

To  
Sri Deepak Sharma,  
Advisor (B&CS),  
Telecom Regulatory Authority of India

**Sub:** Comments on the responses to TRAI Consultation Paper on *Framework for Service Authorisations for provision of Broadcasting Services under the Telecommunications Act, 2023*

Dear Sir,

Extreme Infocom Pvt. Ltd. is holder of NLD and ISP-A Universal Licenses. The company is operating Extreme IXP ([www.extreme-ix.org](http://www.extreme-ix.org)) - India's leading Internet Exchange Provider. Extreme IXP is serving peak traffic of 2.9 Tbps ([www.extreme-ix.org/technical/statistics/](http://www.extreme-ix.org/technical/statistics/)) in 41+ Points of Presence across 6 cities - Mumbai, Delhi NCR, Chennai, Bengaluru, Hyderabad and Kolkata.

We're committed to bringing India up to speed and making India a global hub for internet content, services and apps by providing world class peering solutions across all states of India. We are pleased to learn about the authority's keen interest in aligning the regulatory framework for the telecom industry with the Telecommunication Act, 2023 and further developing the sector to ensure efficiency and regulatory parity. We believe that the questions under consideration aiming to align the broadcasting services under the Telecom Act, indicate a progressive approach towards achieving the said goal.

In this regard, we would like to share our comments and related recommendations on the questions pertaining to the regulation of IPTV in particular.

**Q17. The extant IPTV guidelines dated 08.09.2008 may be required to be amended to align with the provisions of the Telecommunications Act, 2023. A preliminary draft of terms and conditions for providing IPTV Services is annexed as PartIII of Annexure-III for consultation. Stakeholders are requested to provide their comments including addition/ modification/ deletion required, if any, with detailed justification.**

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We commend the TRAI for taking a forward-looking approach by revisiting the extant IPTV guidelines, originally issued in 2008, to align with the evolving landscape under the Telecommunications Act, 2023. This initiative is both timely and essential, given the substantial transformation witnessed in telecommunications and broadcasting over the past decade. Our response emphasizes necessary changes to ensure that the regulatory framework aligns with modern technological capabilities while fostering innovation, affordability, and consumer-centric growth.

A key driver of change in the sector is the phenomenon of "convergence". Over the last few decades, the telecommunications sector has experienced radical technological advancements, transformations in market structures and regulatory approaches grounded in elevating India at par with global counterparts. In this context, it is critical that any regulatory framework for IPTV encourages innovation, investment, and affordable access to services. Regulatory policies must continuously evolve to stay ahead of technological developments and ensure flexibility, enabling service delivery models that are responsive to market needs. To reflect this in the IPTV guidelines, it is crucial to incorporate the following changes:

- **Allowing fibre-based delivery:** The traditional model of delivering content in IPTV by uplinking and downlinking broadcaster's content over satellite, involves multiple stages, introduces latency, and incurs higher costs due to dependency on satellite infrastructure.

On the contrary, by leveraging dedicated fibre connections, IPTV providers can receive broadcaster content directly without the satellite link step. The process involves broadcasters transmitting their content in a digital format over a high-speed fibre-optic network to IPTV provider headends. At the headend, the content can be securely received, decoded, and formatted into a digital stream suitable for distribution across the IPTV network. The fibre pathway offers high data capacity, faster speeds, and lower latency compared to satellite transmission, leading to a seamless and high-quality service experience for consumers. To address potential challenges, including high deployment costs and regional disparities in fiber infrastructure availability, the government could consider introducing incentives such as subsidies or public-private partnership models to accelerate fiber deployment in underserved areas.

The fibre-based approach not only streamlines content acquisition but also allows for greater adaptability and scalability of IPTV services. By eliminating satellite dependence, service providers can more quickly introduce new channels and modify offerings to align with market demands, enhancing operational efficiency and [flexibility](#). This direct connectivity fosters a more robust, consistent, and reliable user experience by reducing potential points of failure inherent in satellite systems, such as weather-related disruptions and transmission delays.

Furthermore, shifting to fibre connections aligns with the broader push for convergence-driven telecommunications solutions. The same fibre infrastructure used to provide broadband can now support high-quality IPTV services, further optimizing network [utilization](#). Currently, many regions in India rely on copper or coaxial cables for IPTV deployment, which come with significant limitations. Shifting to a fibre-based delivery model would not only address these constraints but also enable high-speed, future-ready service [delivery](#). Such a transition would further incentivize the expansion of fibre networks, driving greater broadband penetration across the country.

In summary, this approach—permitting IPTV providers to utilize dedicated fibre connections—allows them to bypass satellite-based content transmission. It reduces latency, cuts costs, and improves service reliability by directly integrating broadcaster content into the IPTV headend using fibre. The content can then be encoded, adapted, and distributed digitally over the IPTV network, ensuring a seamless, efficient, and scalable service model.

- **Reducing dependence on coaxial cable:** India, at present, [lacks](#) widespread high-speed wiring and is still reliant on copper or coaxial cables for IPTV network deployment. By shifting to fibre, which is already used for providing broadband, we can overcome these infrastructural limitations, ensuring faster and more reliable IPTV services while simultaneously addressing broadband penetration challenges.
- **Tech-neutrality:** Furthermore, the amended guidelines should recognize that when the original IPTV framework was introduced in 2008, technological limitations made fibre-based transmission from broadcasters unfeasible. Today, however, advancements in fibre-optic technology provide a superior medium for content delivery. Regulatory adaptation to this reality is necessary to maintain a technology-neutral framework consistent with the Telecommunications Act's objective of promoting convergence-driven, dynamic service models.

Allowing IPTV services to be offered seamlessly over fibre infrastructure that supports broadband would bring substantial benefits to consumers and the market. Consumers would benefit from bundled services, driving cost efficiencies and expanding access to high-quality services. This, in

turn, would contribute to achieving broader policy objectives related to broadband expansion. Moreover, simplifying the regulatory structure and content acquisition models can enhance and promote inter-ministerial coordination, making regulatory compliance and implementation more efficient.

- **Installation of headends by IPTV service providers:** The amended framework should recognize and facilitate the ability of ISPs providing IPTV services to establish headends that connect multiple Multi-System Operators (MSOs) and Local Cable Operators (LCOs) through shared infrastructure without themselves being subjected to further compliances such as registration under Cable Television Networks (Regulation) Act, 1995. This collaborative model offers several significant benefits, contributing to market competition, operational efficiency, and enhanced consumer services.

Firstly, MSOs and LCOs have a well-established customer base for cable TV services. Partnering with them allows ISPs to tap into this existing pool of consumers and offer IPTV as an additional service, thus expanding their market reach and promoting service adoption more quickly.

Additionally, MSOs and LCOs possess extensive expertise and experience in managing cable networks and delivering TV services. By leveraging the operational know-how of MSOs and LCOs, ISPs can more effectively manage their IPTV service rollout, ensuring a seamless, high-quality experience for end-users.

Moreover, leveraging existing MSO and LCO infrastructure enables faster deployment of IPTV services. Building a new network from the ground up involves significant time, regulatory hurdles, and investment. In contrast, utilizing established networks for distribution allows for quicker rollout, reducing the time to market and minimizing resource expenditure. This collaborative model not only accelerates the delivery of IPTV services but also maximizes the efficiency of network utilization, aligning with broader policy goals of improving access to affordable and high-quality telecommunications services. By enabling IPTV service providers to leverage shared infrastructure, the amended guidelines can foster inclusive growth and reduce the urban-rural digital divide.

In conclusion, the proposed amendments to the IPTV guidelines must reflect the technological and market shifts driven by convergence. By allowing direct content sourcing through dedicated fibre connections, supporting fibre-based network deployment, and streamlining content acquisition at provider headends, the guidelines would align with contemporary market realities. This forward-looking regulatory approach would position India as a leader in telecommunications and broadcasting innovation while offering consumers affordable, high-quality services, fulfilling the broader objectives of a technology-neutral, inclusive, and innovation-driven telecommunications ecosystem.

**Q18. Is there a need to review the minimum net worth requirement of Rs. 100 crore for ISPs to provide IPTV services, while framing the terms and conditions for provision of IPTV services in the new authorisation regime and whether it should be aligned with the terms and conditions of authorisation of Internet Services by Department of Telecommunications? Please provide your comments with detailed justification.**

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In this context, we strongly submit that the minimum net worth requirement of Rs. 100 crore for ISPs to provide IPTV services should be removed. Retaining such a requirement creates unnecessary entry barriers, hampers market competition, and undermines the overall objective of promoting a dynamic, diverse, and innovation-driven telecommunications sector.

The minimum net worth criterion, as currently specified, functions as a financial threshold that disproportionately affects smaller and emerging service providers. Such a gatekeeping mechanism stifles new entrants who may bring innovative solutions, diverse service offerings, and price competition that ultimately benefit consumers. By limiting market participation to only well-capitalized entities, we risk consolidating market power in the hands of a few large players, thus reducing the vibrancy and competitiveness of the IPTV market.

Moreover, it is essential to recognize that IPTV services are poised to operate within a robust regulatory framework. With the integration of IPTV guidelines and the upcoming broadcasting law, there will be a comprehensive layer of regulatory oversight governing service provision, content standards, technical parameters, and consumer protection. This regulatory oversight is well-suited to addressing concerns related to service quality, compliance, and operational reliability, eliminating the need to gatekeep market entry based on net worth.

Another critical consideration is the need to ensure a level playing field within the IPTV market. Currently, cable operators are eligible to provide IPTV services without being subjected to any minimum net worth condition or criteria. Applying a net worth requirement to ISPs but not to cable operators creates an uneven competitive environment and places ISPs at a distinct disadvantage. This inconsistency within the regulatory framework undermines market fairness and deters healthy competition. For a truly competitive and innovation-driven IPTV ecosystem, it is crucial that all service providers operate under equitable terms and conditions, without arbitrary financial barriers.