Line¹⁸, WeChat,¹⁹ respectively, as an alternative to foreign OTT services. Some countries like Singapore²⁰, Malaysia²¹ have made regulatory licensing provisions for OTT Media services, which is outside the scope of this consultation process.

2.2 In May 2019, ITU-T vide its recommendation D.262 on ‘Collaborative framework for OTTs’ has recommended to Member states for taking certain initiatives which inter-alia include developing enabling policies and/or regulatory frameworks to foster fair competition between network operators and providers of OTTs²². Many member states and Sector Members have submitted contributions to propose ITU Studies on various aspects of OTTs. Regarding cooperation between OTT providers and telecom operators, various discussions are going on in the ITU forum.

2.3 Recently, a meeting was also held in Study Group 3 of ITU-T²³ (24th August–28th August 2020), wherein, it was agreed upon by the ITU Members that further study on the subject before a normative standard or guidelines or Technical Report could be issued by ITU on various aspects of OTTs.

2.4 In view of the already issued recommendations and regulations mentioned in para 1 above, and based on inputs received during the consultation process on the issues, and subsequently studying practices in other jurisdictions, Authority is of view that:

i. **Economic aspects:** Over the last few years, telecom has witnessed

¹⁷ <https://www.statista.com/statistics/284473/south-korea-social-network-penetration/#:~:text=KakaoTalk%2C%20often%20referred%20to%20as,the%20first%20quarter%20of%202020.>

¹⁸ <https://www.statista.com/topics/1999/line/>

¹⁹ <https://www.businessofapps.com/data/wechat-statistics/>

²⁰ <https://www.imda.gov.sg/regulations-and-licensing-listing/Over-the-top-TV-Niche-Licence>

²¹ <https://www.mcmc.gov.my/en/sectors/telco/licensing>

²² <https://www.itu.int/rec/T-REC-D.262-201905-I>

²³ ITU-T Study Group 3 provides a global forum to improve the understanding of the financial and economic aspects associated with the growth of ICT, particularly with respect to the shift to IP-based and NGN/Future Networks and the exponential rise in mobile wireless communications. In November 2016, Study Group 3 was entrusted by the World Telecommunications Standardization Assembly (WTSA-16) with the study of 11 questions, including a new question on the economic and policy aspects of big data and digital identity in international telecommunications services and networks. Study Group 3 is also working on the **economic impact of OTTs**.

exponential growth in data traffic and service providers have launched tariff plans with unlimited voice usage as a part of data plans. It shows that with the increase in the usage of OTT, traffic of telecom services providers has also grown. Various studies on appropriate business models are already under consideration in various jurisdictions and it is emerging. Therefore, any regulatory prescription in haste may leave adverse impact on industry as a whole. Accordingly, Authority is of the opinion that market forces may be allowed to respond to the situation without prescribing any regulatory intervention. However, developments shall be monitored and intervention as felt necessary shall be done at appropriate time. In view of the above, **the Authority recommends that Market forces may be allowed to respond to the situation without prescribing any regulatory intervention. However, developments shall be monitored and intervention as felt necessary shall be done at appropriate time.**

- ii. **Security and privacy issues:** Various issues related to security and privacy were raised during the consultation process. After studying the issues, it has been observed that architecture of OTT communication services is evolving to protect the end users and encryption technology deployed in a manner which prevents intermediaries from getting the communication in a clear text or in an intelligible form. Imposition of any requirements to cater to get the details of communication in an intelligible form or clear text would either lead to change in the entire architecture of such OTT services which might not provide same level of protection as offered today or would require to introduce provisions which may make the agents involved in the communication vulnerable to unlawful actors. Authority noted that this matter is under examination of various international jurisdictions and no satisfactory solution has emerged as yet. As such, the Authority is of the view that no regulatory interventions are required at the moment. In view of the above, **the Authority recommends that No regulatory interventions are required in respect of issues related with Privacy and security of**

OTT services at the moment.

- iii. **Regulatory framework for OTT services:** Regulation of OTT services is a widely debated topic in many jurisdictions as well as in ITU. While few jurisdictions have started exploring possibilities to regulate some aspects of a few OTT services through legal and technical measures but these efforts are yet in nascent stage and the overwhelming majority of jurisdictions and the ITU are still studying various aspects of OTTs. Since, ITU deliberations are also at study level, therefore conclusions may not be drawn regarding the regulatory framework of OTT services. However, in future, a framework may emerge regarding cooperation between OTT providers and telecom operators. The Department of Telecommunications (DoT) and Telecom Regulatory Authority of India (TRAI) are also actively participating in the ongoing deliberations in ITU on this issue. Based on the outcome of ITU deliberations DoT and TRAI may take appropriate consultations in future. In view of the above, **the Authority recommends that it is not an opportune moment to recommend a comprehensive regulatory framework for various aspects of services referred to as OTT services, beyond the extant laws and regulations prescribed presently. The matter may be looked into afresh when more clarity emerges in international jurisdictions particularly the study undertaken by ITU.**

CHAPTER 3

SUMMARY OF RECOMMENDATIONS

3.1 The Authority recommends that

- i. Market forces may be allowed to respond to the situation without prescribing any regulatory intervention. However, developments shall be monitored and intervention as felt necessary shall be done at appropriate time.
- ii. No regulatory interventions are required in respect of issues related with Privacy and security of OTT services at the moment.
- iii. It is not an opportune moment to recommend a comprehensive regulatory framework for various aspects of services referred to as OTT services, beyond the extant laws and regulations prescribed presently. The matter may be looked into afresh when more clarity emerges in international jurisdictions particularly the study undertaken by ITU.

Annexure I (Chapter no. 1/Para no. 1.1)

DoT's Reference to TRAI for Recommendations

Government of India
Ministry of Communications & IT
Department of Telecommunications
Sanchar Bhawan, 20 Ashoka Road, New Delhi
[Networks & Technologies(NT) Cell]

No: 12-30/NT/2015/OTT (Pt)
Dated - 3rd March 2016


Sub: Recommendations on Net Neutrality-regarding.

TRAI had initiated public consultation on OTT services vide its consultation paper "Regulatory Framework for Over-The-Top (OTT) Service" issued on 27.03.2015, which included specific reference to Net Neutrality in chapter 5 of the consultation paper and related questions thereon. The consultation paper comprehensively dealt with various related issues like international experience with net neutrality and regulation of OTTs (communications and non-communications). The consultation process was open for stakeholder's comments & counter comments till 24.04.2015 & 08.05.2015 respectively.

2. Subsequently, TRAI has issued another related consultation paper titled "Differential Pricing of Data Services" on 09.12.2015. This paper deals with potential economic and regulatory effect in cases, where tariff is tied to the type of content and was open for comments and counter comments by 07.01.2016 & 14.01.2016 respectively. TRAI has since released Regulation on "Prohibition of Discriminatory Tariffs for Data Services Regulations, 2016" on 8th Feb 2016.
3. In various chapters/clauses of its consultation paper "Regulatory Framework for Over-The-Top (OTT) Service" (like Clause 6.2, 6.13 etc), TRAI has expressed desirability of an overarching framework of net neutrality, so as to define the extent of regulatory intervention required.
4. DoT, on its part, had constituted a high level committee, chaired by Member(T) vide its letter No12-30/NT/2015/OTT dated 19.01.2015 to examine net neutrality and other associated issues and recommend overall policy & technical response required to deal with it. The committee has submitted its recommendations, which was placed in public domain for inputs. A copy of the same was forwarded to TRAI as well vide this office letter no 12-30/NT/2015/OTT dated 17th July 2015.

5. TRAI, in its letter No 301-7(1)/ 2014-F&EA dated 23rd Jan, 2015 (copy enclosed), had stated that it would make suitable recommendations to the Government based on the outcome of the consultation process. Also, TRAI is already engaged in the OTT & Net Neutrality related consultation process vide its consultation paper "Regulatory Framework for Over-The-Top (OTT) Service" issued on 27.03.2015 & no related recommendation has been submitted to Government.
6. Though finalizing a viewpoint on net neutrality is a policy matter, yet the Government proposes that recommendations of DoT Committee on net neutrality, other inputs available/sought earlier & recommendations of TRAI be taken into account by DoT in arriving at final viewpoint on various aspects and nuances of net neutrality.
7. Accordingly, TRAI is requested to provide its recommendations under Section 11(1)(a) of TRAI Act, 1997, as amended by TRAI (Amendment) Act 2000, on net neutrality including traffic management and economic, security & privacy aspects of OTT services apart from other relevant standpoints as covered in the above-referred consultation paper dated 27.03.2015.

Annex: As above


(Rajiv Sinha) 03/04/15
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List of Acronyms

Sl. No.	Acronyms	Full Text
1.	DoT	Department of Telecommunications
2.	OTT	Over The Top
3.	TSP	Telecom Service Provider
4.	TRAI	Telecom Regulatory Authority of India
5.	OHD	Open House Discussion
6.	VOIP	Voice over Internet Protocol
7.	PSTN	Public Switched Telephone Network
8.	EU	European Union
9.	ITU-T	International Telecommunication Union- Telecommunication Standardization Sector
10.	SMS	Short Message Service