RJIL/TRAI/2023-24/07
03rd April 2023

To,
Sh. Sanjeev Kumar Sharma
Advisor (Broadband and Policy Analysis)
Telecom Regulatory Authority of India
Mahanagar Doorsanchar Bhawan
Jawaharlal Nehru Marg, New Delhi - 110002

Subject: **RJIL's Comments on TRAI's Consultation Paper dated 30.01.2023 on "Regulating Converged Digital Technologies and Services - Enabling Convergence of Carriage of Broadcasting and Telecommunication services".**

Dear Sir,

Please find enclosed the comments of Reliance Jio Infocomm Limited on the consultation paper dated 30.01.2023 on "Regulating Converged Digital Technologies and Services - Enabling Convergence of Carriage of Broadcasting and Telecommunication services".

Thanking you,

Yours Sincerely,
For **Reliance Jio Infocomm Limited**

KAPOOR SINGH GULIANI
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Kapoor Singh Guliani
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Enclosure: As above

Reliance Jio Infocomm Limited's Comments on 'Regulating Converged Digital Technologies and Services – Enabling Convergence of Carriage of Broadcasting and Telecommunication services'

1. The Consultation Paper ('**CP**') on 'Regulating Converged Digital Technologies and Services – Enabling Convergence of Carriage of Broadcasting and Telecommunication services' is a timely acknowledgement of already established and rapidly evolving convergence between telecommunication, broadcasting, and other service. We note that the convergence covers provision of different services through the same technology as well as provision of the same service through different technologies and platforms. Thus, convergence can either mean converging technologies or converging services. At the same time there is market related convergence in Information, Communication and Entertainment markets.

2. **The regulatory environment should ensure that lack of 'required' convergence in regulatory framework should not lead to creation of bottlenecks, imperfect competition, and disputes/ opportunities for arbitrage.** For instance, if one service can be provided by two different routes, it should be ensured that the regulatory environment owing to lack of recognition of convergence in carriage of services does not lead to advantage for any one service provider over other as it will lead to creation of non-level playing fields. **Regulatory regime must be such that the consumers and service providers should benefit from the technological advances.**

3. At present huge infrastructure, both in telecommunication and broadcasting services, have been created on the basis of present policy and licensing regime. Any change in policy or regulatory structure must ensure the continuity of provision of services by utilising the infrastructure created by current investments, therefore, in order to have regulatory certainty, we suggest that **the minimal required changes in the existing regulatory landscape should be carried out to address the challenges arising from convergence of carriage and technological upgradation**. Further, the focus should be to provide a facilitative and forward-looking regulatory framework which promotes and supports organic convergence as is already happening in the market. **There seems to be no need to re-engineer the existing regulatory and administration processes. Further, as the Telecommunication laws are already being recast under the draft Telecommunication Bill 2022, any change in regulation should be proposed only after there is a complete clarity in the proposed telecommunication law.**

4. **Close coordination among various administrative ministries to facilitate the convergence can be achieved through use of ICT tools like developing a digital portal that handles issues in granting of licenses and permissions including compliances** etc., across involved ministries. It will lead to creation of single window system that will enhance overall ease of doing business for the stakeholders. For instance:

    a. Presently, providing any satellite-based communication service to the public or setting up a satellite-based network is a multi-stakeholder process that requires close coordination among the Department of Space ('DoS'), Ministry of Information and Broadcasting ('MIB'), Department of Telecommunications ('DoT') Satellite Licensing Division, Wireless Planning & Coordination ('WPC') Wing, and Network Operations & Control Centre ('NOCC'). Various separate authorizations/permissions are required by an investor which can be facilitated by an integrated platform.

b. Ministry of Information and Broadcasting's ('**MIB**') Broadcast Seva Portal aims to provide online facilities to the applicants for seeking permissions, subsequent change in the permissions and payment of fees, hence fostering ease of doing business for stakeholders.

5. Having said that, in addition to ease of doing business, **it is also essential that similar services should have similar conditions/obligations for conducting their business ensuring level playing field for service providers, irrespective of the technology, and protect the interest of the consumers.** Due to the convergence of technologies, many new-age services including social media, OTT communication and broadcasting services, online video streaming etc. are operating at the intersection of these compartmentalized functions of the departments and may remain out of the necessary oversight and policy frame of the Government despite being functionally similar to licensed services.

6. A balanced uniformly applicable regulatory landscape will ensure equitable opportunity/obligations on functionally similar services and avoid asymmetry in favour of less regulated services. For instance, the IT Act provides for some regulation of OTT platforms but is limited to their liabilities as an intermediary only and not communications service providers. Although the OTT communication service providers have been included in the definition of telecommunication services under draft Telecommunication Bill 2022, there is no oversight/ regulatory mechanism for the issues related to tariff, KYC and quality of service for such players. This asymmetry needs to be addressed with evolution of a suitable regulation.

7. Historically drivers of regulatory checks for telecommunication and broadcasting sectors have been different, viz. for telecommunication sector, primary area of concern has been teledensity and affordable communication services including broadband data services to everyone whereas for broadcasting sector primary areas of concern have been nature of content, advertisements and meeting desired societal objectives.

8. Convergence of telecom services and broadcast service platforms is facilitating efficient utilization of the underlying infrastructure used for carriage of these services. These platforms are increasingly complementing each other with the growing adoption of high-speed broadband networks, both wired and wireless, and consumers are demanding the same content experience and other broadcasting and telecommunication services across multiple form-factor devices. We recognize that as the world's biggest open market for smartphones, India is uniquely positioned to lead the world on mass adoption of 5G by unlocking the potential of direct to mobile broadcasting.

9. Converged service delivery is giving multiple benefits to service providers like lower CAPEX and OPEX, ease of maintenance, economy of scale etc. Hence, in the converged era, regulatory and licensing frameworks may need certain tweaks in governance challenges like multiple license/permission authorities for same converged service (e.g., IPTV) and lack of regulatory clarity on the outcomes of converged technologies (e.g., OTT).

10. **We reiterate that the regulatory landscape should ensure minimal required changes in the existing scheme of things which should be restricted to address the issues** and in all other matters the status quo should prevail. Hence, the Authority should continue to administer tariffs, interconnection as well as laying down quality of service standards for broadcasting and

telecommunication sectors, as before, the power of issuing licenses and spectrum management should remain with the DoT and content management should remain with MIB.

11. **We submit that regulation of carriage and content should be separated, as the skill sets required for the two are significantly different**. Regulation of carriage is primarily concerned with technical and economical aspect of policies while content regulation must consider the impact of content on sensibilities, morals, and value system of the society.

Q1. 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.

AND

Q2. 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.

1. We understand that in the past, telecommunications and broadcasting services based on different technologies, had distinct governance and clearly separate markets. Their regulatory and licensing frameworks were also different. Although the evolving digital technologies which is used to provide telecom and internet services, has also acquired capabilities to provide services which were provided by the broadcasting operators. Hence the boundaries that once separated these two functions from the perspective of carriage of these services is getting blurred. This will be more prominent with advent of technologies like Advanced Interactive Broadcast (AIB), Direct to Mobile Broadcasting and further enhanced Multimedia Broadcast-Multicast Service (FeMBMS)

2. We believe that convergence in carriage may be disruptive as the changes in the market structure, competition, mergers and acquisitions are not to be seen much in individual markets but rather in a consolidated market. IP has become a common transport layer to carry all services (telecommunication, broadcasting, and data services).

3. In the cable industry, telephony and broadband on the cable network is representative of convergence of telecom and broadcasting sector. TSPs are also bundling content and other value-added services like IPTV, video, and music streaming services along with broadband services. The convergence of broadcast services is provided through Hybrid Set Top Boxes which allow users to view digital cable programmes as well as videos from the Internet or local IP network. There is also an increasing trend to provide broadcasting services through IPTV by Multi- System Operators (MSOs) as well as the Internet Service providers (ISPs).

4. We believe that non-linear TV applications will impact on the global design of the video delivery solution and will also drive the demand for switching between unicast and multicast streaming modes. Owing to growing consumer demand, telecom/internet operators are deploying converged video delivery solutions across all their networks, fixed and mobile, and across all the screens, to save on operational costs and on equipment costs.

5. High-speed wireless technologies are creating a substitute for the traditional broadcasting platforms such as of DTH and Cable TV and have become an alternative to the fixed broadband services. The success of broadband streaming has shown that user-interactivity is an essential value for modern media and entertainment industries as consumers these days prefer to be an active participant rather than remaining as a passive recipient.

6. **We are hopeful that with evolution of technology, 5G broadcast to mobile will become a reality and lead to mass adoption in future as it provides multi-fold advantage compared to traditional broadcast, viz. wider coverage, spectrum efficiency, no requirement of SIM cards and evolution of smart data pipes.** This will have significant impact on reach of broadcasting services and has potential to play an important role in various aspects of life of citizens.

7. While DoT deals with the issues relating to communications which include voice, video, and data communication, MIB is the nodal ministry responsible for the issuance of all broadcasting and cable services related licenses/permissions/registrations to broadcasters and distribution platforms. **We note and observe that the licensing regime for broadcast services has been operating smoothly irrespective of the underlying technology. Any large-scale change in licensing regime will bring regulatory instability and impact investor confidence.**

8. **We submit that for enhancing ease of doing business, a single window portal should be developed for all broadcasting services, irrespective of the technology, which should cover licensing as well as compliance requirements of the service providers.**

9. Additionally, as part of convergence of licensing, we suggest that Authority should extend best practices among existing licensing regimes to all the broadcasting services which will allow the digital broadcasting services to expand its reach though convergence of devices. This can be used effectively to uplift the living standard of citizens through creation on required broadcast content for mass adoption and benefit of several citizen groups. **While doing so, it is critical that it should be ensured that in no situation should there be any increase in commercial obligation for any broadcast service provider as it will lead to regulatory instability and hence go against principle of promoting business and ease of doing business.**

10. Notwithstanding the development of newer technology, we suggest that licensing regime should continue its organic progress towards simplified authorization/converged licenses which enable provision of various services, both existing and new, by the service providers without the need for separate additional licenses or any mandatory migration towards convergence.

11. With the same media being used for different services, such evolved convergence will build economies of scale and scope. This will result into better services being made available to the consumers at cheaper price. It will also address aspects such as new entry, interconnection, consumer protection and sharing of infrastructure which also needs to be handled to create level playing field in the new market structure.

12. We submit that **from a policy perspective, in the converged era, important areas may be standards and technical license conditions, maintaining technology neutrality may be relevant from various perspectives including consumer safety, interoperability and quality of service**. Hence best practices related to these aspects may be extended to all the broadcasting service license conditions.

13. The blurred boundaries due to convergence are also resulting into overlapping of administrative jurisdictions. With progress of time, it may be imperative to bring better coordination between different Ministries which have been assigned different regulatory responsibilities related to data. Absence of institutional mechanism for coordination among multiple administrative units/government departments that are responsible to govern converged services, leads to confusion and uncertainty amongst stakeholders.

14. **We submit that the content part should be continued to be regulated as per prevailing Acts/Rules/Guidelines of the MIB.** We note that even for IPTV, the service providers are required to follow the same guidelines. Regulation of content requires separate skill sets, then that of technocrats or economists, who can factor the impact of content on sensibilities, morals, and the value system of the society.

15. **In view of the above, we believe that present laws are adequate to deal with convergence of carriage of broadcasting services and telecommunication services, however, the Authority may need to iron out a few administrative issues and bring in synergy in close coordination with other Government stakeholders. Any amendments may not be required at this time, especially till new Indian Telecommunication Act is enacted.**

Q3. How 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 synergized effectively to serve in the converged era. Please provide institution wise details along with justification.

1. We agree and note that at present there are multiple agencies under various Ministries working towards their own previously defined agendas. Telephony (when providing voice), cable TV (when providing video), and mobile cellular technologies each follow their respective standards, and these services were regulated by policies specific to each type. Initially, the standards, testing, and certification oversight policies for a specific technology were established independently. They were not necessarily developed with merging or interoperability in mind. For instance:

    a. Telecommunication Engineering Centre ('**TEC**'), an attached office and technical arm of DoT, is primarily responsible for standardization, testing, certification in telecom and related IT domain, apart from advising Government in technological matters.

    b. Bodies associated with MeitY, viz. Standardization, Testing and Quality Certification ('**STQC**'), Directorate and Controller of Certifying Authorities ('**CCA**') provide Testing, Calibration, IT & e-Governance, Training and Certification in the area of Electronics and IT through countrywide network of laboratories and centres.

2. But with convergence of technology and carriage, it has led to redundancy/duplication of efforts which also leads to confusion for the industry stakeholders. When a converged technology utilizes differing communications technologies, it may be required to adhere to multiple standards and regulations. We submit that **mechanisms need to be developed to build synergies amongst all these sectoral institutes and bodies either by merger of some of the related institutes or by developing a collaborative approach.**

3. Regarding training and skilling of human resources, we suggest that, in a converged era, different institutions should develop synergies to framing courses and policies in a holistic manner rather than following a departmentalized approach. Such synergy will also ensure that research and development of converged equipment and platforms do not suffer from myopic segmented approach.

Q4. 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 justify/cation.

1. In Spectrum Management, short-term, medium-term, and long-term planning is an absolute necessity for management of requirements due to dynamic changes in technology and resultant spectrum usage. We submit that the same should be ensured through close coordination between all Departments while assignment of spectrum by DoT. **Further, the newer technologies both in telecommunication and broadcasting can use multiple spectrum bands e.g. the IMT spectrum bands can be used for broadcasting and spectrum bands reserved for broadcasting are required for IMT services.** Similarly, the majority of spectrum bands can be interchangeably used between satellite and terrestrial networks. **Therefore, achieve the most efficient utilization of spectrum, all bands (except reserved for defence/sovereign use) should be assigned in such as way the assignee can use it multiple technologies and artificial barrier of technologies are not created. Further, auction should be default methodology for assignment of spectrum for any kind of commercial service be it telecommunication or broadcasting through terrestrial or satellite-based network.**

2. We envisage that with convergence of carriage technology and increasing demand for broadcast services on mobile handsets, there will be evolution of mass technologies allowing consumers to view broadcast services on their mobiles while using the spectrum resources efficiently. Roll out of such services may require refarming of existing spectrum by DoT in planned and phased manner while working closely with MIB.

3. However, what spectrum bands to be assigned for each service is the most contentious of the gamut of issue pertaining to spectrum management. India has a legitimate aspiration to lead in 5G deployment in the world and undeniably, it needs strong 5G networks to expeditiously deploy the ICT technology-based solutions to propel growth and equitable economic growth across sectors like healthcare, manufacturing, industry 4.0, transportation and logistics, among others. **The prime bands for 5G are C-Band, 6 GHz band, Sub-GHz bands and mmWave spectrum. Further, as the experience shows, the more the spectrum the better the quality, reliability, and throughput.**

4. We understand that in order to offer efficient and scalable 5G services, a TSP should have at least 200-300 MHz spectrum expandable to 500 MHz in the mid-band i.e. C-Band and 6-GHz band and at least 50 MHz spectrum in sub GHz bands. Of these bands, parts of C-Band are most contentious between TSPs and Broadcasters. **As per GSMA, this spectrum band represents "a balancing point between coverage and capacity that provides the perfect environment for the earliest 5G connectivity."**

5. While a significant part of C-band i.e. from 3.3 GHz to 3.6 GHz, is already allocated in India for allocation for 5G services, and there is policy level agreement for extending it to 3.7 GHz for 5G. **However, it is evident that the spectrum for 3.3 GHz to 3.7 GHz may not be adequate for competitive wireless Broadband services by existing 4 operators in the country and there is a need to carve out more spectrum, especially post US took a lead in this direction.**

6. Evidently, the most contentious part is the spectrum from 3.7 GHz to 4.2 GHz with incumbent use by satellite and broadcasting operators and its potential use as mid-band 5G by Mobile Operators. Globally, different countries have different solution for this contentious issue. The United States has already auctioned 280 MHz spectrum (3.7 – 3.98 GHz) of this band for flexible use licenses, under the FCC's 5G FAST plan. The strategy adopted was to incentivize Broadcasters to expeditiously shift to upper ends of the C-Band. Other Regulatory bodies in countries like China, South Korea, and the United Kingdom have also been mulling similar plans for bandwidth reallocation.

7. The valuation of over $81 Billion for the spectrum in 3.7 to 3.98 GHz in the US auction and other similar activities in Europe, for instance Italy's auction of 200 MHz block at 3.7 GHz in 2018, for €4 billion, clearly indicates that this spectrum cannot be left for administrative allocation and has to be auctioned for optimum use. Thus, it is inevitable that the Broadcasters should be asked to vacate parts of the band, however, Broadcasting is also a critical service, therefore adopting a least disruptive solution is imperative.

8. The best and least disruptive solution lies in convergence of carriage of Broadcast offers a natural and unique broadband based solutions and hybrid IP and terrestrial models. The possibility of streaming high-quality HD video at well under 10 Mbps gives broadcasters a viable option and they can rely on the 4G-5G networks. We understand that there is a rethink even in the US

Broadcasting companies to explore this possibility with advanced cloud and IP technologies that can not only solve the spectrum issue but can also offer new and agile service paradigms that are also future proof. There is also a view that live streaming over the internet is even more secure than satellite links, due to open-source protocols.

9. **Thus, the optimum solution for spectrum management remains the transparent and fair auction of the spectrum in all bands being used by TSPs and Broadcasters. Certain frequencies can also be kept for mixed or flexible use, however, the assignment methodology should remain auction. We further submit that auction is also the only legally tenable option as has been established through various judgements by Hon'ble Supreme Court. Further, as per media reports, the same position has been reiterated by the Attorney General as well.**

10. The significant improvements in available IP network connectivity mean that IP-based options are much more attractive than might have been the case only a few years ago. **Broadcasters can take advantage of IP connections using private fiber or terrestrial IP network service providers. This will be enhanced by the increasing availability of cloud service providers' networks, combined with newer protocols.**

11. We further submit that the WPC wing of DoT should continue to be the nodal agency of the Government of India for radio frequency regulation and be responsible for planning and management of spectrum and cater to the needs of all wireless users.

12. **We appreciate the efforts taken by Government till now in ensuring transparent management of spectrum allocation to stakeholders and are sure that Government will adopt auction of spectrum as a default method and will allow flexible use of spectrum assigned through auction.**

Q5. 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.

1. The OTT Communication services offer voice, video, and messaging services, that are substitutable with similar services offered by licensed TSPs. The TSPs bear the costs for the infrastructure, spectrum management and pay license fees for use of spectrum. **At the same time, they need to meet Universal Services Obligations and roll-out obligations and comply with other regulations. The counterpart OTT communication service providers are presently not mandated to adhere to any such regulatory obligations and do not have to bear any such costs.**

2. While MeitY is the overseeing Ministry for IT Act 2000, there is no process of licensing or regulatory oversight over the OTT service providers providing communication or subscription-based video on demand services (some platforms do provide integrated front-end for linear channels and other content-based services). **While such OTT use internet as bearer of the telecommunication services, but install the platform to manage subscription, charging, accounting, KYC, usage records etc, therefore, like the telecommunication service provider who are required to comply with regulations related to platform such as tariff, quality of service, KYC, subscription, usage data, consumer protection and security conditions, the OTT players**

also should be mandated with such regulation enforced through the license *(or with whatever name it is called)* granted under the Indian Telegraph Act or proposed Telecommunication Act.

3. We note that in the recently released Draft Indian Telecommunications 2022 Bill ('**Bill**'), definition of 'telecommunication services' has specifically included OTT communication/broadcasting/messaging services. We appreciate such a measure and suggest that **coordinated efforts should be made to bring these platforms under administrative and regulatory oversight thereby providing a level playing field**. **The inclusion of such internet-based communication platforms within the regulatory ambit will ensure level-playing field for all similar service providers.**