

IAMAI Submission on TRAI Consultation Paper 'Regulating Converged Digital Technologies and Services – Enabling Convergence of Carriage of Broadcasting and Telecommunication services'

The Internet and Mobile Association of India ("IAMAI") is a not-for-profit industry body and we play a key role in ensuring the growth and sustainability of the digital industry. We firmly believe that the digital industry is going to be a major driving force in the economic and social development of the country which includes job creation, innovation, contribution to the GDP, inclusion and empowerment of our citizens, etc.

At the outset, we would like to thank the Telecom Regulatory Authority of India (TRAI) for giving stakeholders the opportunity to comment on its "*Consultation Paper on Regulating Converged Digital Technologies and Services - Enabling Convergence of Carriage of Broadcasting and Telecommunication services*". We have outlined below our preliminary observations, issues with some para and conclusions in the Consultation Paper (CP), and a broad set of principle-based recommendations to contextualise our responses to the questions and issues highlighted in the CP. However, we note that our members, Airtel, Reliance Jio Infocomm Ltd and Network18 have divergent views from those expressed in this document.

IAMAI Submission

1. Timeline for the consultation

We agree with the TRAI's view that convergence has been "defined and interpreted in many ways". For instance, a content creator or a Digital Service Provider (DSP) would have a different perspective on convergence, compared to a Telecom Service Provider (TSP) or a broadcast carriage service provider like Direct to Home (DTH), Headend-In-The-Sky (HITS) or Cable Operators.

To explain convergence, the CP states that "various technological developments in digital markets have resulted in the convergence of devices, services, and networks". The CP also delves into a broad range of issues from convergence in telecom and broadcasting services, convergence between telecom and the IT sector due to convergence in IP based networks, and convergence between telecom and space sector. The CP then highlights potential challenges that could be caused by such convergence at the statutory, licensing, regulatory (including content regulation), administrative and institutional levels. Consequently, it seeks stakeholder responses on how India should respond to these emerging trends.

These are important and relevant questions. Responses to these questions would require stakeholders to evaluate the current carriage regulatory frameworks for broadcasting and telecom services, adequacy of the current administrative set up, current and best international practices, and feasibility of replicating such practices in the Indian context. Such exercises require time, and we humbly suggest that the TRAI should have given at least six months for stakeholders to respond.



2. The offerings of OTT services are in addition to, and not in derogation of, traditional telecommunications services

The paper operates on the assumption that all digital services are largely similar, and indistinct from telecom services (and therefore should be regulated similarly with telecom services). In actuality, the vast majority of online services, sometimes referred to as 'OTTs', are in addition to and not in derogation or substitution of telecommunications services. While the adoption of online communications by users is already considerable (even in a market like India), that does not imply product market substitution, and certainly not complete substitution for traditional telephony, or for mobile networks.

Over-the-top (OTT) services refer to applications and services which run 'over the top' of the telecommunication networks, through the public Internet. While the term can describe any Internet application or service, it is most often understood and used to refer to apps that enable either online communications or video viewing, which some contend are 'similar' or 'replacements' and 'substitutes' for telecommunications / telephony services, respectively.

Users of these products also typically subscribe to traditional fixed and mobile services, and use each of them as the circumstances and call types vary, depending on the use case (e.g., at home, on the road, personal use, professional use, intended call duration, combination with text, video and file transfer, unified communications, conference calls, business solutions, etc.). Usage is therefore more complementary and accretive than substitutive.

3. Symbiotic relationship between TSPs and technology companies

As use and reach of online ('OTT') services grows, more and more consumers are purchasing more and more of TSPs' products to access the internet. Therefore, a virtuous cycle exists in the online content space, which ultimately depends on consumers who buy high-speed internet access from TSPs (as Internet Service Providers - ISPs) in order to reach content and applications. Similarly, content providers are themselves reliant on a connected population for their business to work.

This has delivered huge advantages to consumers and users who benefit from unfettered access to a rich ecosystem of online content, applications, and services, bringing socio-economic benefits and access to entertainment and information that enriches consumers' lives as well as economic opportunities. The government should continue to encourage this kind of symbiotic relationship for the benefit of all actors in the ecosystem, beginning with end-users. It must also be noted that OTT companies also contribute significantly to investment in networks infrastructure and the telecom value chain. Their services and infrastructure are a major benefit for TSPs and consumers.

4. Calls for similar regulation of TSPs and internet companies do not consider the following

The paper makes the assumption that because the offerings of the TSPs and the OTTs are interdependent and complementary, they should be similarly regulated and licensed. However, this view may ignore that the sectors are vastly different with different regulatory requirements (or lack thereof).

Indeed, compared to the telecommunications space, the OTT sector has vastly different competition and consumer protection concerns, and is already regulated by laws in these areas and others (such as broadcasting rules, intermediary guidelines, etc).



The Competition Commission of India (CCI) in its Market Study on the Telecom Sector in India examined the telecom sector and also the establishment of the OTT service providers in India. Tellingly, it stated: "On balance experts feel a separate regulatory framework is not necessary for OTTs and excessive regulation may stifle technological innovation, and therefore be counterproductive."

The International Telecommunications Union (ITU)'s Recommendation ITU-T D.262 also mentions as below:

"Consideration of the economic impact of OTTs should be based upon recognition of the fundamental differences between traditional telecommunication operators and OTTs, including inter alia, control of broadband Internet access, level of regulatory exposure, barriers to entry, competitive environment, level of substitutability between OTTs and traditional telecom services and interconnection to public networks. ..."

8.2 In the spirit of service availability and affordability, Member States should foster enabling legal and regulatory environments, and develop policies that are fair, transparent, stable, predictable and non-discriminatory; and that promote competition, foster technological and service innovation and encourage private sector investment incentives, in order to ensure the continuing growth and adoption of OTTs.

As such, we emphasise that regulation for regulation's sake would not be the best way to encourage either the telecom or the online (OTT) industry.

5. Telecommunication and Broadcasting services are distinct services, and they should remain so from a regulator's point of view

The CP states that "various technological developments in digital markets have resulted in the convergence of devices, services, and networks" and explains device convergence, service convergence and network convergence.

We have questions around the CP's explanation of "convergence".

(i) **Device convergence**: To support its description of device convergence, the CP also refers to "smart devices" and describes smart TVs in detail. However, latest available data suggests that only around 22 million homes have internet-enabled smart TVs, making up around roughly 10% of all television households in the country. Is 10% penetration sufficient to conclude device convergence for a 1.4 billion people?

(ii) Service convergence: The CP in para 1.3(ii) states that broadcasting services and telecommunication services have converged into one service.

"In the media and telecommunications business, it may mean the tendency for services to merge into one offering that combines the features of the original services. Convergence of services allows operators to offer bundles of services to the end-users. Converged services include at least two different types of services, for example, double-play, triple-play, quadruple play bundled services."

The CP uses examples of *double-play*, *triple-play*, and *quad-play* to draw this conclusion. The CP *mistakes* the bundling of telecommunication services with broadcasting services by a single service provider as convergence of services. It is important to note that bundling of different services (*like TV*, *broadband and voice*) into one offering does not mean that these services have converged. It only



enables a service provider to provide multiple services as a bundled offering and each service within the bundle remains distinct. The fact that they are offered as a bundle or provided by one service provider does not mean that these distinct services have converged. In other words, while it is now possible to engage in talking / watching / messaging through one device, this has been possible due to the inherent technological development of single pipeline being used to disseminate text / audio / video.

As rightly pointed out in para 1.17 of the CP, telecommunication has a private nature of communication and its markets are ruled by economic and technical issues, including network access. As a result, regulators' role, inter-alia, included ensuring access. On the other hand, broadcasting is communication to the public and regulatory concerns in broadcasting are mainly to do with freedom of speech and expression. It is also pertinent to point out here that OTT media service providers are in the business of creation and dissemination of copyright works and are thus governed by the Copyright Act, 1957. An owner of copyright in a work (which includes a programme, film, TV Show etc.) is entitled to use different means of dissemination and any technology so available to make available the copyright work. Further, such a copyright owner is also entitled to have complete control over the manner of exploitation of their copyright work. We respectfully submit that infrastructure service providers / carriage service providers (viz. entities that are engaged in the business of setting up the infrastructure / pipeline as the means of dissemination of information) are intermediaries. Their role is limited to providing a network / infrastructure to connect businesses at one end with consumers at the other end. By their very nature, intermediaries cannot and should not have any say in the content / services being transmitted through their pipelines. Otherwise, they will lose their intermediary status.

We respectfully submit that any attempt to bring about a converged legislation or a super-regulator that treats carriage intermediaries akin to content service providers who are engaged in dissimilar services is bound to treat un-equals equally, thereby violating Article 14. Such a converged legislation is also bound to suffer from manifest arbitrariness. Therefore, we recommend TRAI to create a clear distinction in the regulation of Telecommunication services from that of Broadcasting Services.

(iii) "Carriage convergence" (or "network convergence"): The CP gives the example of "*integrated delivery, via a single delivery channel, of voice and other services, through a single network infrastructure that handles and distributes multiple types of media*" to explain network convergence. However, the networks for broadcasting and telecommunication services remain distinct, even if the services are available in a bundled offering for consumers. The CP itself notes that technologies "*are being developed* to enable convergence of broadcast and unicast infrastructure..." (emphasis added). It cites Direct-to-Mobile, 5G Broadcast, and satellite networks for broadcast and telecom services as examples of this, *but what it describes are systems that could theoretically support convergence, rather than actual convergence taking place*.

The CP appears to be basing the need for regulatory changes entirely on emerging trends, perhaps to 'future proof' the regulation. However, trends in certain urban pockets of the country like triple play and quad-play or anticipated developments like direct to mobile broadcasting, which have not been realised on any significant scale in India, cannot form the basis of policy changes that will impact 210 million TV home (*or about 850 million TV viewers*) and 1.2 billion mobile users in India.



6. Regulation of carriage for telecommunication and broadcasting services

The CP in several places mentions the need for a *converged carriage regulator* for telecom and broadcasting services, and that such a converged regulator will "benefit" the stakeholders. But the CP fails to mention what these benefits would be.

We would like to highlight that *India already has a common regulator, TRAI, for the carriage of telecom services and broadcasting services.* TRAI was established with effect from 1997 by an Act of Parliament to regulate telecom services, including fixation and revision of tariffs for telecom services which were earlier vested in the Central Government. TRAI was then entrusted with the regulation of the broadcasting sector in 2004.

Unfortunately, the benefit of such a converged regulator remains a question, particularly for the broadcasting sector. While there have been efforts by TRAI to remedy these issues in the recent amendment to the Tariff Order and Interconnect Regulation, TRAI's carriage regulation continues to impinge on content, both in terms of freedom of speech and expression and broadcasters' ability to monetise copyrighted content.

The CP also highlights the need for *convergence of licensing frameworks* for telecom and broadcasting services and calls for *convergence between administrative* government units overseeing the policy and statutory frameworks for telecom and broadcasting services. We do not agree with such a proposition.

IAMAI Recommendation

As mentioned above, telecom services and broadcasting services are distinct services and hence the *licensing frameworks must be kept separate*. Similarly, to maintain this distinction, we also *recommend the administrative government units overseeing the licensing and statutory frameworks be kept separate as below*.

Carriage services	Legislation / policy/ guidelines	Authorization Type	Administrative government unit
Telecommunication services ¹	Unified license under Telegraph Act	License	DoT
Broadcasting services	Guidelines for Uplinking and downlinking of TV channels	Permission	MIB
	Cable Television Networks (Regulation) Act & Rules	Registration	

¹ Access Services (Telecom Operators), Internet Service Provider (ISP), Very Small Aperture Terminal (VSAT) Global Mobile Personal Communication by Satellite (GMPCS) Service, INSAT Mobile Satellite System Reporting Service (INSAT MSS Reporting Service), National Long Distance (NLD) Service and International Long Distance (ILD) Service



FM Radio	FM Radio License	
HITS Guidelines	Permission	
DTH/IPTV Guidelines	DTH/IPTV License	

We note that the MIB in its letter to TRAI dated 4th October 2022 mentioned that it is in the process of amending the Cable Television Networks (Regulation) Act "to bring all broadcasting carriage platforms under its ambit in order to holistically address all institutional regulatory and legal aspects of broadcasting services under a unified Act."

Such a unified act must clearly segregate the principles for the regulation of content from that of carriage and must avoid using licensing/registration/permission conditions to impose content regulations, particularly those that restrict freedom of speech and expression and a copyright holder's ability to monetise content as per copyright principles.

7. The regulation of content should be kept separate from the regulation of carriage and should be outside the scope of the CP

The Department of Telecommunication's reference to TRAI dated August 12, 2021, is limited to "convergence of carriage of broadcasting and telecommunication services". However, the CP analyses the regulatory framework for content for OTT (news and non-news), Radio, TV (news and non-news), Films and Print and concludes that "the existing regulatory oversight framework for content regulation, which is patchy and inadequate at its best, may need a complete overhaul in a converged era in line with many other nations, where a converged regulator regulates carriage and content".

We would like to respectfully disagree with such conclusive statements about the regulatory framework for content across different platforms. Such remarks completely disregard institutional learnings from the Ministry of Information and Broadcasting (MIB), the role of self-regulatory bodies like the News Broadcasting Standards Authority (NBSA) and the Broadcasting Content Complaints Council (BCCC) in television and the Digital Publisher Content Grievances Council (DPCGC) and the Digital Media Content Regulatory Council (DMCRC) for OTT, as well as the 2021 amendment to the IT Rules to address the issues and challenges posed by digital platforms.

We would also like to take this opportunity to highlight that content regulation is very different from carriage regulation. Content regulation deals with freedom of speech and expression as guaranteed by Article 19(1)(a) of the Indian Constitution, subject to restrictions under Article 19(2). As illustrated in pages 28-29 of the CP, the regulatory framework for content has evolved from judicial interpretation of Article 19(1)(a) of the Indian Constitution for different media platforms.

IAMAI Recommendation

We recommend that the regulatory framework for content (within the confines of Article 19(2) of the Constitution of India) should be distinct and separate from the regulatory framework for carriage. For clarity, the regulatory framework for carriage should not result in impinging of rights under Articles 19(1)(a) and 19(1)(g) of the Constitution of India. In fact, TRAI in its 2006 Recommendations on



"Issues Relating to Convergence and Competition in Broadcasting and Telecommunications" acknowledges this distinction and recommended that the "*Regulation of carriage and content should be separated, as the skill sets required for the two are significantly different. Regulation of carriage is more or less concerned with technical and economic aspects/ repercussions of policies. Content regulation has to take into account the impact of content on sensibilities, morals and value system of the society. Artistic and creative persons from the fields of fine arts, drama, films etc. may be more suited for content regulation than technocrats or economists." The MIB adopts a similar view in its response to the DoT and TRAI on the issue; its letter dated 4th October 2022 echoes the TRAI's 2006 recommendations.² The Ministry also says that existing mechanisms for content regulation are effective, and there is no need to disturb established practices or re-engineer business processes.*

The premise for such distinction and separation of the regulatory frameworks for content and carriage still holds in today's digitalised carriage eco-system.

Moreover, the principles for regulating content across different platforms are different for theatres, TV, and OTT because of fundamental differences in how content is consumed via these platforms. For example, content shown in theatres is being publicly exhibited, viewed by a wide range of viewers at the same time, and hence is governed by the Cinematograph Act and Rules. Television, by comparison, is relatively private and characterised co-viewing with schedule programs (*push content*) and hence governed by the Cable Television Networks Regulation Act and Rules. OTT on the other hand, is a characterised with private viewing in India with consumers making informed choice (*pull content*) about every content that they watch, and hence content on OTT is governed by Information Technology (Intermediary Guidelines and Digital Media Ethics Code) Rules, 2021.

The viewer's ability to exercise choice in how they view the content, or indeed whether they view it at all, factors into the potential risks of providing content via a particular platform. Therefore, a converged or "one size fits all" framework for content regulation cannot be applied for all platforms.

8. Internet-based Services or Digital Services are different from Telecommunication Services and are regulated by specialised legislation like the Information Technology Act, 2000

Telecommunication services are services provided by Telecommunication Service Providers (TSPs) and include fixed and mobile telephone services (including internet connectivity), carrier services, call management services, private network services and data transmission services.

TSPs provide these services through a license granted by the Government which confers to them an exclusive right to acquire and exploit scarce natural resources like telecommunication spectrum, the right to obtain telecom numbering resources, and the right of way to set up infrastructure. TSPs also have access to a Public Switched Telephone Network (PSTN) (*or switched or non-switched networks in the case of mobile services*) for the transmission of voice, data and video to and from national and international destinations, and hence their service is primarily concerned with the transmission of voice and data. They are also often provided with crucial infrastructural assets, essential facilities and territories necessary for their operations.

These exclusive privileges give TSPs economic advantages like high entry barriers, reduced competition and exclusivity in business operations, and are the premise for regulations in the form of

² <u>https://www.trai.gov.in/sites/default/files/CP_30012023_0.pdf#page=146</u>



net neutrality, revenue share, contributions to universal service obligations, investment mandates, tariff regulation and must carry obligations.

Internet-based services or digital services, as the name suggests, are services that are provided over the internet. The EU defines these as services sent and received by electronic equipment for data processing.³

Digital services include buying and selling, OTT communication and messaging services, OTT video streaming services, digital news, search services, navigation services, ride hailing services, dating services, delivery and logistics services delivered over the internet. On the supply side, new data networks, digital computing tools, and internet platforms enable service providers to digitalise their services and transform their modes of delivery. On the demand side, internet platforms and digital technology reduce transaction costs and allow access to a variety of goods and services. They also provide convenience and the ability to customise services. Such "digital markets" are built on top of telecommunication services and characterised by hyper competition and low entry barriers.

Therefore, it is important to note that these digital services are different from the telecom services mentioned above.

Of late, there have been several attempts to equate voice and messaging services of TSPs with services of DSPs. They claim that voice and messaging services provided by TSPs are substitutable with *internet-based communication services* and *OTT communication services* of DSPs and that these services be brought under the same rules that regulate TSPs' voice and messaging services.

It is crucial to understand that *internet-based communication services* and *OTT communication services* are not a substitute for TSPs' voice and messaging services. Terming the services as substitutable ignores the differences in the features offered by the two services.

- i. TSPs provide internet connectivity and facilitate the provision of services through the internet. As all internet access is controlled by TSPs, which DSPs need to build and provide their services, they are a dependent industry and not equal.
- ii. The Australian Competition and Consumer Commission (ACCC) found that a technical shortfall of OTT communication is that it only facilitates communication within a particular app's ecosystem, whereas a TSP enables communication between different operators. This limitation of OTT communication limits the substitutability of traditional communications and OTT communications.⁴ The ACCC report also concluded that there is "no basis for requiring equivalent regulatory treatment".
- iii. TSPs are gatekeepers of internet access, and hence gatekeepers to all digital services. To be considered as equal, the first requirement is for the services to be independent or mutually dependent. Neither is true and hence TSPs' voice and messaging services are not the same service as that of DSPs' *internet-based communication services* or *OTT communication services*.

³ See Article 1(1)(b) of Directive (EU) 2015/1535, available at <u>https://eur-lex.europa.eu/legal-</u> <u>content/EN/TXT/PDF/?uri=CELEX:32015L1535</u>

⁴ Australian Competition and Consumer Commission, Communications Sector Market Study (April 2018), available at: <u>https://apo.org.au/sites/default/files/resource-files/2018-04/apo-nid139446_1.pdf</u>



IAMAI Recommendation

Given the distinction highlighted above, digital services are already adequately regulated by specialised legislation like the Information Technology Act, 2000 (*which, according to Minister of State for MeitY, is currently being revamped to a Digital India Act*) and a separate regulatory framework distinct from the regulatory principles that govern and regulate telecommunication services. The CP's claim in paragraph 1.33 that "The objective of promoting innovation, competition and growth of India's Digital Economy may not be fully achieved by just amending the India's Information Technology Act, 2000" overlooks the clear intent of the government to refine and further develop specialized legislation for digital services.

India has a unique institutional setup that favours specialisation to better manage administrative affairs. The intent to maintain distinctions between different areas of expertise is apparent in the fact that there are separate ministries for Communication, Information & Broadcasting, and Electronics & Information Technology and in the different responsibilities they have been allocated/entrusted with. Accordingly, separate but coordinated licensing and regulatory frameworks are most appropriate for the Indian context. The CP has not shown that there is any need for additional regulations, or that there is something to be "fixed" in the current regulatory frameworks: it does not highlight competitive outcomes that are not being achieved by the market, it does not indicate that there are unified technical standards that need to be enforced, nor does it suggest social benefits which could be realised.

9. Any suggestion requiring OTT service providers to pay "carriage fee" to infrastructure providers will lead to gatekeeping / access restrictions hampering innovation, also increasing burden of new entrants

The Consultation Paper hints at the possibility of OTT service providers being required to pay a fee to carriage / infrastructure service providers (TSPs in this case) for use of their infrastructure for carriage / making available of OTT services. This amounts to strengthening TSPs as gatekeepers and imposing a penalty on any service provider who wishes to unlock the potential benefit of convergence of infrastructure. The cost of setting up infrastructure is fixed, and TSPs recover such cost from the various consumers of their services. TSPs have all kinds of subscription plans available to any and all consumers of their services who wish to access and use telecom or internet or any other carriage services. However, TSPs cannot be allowed to double-dip by demanding additional gatekeeping fee from any service provider who uses the TSPs' infrastructure.

Considering the sweeping inclusion of OTT services within the scope of the consultation, we are concerned that any such carriage fee requirements will be imposed (due to sheer lack of clarity and similar treatment of dissimilar services) on all digital services. This would effectively mean that every social media influencer, vlogger, or any content creator provider on the Internet (who are also engaging in digital services either directly or through third party service providers) will also be required to pay such carriage fee. This will be akin to mandating that if person A engages an artist for example Ms. Asha Bhonsle to sing a song over a telephone call and pays her Rs. 1 lakh for 1 minute, the telephone company should be entitled to a carriage fee for carrying Asha Bhonsle's voice to person A. This will not only amount to gatekeeping of the means of dissemination but will effectively kill the growth of the creative economy of the country.

In this regard, we respectfully submit that the right to propagate one's ideas/views is inherent in the conception of freedom of speech and expression and concomitantly, every citizen has a right to publish,



disseminate and circulate such ideas and views. The right guaranteed under Article 19(1)(a) of the Constitution of India extends not only to the matter or form of speech but also to the medium of speech. It is settled law that the freedom of speech includes within its scope, the freedom to choose the means and instruments to exercise the right and to achieve the maximum possible circulation, without undermining the independence of the media by narrowing the scope of dissemination of information and driving it to seek government aid. Sakal (Newspapers v. Union of India, (1962) 3 SCR 842; Indian Express Newspapers (Bombay) P. Ltd. v. Union of India, AIR 1986 SC 515). Any law which lays excessive and prohibitive burdens on the medium of dissemination which would restrict the circulation of speech and expression would not be saved by Article 19(2) of the Constitution.

We respectfully submit that any imposition of carriage fee to be paid by OTT services to TSPs will not only be a direct encroachment on the freedom of speech but will also impose excessive and prohibitive burdens on propagation of speech by controlling the entry-way to the mode of dissemination of the speech.

10. TRAI should acknowledge that cloud services are different from telecom services

The Consultation Paper assumes similarities between telecom services providers and cloud service providers (CSPs). This assumption is misplaced as there are fundamental differences between TSPs and CSPs. TSPs provide the infrastructure for connectivity and the connectivity itself. On the other hand, cloud services rely on the networks of TSPs to provide services to its users and therefore, do not control access to the internet or the network layer.

TSPs provide non-discriminatory access to public network of computers, whereas cloud services do not perform such public function or access to public resources. Cloud services are information services for businesses and individuals that build on a cloud platform, and include servers, storage, software, platforms etc. This is different from telecom services, which include the provision of connectivity using the actual physical telecom network. Therefore, it is incorrect that there is a 'blurring of boundaries' between the 'telecom space' and the 'cloud space' (paragraph 1.27).

There are inherent differences between cloud services and telecom services. Unlike a telecommunications service, cloud computing does not involve the supply of connectivity to any person. The services offered by CSPs are not substitutable with telecommunication services offered by the licensed TSPs. Whereas a TSP owns and operates the infrastructure for connectivity and supplies its customers with some form of connectivity, a CSP does not. Instead, cloud computing resources are accessed via a telecommunications service just like other digital services. The users of cloud computing services must procure connectivity for themselves, directly from a TSP (and may come to rely on connectivity services supplied by multiple TSPs via the Internet). Indeed, telecommunications and cloud computing services exist in completely different network layers (telecommunications at the network layer and cloud computing at the application layer). The National Digital Communications Policy, 2018 (NDCP) recognised the significance of this distinction and explicitly rejected the idea that entities operating at these different layers should be treated the same or regulated as equivalents. This clear distinction between telecommunications services and cloud computing is recognised by other telecommunications regulators around the world. Imposition of telecommunication regulation on the cloud services sector would be antithetical to the NDCP's goal of establishing India as a global hub for cloud computing and other allied services.



11. Not regulating CSPs under telecom laws is aligned with international practices

The country case studies cited in the TRAI CP recognise that telecommunications regulations are unsuitable for cloud computing. While the CP highlights countries like the United States, United Kingdom (UK), Australia, European Union (EU), Singapore etc as models of convergence, in most of these countries, cloud services are regulated differently from telecom services, under various regulatory structures. Cloud services are governed under legislations, regulations, guidelines on data protection, cybersecurity, and consumer protection. In certain jurisdictions like the EU, UK and France, cloud services are recognised as 'digital services' that enable access to a scalable and elastic pool of shareable computing resources. The different regulatory treatment of cloud (compared to telecom) within these jurisdictions arises from the architectural and structural differences between CSPs and TSPs. In other jurisdictions, like the EU, Singapore, and Australia, CSPs are subject to best practices guidelines and codes of conduct issued by authorities. Cloud services are also subject to sectoral regulations, in addition to cloud-specific certification and standards schemes.

To the extent that any 'network cloudification' occurs (paragraph 3.70), the particular network technical functions that may in time be run in the cloud (for example, firewalls, load balancers, routers, network address translation, IP address management) constitute neither a telecommunications service nor a TSP under law. For example, networking hardware vendors that have traditionally supplied and sometimes managed the dedicated proprietary hardware for telecommunications network are not regulated as TSPs or deemed to be requiring a licence. Therefore, the virtualization of those network functions should not create a new type of TSP. The actual network operator/TSP may have updated the technology or its mix of vendors, who may have increased scope and granularity of its control over the capabilities and performance of its network. Therefore, there is no need for "demarcating and assigning responsibilities between cloud and telecommunication service providers" (paragraph 3.70) for the same reason that the TRAI (like telecoms regulators elsewhere) has never done so in respect of TSPs and their networking hardware vendors.

12. CSPs are already regulated under existing laws and should not be treated at par with telecom service providers

It is incorrect to suggest that cloud computing operates in an 'unregulated domain' (paragraph 1.27) or needs to be brought within the TRAI's regulatory jurisdiction. CSPs are already subject to comprehensive regulation under both existing general and sector-specific laws and regulation, including in the areas of security (Information Technology Act, 2000), consumer protection (Indian Contract Act, 1872; Consumer Protection Act, 2019) and proposed privacy legislation (draft Digital Personal Data Protection Bill, 2022). The Ministry of Electronics and Information Technology (MeitY) also provides guidelines and requirements for cloud services for empanelment. Regulators like the Reserve Bank of India and the Insurance and Regulatory Development Authority of India, also issue IT outsourcing guidelines to ensure that sector specific requirements and expectations continue to be met by regulated entities when they outsource IT, including when they adopt cloud. Existing regulations allow access by law enforcement agencies in a streamlined manner, that may arise from a national security perspective. Further, the network infrastructure through which cloud services are accessed by customers is already regulated by DoT for the TSPs.

The provision of cloud services also does not involve the allocation of any scarce resources such as spectrum or numbering resources, and therefore the same set of regulations, if made applicable to CSPs,



will result in adversely affecting the provision of such services in India. Moreover, it will negatively impact businesses that depend on innovation and constantly evolving technologies and create impediments in achieving the Government's objectives in relation to Digital India. Cloud computing is enabling internet-based innovation for all types of businesses and industries across the economy.

India's data centre industry is estimated at USD 5.6 billion dollars in 2022, and set to grow as capacity is increasing, with over 45 data centres coming up. The industry received considerable tailwinds from the pandemic, and India is poised to become a data hub for the world. Any additional regulatory burden will have the unfortunate consequence of stymying innovation and investment into the sector.

Additionally, competition among service providers in creating value for consumers, the industry's existing best practices, and the existing regulatory frameworks ensure that consumers are adequately protected. In fact, increased regulation would only lead to increased costs of access for Indian consumers, and create a chilling effect on investment in India. Therefore, no further regulation of cloud services or cloud services providers is necessary or desirable at this time.

IAMAI Recommendation

Imposing telecommunications regulation or licensing requirements on cloud technology or wider range of digital services may jeopardise the potential benefits of innovation and new technologies, harm service availability and its adoption, in addition to the compliance and cost burdens on service providers. Hence, we recommend that the information technology enabled services (ITeS) sector (including cloud computing) is excluded from potential regulations under 'convergence of carriage' (as proposed in paragraph 3.72).

13. Need for review on convergence and competition issues across carriage services

We would like to reiterate that converging ownership in the carriage of Broadcasting and Telecommunication services has been emerging and there is no data to suggest that this necessarily leads to increased level of competition or lowers entrance barriers. On the contrary, there is evidence to suggest that "convergence in carriage" could lead to market concentration, a fact which is highlighted in para 1.19 of the CP "*The convergence introduced new forms of competition and disrupted long-term governance relations. New services and new entrants are emerging, whilst established players are vertically integrating or even exiting the market.*" However, it must be understood that the nature of investments differs from stakeholder to stakeholder. If the regulatory framework as envisaged in the CP without proper assessment is brought into force, it will give preference or advantage to one stakeholder at the cost of the others and will create an imbalance and disturb the level playing field between the stakeholders.

TRAI via its earlier CP on "*Issues relating to Convergence and Competition in Broadcasting and Telecommunications*" had outlined the need for analysis of the distinct regulations and laws in relation to the distribution/carriage services. for e.g., the fact that the telecommunication services are not subject to regulations such as the broadcast and cable services Interconnect Regulations, Tariff Orders, etc. This is contrary to the prevalence of a level playing field. Hence, the need of the hour is to ensure strict adherence to fair and reasonable restrictions and guidelines within the media value chain. It may also be not out of context here to mention that there are only a handful of players in the telecom sector, and the public sector presence has been reduced to a great extent – and hence, this aspect is all the more cause for concern. Therefore, it is important to bring in transparency and non-discrimination between



entities in a vertically integrated segment, the absence of which will give rise to malpractices and discrimination by dominant entities vis-à-vis other constituents within the segment.

IAMAI Recommendation

It is recommended that the monitoring and review of telecommunication, internet and broadcasting services and sectors by the regulator should be appraised against the market conditions, and conduct that is found to be anti-competitive and susceptible to create monopolies or actions that are not permitted under the competition principles, should be appropriately addressed by the relevant authority.

14. Guiding principles to regulate telecommunications services and broadcasting services

We would like to take this opportunity to reiterate that we do not agree with the CP's observation that there is convergence in services between telecommunication services and broadcasting services. Additionally, the CP does not provide sufficient data to conclude that carriage of broadcasting services and telecommunication services have converged. Therefore, we recommend that the regulation of broadcasting services and telecommunication services remain separate and the extant regulatory framework is sufficient.

At any given point of time, we recommend the following principles to guide the regulation of telecommunications services and broadcasting services:

(i) Distinct and separate regulatory frameworks for carriage and content: As elaborated several times above, the principles for regulating carriage and content are different, as are the skill sets required to implement and oversee such regulation. Similarly, within content regulation, there are different principles for regulating content on different platforms. The distinction in regulation of carriage and content must be clearly established in any rules for the telecommunications and broadcasting sectors.

(ii) No intervention without evidence of market failure or harm: In paragraph 1.14 of the Consultation Paper, TRAI observes that "In India too, in 2004, TRAI was entrusted regulation of broadcasting sector, in addition to telecom sector. However, the actual benefits of convergence could not be realized, as most functions were with ministries that did not converge. Areas that may be of concern for a regulator may be market access, pricing, investment, and merger approval, etc. motivated by a broad range of market failure concerns." From the above, it is apparent that the present exercise is merely based on 'market failure concerns' and is not backed by any data evidencing any actual market failure.

The CP cites the growth of the telecommunications and broadcasting sectors, as well promotion of innovation, competition, and growth of India's digital economy as objectives. The only instance of a market harm cited by the CP is from a 2012 paper, which predates the telecom boom⁵.

Convergence, in the form the CP suggests, will require overhauling the legal, regulatory, licensing, administrative and institutional setup for both telecommunication and broadcasting services. This will disrupt the current equilibrium and could severely impact the growth of the telecommunication and broadcasting sectors. Multiple regulatory changes have reduced the thriving pay TV ecosystem, both in terms of the number of pay TV subscribers and the number of TV channels available per household and hampered its competitiveness with emerging platforms.

⁵ https://www.sjpub.org/sjp/sjp-221.pdf



(iii) Activity-based regulation, or "same service same rules": It is crucial to understand the service as a whole, including its function and technological underpinnings, before determining if it is the "same" as another service. As stated above, the availability of different services through the same platform does not mean that there has been convergence of services. For example, telecommunication services are primarily private in function, and broadcasting services are primarily public in function, and must be treated as distinct for regulatory purposes. Similarly, all internet-based services run on top and are dependent on established telecom networks, and therefore cannot be considered substitutes or the "same service" as telecommunication services.

Responses to Specific Questions

Question 1: Whether the present laws are adequate to deal with convergence of carriage of broadcasting services and telecommunication services? If yes, please explain how?

OR

Whether the existing laws need to be amended to bring in synergies amongst different acts to deal with convergence of carriage of broadcasting services and telecommunication services? If yes, please explain with reasons and what amendments are required?

OR

Whether there is a need for having a comprehensive/converged legal framework (separate Comprehensive Code) to deal with convergence of carriage of broadcasting services and telecommunication services? If yes, provide details of the suggested comprehensive code.

IAMAI Response

We do not think there is a need for having a comprehensive/converged legal framework (separate Comprehensive Code) to deal with convergence of carriage of broadcasting services and telecommunication services since the same will go against the interest of consumers. Moreover, the present legal and regulatory frameworks that exist adequately cover the field to ensure that all stakeholders are suitably regulated, and therefore, that all consumers of telecom and digital services are suitably protected.

Further, as mentioned above, telecom services and broadcasting services are distinct services and hence the laws to deal with the carriage of broadcasting services must be kept separate from laws that govern the carriage of telecommunication services.

As mentioned in the CP, at statutory level, there are already the Indian Telegraph Act, 1885, the Indian Wireless Telegraphy Act (IWT Act), Information Technology Act (IT Act 2000), the Cable Television Networks (Regulation) Act, 1995 (CTNR Act), the Prasar Bharati (Broadcasting Corporation of India) Act, 1990, and on the regulation side, Telecom Regulatory Authority of India Act, 1997 (as amended) (TRAI Act) that govern converged ICT services. There are other rules that govern content. The CP acknowledges that TRAI is already a unified regulator for regulating carriage of both telecom and broadcasting services (though its powers may not be structured in the same way as the regulators in other countries).

The broadcasting and telecommunication sectors have the same regulator, i.e., TRAI, and their disputes are settled by the same body i.e., the Telecom Disputes Settlement and Appellate Tribunal (TDSAT). The TRAI and TDSAT are created by the TRAI Act. It is also important to note that SACFA clearance, wireless operating license, allotment of spectrum to both telecom and broadcasting operators are given



by the same government body, namely, the Wireless Planning & Coordination wing (WPC) of the Department of Telecommunications (DoT). Further, there is already a convergence of some statutes and institutional frameworks relating to carriage of broadcasting and telecom services, like the same regulatory, adjudicator and spectrum administrator. The IT Act and the Information Technology (Intermediary Guidelines and Digital Media Ethics Code) Rules, 2021 ("Intermediary Guidelines 2021") are applicable to the carriage of broadcasting and telecommunication services. Even the Ministry of Information & Broadcasting (MIB) in its reply to the DoT's reference, cited TRAI's role as the common regulator for carriage of telecom and broadcasting services. TRAI was giving recommendations suo moto or on the MIB's reference (on aspects such as carriage platforms, foreign investment provisions, license fees, digital terrestrial transmission, etc). MIB flagged that convergence of technology had already happened to a great extent in the last decade, and TRAI along with MIB have successfully handled all the legal, policy, and regulatory requirements arising out of such changes. Further, the MIB mentioned that broadcasting is an important sector, which, owing to its sensitivity and impact, is a strategic sector that needs to be regulated. As such, multiple agencies, including the Ministry of Home Affairs, and the Department for the Promotion of Industry and Internal Trade, are involved in regulation. Shifting of licensing functions to another department, "will not serve any good but will only disturb the established practices". The MIB also mentioned that the regulatory convergence happening in the broadcasting sector was being achieved by creating a single platform in the form of 'Broadcast Seva Portal' on which all the stakeholders / ministries / departments are integrated as a single window for all licensing / permissions / reporting requirements etc.

Moreover, it must be noted that a converged regulator may also lead to jurisdictional conflicts which may be cause for uncertainty for businesses and also result in potential legal challenges.

Question 2: Whether the present regime of separate licenses and distinct administrative establishments under different ministries for processing and taking decisions on licensing issues, are able to adequately handle convergence of carriage of broadcasting services and telecommunication services?

If yes, please explain how?

If no, what should be the suggested alternative licensing and administrative framework / architecture / establishment that facilitates the orderly growth of telecom and broadcasting sectors while handling challenges being posed by convergence? Please provide details.

IAMAI Response

The CP highlights the need for the convergence of licensing frameworks for telecom and broadcasting services, and calls for the convergence between administrative government units overseeing the policy and statutory frameworks for telecom and broadcasting services. We do not agree with such a proposition.

Each administrative establishment, under each Ministry, has a unique mandate and purpose. As mentioned above, there are several laws governing specific parts of the ecosystem, which then feed into the different regulators (including the DoT, TRAI, and MIB). For content, the Cinematograph Act of 1952 and the Press and Registration of Books Act 1967, as well as the IT Act, 2000 and the rules framed thereunder, among others, cover the field. DoT deals with issues relating to communications which include voice, video, and data communication, while MIB deals with information and broadcasting technologies; MeitY considers issues related to electronics and information technology. Together, the



form a comprehensive regulatory ecosystem for the carriage of telecom and broadcasting services in India. Creating a new regulatory dispensation would create a situation of confusion for operators and the internet ecosystem in India, an uncertain operating environment, and reduce ease of doing business in India.

The requirement of a license, approval or authorisation for provision of internet-based communication services runs contrary to TRAI's own observations in its recommendations on "Regulatory Framework for Over-The-Top (OTT) Communication Services". TRAI observed that a comprehensive regulatory framework for OTT services is not recommended beyond the existing laws and regulators. It was of the opinion that such regulation could be looked into afresh when more clarity emerges in international jurisdictions, particularly the study undertaken by the International Telecommunication Union (ITU). Between 2020 and 2023, there has been no changes in this situation, international practices; and no change in ITU's approach. In fact, ITU has not specified any regulatory mechanism for OTT-based services, and has only encouraged voluntary commercial agreements between TSPs and OTT services providers. Additionally, TRAI also recommended that no regulatory interventions are required in respect of issues related with privacy and security of OTT services.

We emphasise that bringing internet communication services within the regulatory ambit of DoT or another regulatory would not only subject such services to onerous license terms and conditions, but would also include a levy of entry fees, license fees and registration fees. This will have a chilling effect on innovations and investments in the internet ecosystem.

As such, the permission-based regime should only extend to those services which traditionally qualify as 'material resources' and are under the ownership of the government – such as spectrum assignment. In addition, the government's exclusive privilege to license certain resources must also differentiate between app-based services and network services. No further changes in the regulatory ecosystem are necessary at this time.

Licensing is usually required were resources are scarce and operators obtain something of value in turn for a license, such as spectrum (for mobile, television, or radio channels). When it comes to online services, there is a virtually infinite number of services that can be offered which do not quire the allocation of such finite resources. As such, we do not believe that a licensing regime is appropriate for online applications and services. For services referred to as 'Video OTT platforms', such internet applications and services have been essential for economic growth and other societal benefits, including choice, innovation and new uses for consumers and businesses. Apart from the fact that it would be impractical and beyond the capacity of any one regulator to license all OTT services, it is important to note that these services which are different from traditional, legacy broadcasting also elicit different user needs and different expectations. For example, for online video services with user generated content, consumers can choose proactively and precisely what they want, from multiple choices and sources, and to protect themselves through tools such as parental controls; this is a marked departure from traditional linear broadcast which gives limited choices to viewers and controls the content shown to consumers.

It may be noted that even MIB in its communication dated 04.10.2022 to TRAI (at page 142 of the Consultation Paper) has, in the context of broadcasting services, stated that – "... multiple agencies are involved for the purposes of company clearances like MHA for security clearance, DoT for wireless and spectrum clearance, DoS for satellite allocation to various licensees, MEA, DPIIT for FDI and



foreign executives working in broadcasting entities, MCA for company matters, Meity for digital news and online curated content etc. and the MIB has established systems and processes to effectively coordinate with all these agencies".

As mentioned, telecom services and broadcasting services are distinct services and hence the licensing frameworks must be kept separate. Similarly, to maintain this distinction, we also recommend the administrative government units overseeing the licensing and statutory frameworks be kept separate.

Question 3: How are various institutional establishment dealing with -

- (a) Standardization, testing and certification.
- (b) Training and Skilling.
- (c) Research & Development; and
- (d) Promotion of industries.

under different ministries can be synergised effectively to serve in the converged era. Please provide institution wise details along with justification.

IAMAI Response

(a) **Standardization, testing and certification:** As mentioned above, every institutional establishment within the larger ICT ecosystem has a specific and unique role. Together, they form a cohesive and successful regulatory mechanism. It would be useful for different regulators to collaborate in the form of project teams, working groups, or task forces on areas of common interest, so as to bring together their respective expertise and perspectives to solve particular situations, while not having to merge the entities themselves. Examples of this approach include the UK's Digital Regulation Cooperation Forum, which brings together the data protection authority, the telecom regulator and others, and engages on an ongoing basis with stakeholders across society.

We understand that one of TRAI's concerns in respect of any given converged technology is the multiple standardisation requirements issued by overlapping agencies that such technology will be subject to. We note that standardization, testing and certification for telecom and related IT equipment is currently set by agencies across various departments, such as the Bureau of Indian Standards and the Telecommunications Engineering Centre. Accordingly, we suggest that enabling agencies to utilise and develop core competencies in the process of standardization, testing and certification remain the primary focus. In this manner, overlaps between the administrative agencies may be limited and their functions can be harmonised. Lastly, for development of new standards, the relevant agency may, in consultation with industry stakeholders, consider adopting existing industry best practices, while having factored in:

- technical considerations of the converged technology in question
- user interests, and
- effective methods to deliver the service relating to such technology.

(b) **Training and Skilling:** We understand that one of TRAI's concerns is to create synergies between the different training and skilling institutions operating under the DoT and MIB respectively. In this



regard, the Union Ministry of Skill-Development and Entrepreneurship has published two reports⁶, which, among others, highlight the need to upskill the workforce to align with the changing technical requirements in the industry. We believe that this may be pursued through public-private partnership models in training for infrastructure sharing and using modern technology for such training methods and allied curriculum.

(c) **Research and Development:** We recommend the setting up of public-private partnership models by coordinating Ministries/departments towards creating synergies in research and development activities. This will enable funding for research institutions and give them access to readily available resources to undertake research, testing, certification and marketing of their converged technologies. This would also assist in the growth of digital services in India, and move us a step closer towards becoming a major digital economy.

(d) **Promotion of industries:** We understand that one of TRAI's aims is to create synergies between the different schemes and initiatives already undertaken for the promotion of industries, such as the Software Technology Parks of India towards the promotion of the start-up ecosystem, and the Telecom Equipment and Service Export Promotion Council towards the promotion and export of telecom equipment and services. While these are commendable efforts, we recommend creating cohort regulatory sandbox(es) that are opt-in based, created by the MIB, DoT and other Ministries together, and with the aim of supporting innovation in emerging technologies (such as, for artificial intelligence, virtual reality/augmented reality). Such an initiative would be in line with the regulatory sandbox cohorts launched by sectoral regulators such as the Reserve Bank of India for, among others, the financial technology sector. Further, any such regulatory sandbox would:

- aid regulators in obtaining empirical information on risks and advantages of emerging technologies and their impact. This would further regulators to develop an informed view on the statutory reforms that may be needed to encourage innovation and how to balance the same against any consequent risks.
- aid broadcasting and telecommunication start-ups in incorporating new technologies in their expansion, and
- bolster the pace of innovation in India and adoption of technology.

Question 4: What steps are required to be taken for establishing a unified policy framework and spectrum management regime for the carriage of broadcasting services and telecommunication services? Kindly provide details with justification.

IAMAI Response

There is no need for establishing a unified policy framework and spectrum management regime for the carriage of broadcasting services and telecommunication services. The current spectrum management regime adequately deals with carriage services offered in both broadcasting and telecom industry. "Saral Sarchar Poral" established by Department of Telecommunication (DoT) is a portal that simplifies the process for frequency allocation through Wireless Planning and Coordination Wing (WPC). For the broadcasting sector, MIB has established a single platform for the broadcasting sector in the form of

⁶ Please refer to the reports titled '<u>Human Resources and Skill Requirements in the Telecommunications Sector</u>' and '<u>Human Resources and Skill Requirements in the Media and Entertainment Sector</u>'.



"Broadcast Seva Portal" which also integrates DoT's "Saral Sarchar Poral" for administrative allocation of spectrum.

Instead of introducing a new framework and spectrum management regime, we recommend that attempts should be made to strengthen this platform for all the processes/approvals pertaining to allocation of spectrum in a time bound manner through better coordination among different Government department.

A balanced, market-led approach to spectrum allocation is critical to achieving efficiency. The CP acknowledges that the WPC of the DoT exercises the statutory functions of the central government, and issues licenses to establish, maintain, and operate wireless stations under the provisions of the Indian Telegraph Act, 1885. For the delivery of services for broadcasters, suitable approvals / licenses are issued by the MIB, and telecom service licenses are issued by the DoT. The expanded reference from DoT also refers only to the following:

- Amending the license regime to enable the convergence of carriage of broadcasting services and telecommunication services;
- Establishing a unified policy framework and spectrum management regime for the carriage of broadcasting services and telecommunication services;
- Restructuring of legal, licensing, and regulatory frameworks for reaping the benefits of convergence of carriage of broadcasting services and telecommunications services;
- Revising regulatory regime in respect of DTH and cable TV services holistically addressing all institutional, regulatory and legal aspects.

As delineated in the sections above, we believe that the comprehensive policy framework in place now is the best and most effective way to regulate the ICT ecosystem. This framework ensures that licenses are suitably issued, content is moderated, and the remit of each individual agency is suitably protected. That said, we do believe that regulators should prioritise the co-existence of lightly licensed and unlicensed models, with a sharing framework that is light on bureaucratic overheads and makes significant unlicensed spectrum available for WiFi.

As mentioned above, telecommunication and broadcasting services are distinct services, and, therefore, the spectrum management principles that apply to carriage of broadcasting services should be distinct from telecommunication services.

Fundamentally, satellite spectrum used for broadcasting services allows multiple satellite service providers to operate in the same geographic area – so there is no constraint on satellite spectrum availability. On the other hand, telecom services offered over terrestrial spectrum block frequency bands in such a way that it can only be used by a single operator and cannot be shared. This fundamental difference results in satellite spectrum never exclusively assigned as opposed to terrestrial spectrum. This has been the prevailing standard for the allocation of satellite spectrum in India and worldwide. Few countries that have tried auctioning of satellite spectrum found major problems and later discontinued the process.

We recommend that the current process of administrative allocation of satellite spectrum for broadcasting services should continue and would be in line with international practice.



Question 5: Beyond restructuring of legal, licensing, and regulatory frameworks of carriage of broadcasting services and telecommunication services, whether other issues also need to be addressed for reaping the benefits of convergence holistically? What other issues would need addressing? Please provide full details with suggested changes, if any.

IAMAI Response

In the draft Indian Telecommunications Bill, 2022 (Telecom Bill), the proposed definition of "telecommunication services" includes OTT communication services, among other, extremely varied services. Further, the Bill places exclusive privilege on the Central Government to issue a license to provide telecommunication services. In this proposed design, all OTT communications would require a license by the DoT.

However, there are fundamental reasons as to why OTT communications should remain outside of the licensing regime. OTT services are essentially different from traditional telecommunications services: an OTT service do not have its own network and spectrum, and is merely an application delivered through the internet. Even the TRAI, in its Recommendations on Regulatory Framework for Over-the-Top (OTT) Communication Services, had stated that it was "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." TRAI stated that the matter may be looked into afresh when more clarity emerged in international jurisdictions particularly the study undertaken by ITU.⁷ Further, as mentioned above, there is sufficient regulatory coverage for OTT services under existing laws, including the IT Act and the rules thereunder (including the Intermediary Guidelines).

In addition, there is a direct and detrimental impact on user privacy by placing OTTs in the same regulatory ambit as TSPs. OTTs may be required to weaken encryption to comply with requests, directly impacting user privacy.

⁷ The economic impact of over-the-top (OTT) services is an area of study covered by Question 9/3 of ITU-T Study Group 3. <u>https://www.itu.int/en/ITU-T/studygroups/2013-2016/03/Pages/ott.aspx</u>