

ANNUAL REPORT **2023-24**



OCTOBER 2024

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अनिल कुमार लाहोटी
Anil Kumar Lahoti



सत्यमेव जयते

अध्यक्ष
भारतीय दूरसंचार विनियामक प्राधिकरण
Chairman

TELECOM REGULATORY AUTHORITY OF INDIA

Message



I extend my warm wishes to the Broadband India Forum (BIF) on their 9th Annual General Meeting. Nine years of active contribution to growth of broadband is a creditable achievement and a reflection of BIF's steadfast dedication to advancing broadband connectivity throughout India.

I would also like to commend BIF for their ongoing and thoughtful contributions to the discourse on policy and regulatory matters, which have been important to the broadband landscape in alignment with the goals of Viksit Bharat.

The telecom sector is a key enabler of the Digital India mission, spearheading advancements in areas such as digital payments, Aadhaar, e-governance, e-commerce, e-health and e-education. The industry is progressing towards building a resilient and secure telecommunication network that provides extensive coverage, especially in underserved and rural regions. This focus is crucial for fostering socio-economic development and ensuring that the benefits of high-quality broadband services are accessible to all, at an affordable cost.

As we move forward, the telecom services sector must continue to deliver secure, reliable and affordable converged telecommunications, available to everyone, everywhere. These efforts are vital for accelerating inclusive socio-economic progress. TRAI is committed to taking forward-thinking initiatives that nurture a supportive environment for all participants in the ecosystem, including telecom service providers, device manufacturers, infrastructure providers, internet companies etc.

We trust that BIF will maintain its proactive approach in driving meaningful consultations and discussions, contributing to the ongoing expansion and improvement of Broadband in India.

With best wishes to all the participants of BIF's AGM.


(Anil Kumar Lahoti)

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एस. कृष्णन, आई.ए.एस.
सचिव
S. Krishnan, I.A.S.
Secretary



इलेक्ट्रॉनिक्स और सूचना प्रौद्योगिकी मंत्रालय
भारत सरकार
**Ministry of Electronics &
Information Technology (MeitY)**
Government of India

MESSAGE

I am delighted to note that BIF having completed 9 years of its existence would be holding its AGM shortly and coming out with its Annual Report. In the past nine years, BIF has made substantial progress and shown its dedication to the field of technology policy by developing and enhancing policies, regulations, and standards that pave the way for affordable and accessible connectivity, thereby unlocking the full potential of Digital India.

India's digital landscape is undergoing a transformative shift, with the nation poised to reach a staggering \$1 trillion digital economy by 2030. The Ministry of Electronics and Information Technology (MeitY) has taken the lead in shaping this digital future, heading initiatives that foster investment, innovation, and the expansion of India's digital ecosystem. Recognising the role of MeitY in driving India's digital revolution, the Union Budget for 2024-25 allocated a substantial Rs 21,936.90 crore to the Ministry, reflecting a significant 52% increase from the previous year.

In the past few years, MeitY has launched successful projects that have significantly impacted India's digital landscape. Whether it is the Digital India Mission that has been instrumental in bridging the digital divide, empowering citizens with digital literacy or the IndiaAI mission that has propelled India's AI research, development, and innovation, MeitY has been instrumental in shaping India's digital ecosystem. Moreover, creating an enabling environment for startups and MSMEs is also a top priority for the Ministry.

BIF has played its role in shaping India's digital future, actively influencing the development of policies, regulations, and standards that are essential for achieving its ambitious goals. Through its thought leadership, evidenced in White Papers, Workshops, Panel Discussions, Digital Dialogues etc, especially in the fields of AI, Digital Competition, Data Protection, Platform Governance and Electronics Hardware Manufacturing, contributed to a shared understanding of the challenges and opportunities of India's digital economy. Moreover, BIF's commitment to digital inclusivity through its Committee for Accessibility and Inclusion has ensured that the benefits of digitalisation reach all segments of society

As we strive to realise the Prime Minister's vision of a Digital India, BIF's non-partisan approach to technology policy is invaluable. I look forward to continued collaboration and wish BIF continued success in its endeavours.


(S. Krishnan)

Place: New Delhi
Date: 1st October, 2024



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डॉ. नीरज मिश्र, भा.प्र.से.
सचिव
DR. NEERAJ MITTAL, IAS
Secretary



भारत सरकार
संचार मंत्रालय
दूरसंचार विभाग
Government of India
Ministry of Communications
Department of Telecommunications

I am delighted to hear that the Broadband India Forum is holding its 9th Annual General Body Meeting (AGM) in New Delhi, and that the Annual Report for FY 2023-24 is being released on this occasion.

Broadband has become an integral part of daily life for citizens worldwide, including in India. Therefore, "Broadband for all" is a key priority for the Ministry of Communications. The government has been diligently working towards this goal through various initiatives. It's encouraging to see Broadband India actively contributing to this objective.

I am confident that the Ministry's initiatives, such as the New Telecom Act 2023, the shift from License to Authorisation, the inclusion of Right of Way (ROW) in the Central Act, the notification of various rules under this act, and the development of indigenous 4G/5G technologies, will facilitate ease of doing business, promote broadband proliferation, and help bridge the digital divide. This Ministry remains committed to technological advancement and the growth of the telecom industry.

I would also like to extend my congratulations to the Broadband India Forum for their insightful inputs on various policy aspects related to broadband. Their efforts in organizing events that address critical issues such as Gigabit connectivity for all, the proliferation of broadband and tackling the digital divide are commendable. These initiatives bring much-needed focus to urgent matters affecting the goal of "Broadband for all" and the broader telecom industry.

I wish the Broadband India Forum continued success in all their endeavors and a bright future ahead.

Place: New Delhi
Date: 9.10.2024


(Neeraj Mittal)

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संजय जाजू, भा.प्र.से.
सचिव
SANJAY JAJU, IAS
Secretary



सत्यमेव जयते

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ENTERTAINMENT SUMMIT
Come, sail with us

भारत सरकार
सूचना एवं प्रसारण मंत्रालय
शास्त्री भवन, नई दिल्ली - 110001

GOVERNMENT OF INDIA
MINISTRY OF INFORMATION & BROADCASTING
SHASTRI BHAWAN, NEW DELHI - 110001

8th October, 2024



MESSAGE

I extend my warmest congratulations to BIF on hosting their 9th AGM. In the past decade, BIF's work on developing and enhancing both the broadband and the broadcasting sector has been invaluable, given its non-partisan and holistic approach to policy development. This approach is critical in creating a regulatory environment that supports India's digital transformation.

As India embraces the digital age, a comprehensive, inclusive, and technologically advanced broadcasting system has become indispensable. The Ministry of Information and Broadcasting (MIB) has been instrumental in driving this transformation, launching initiatives that have significantly elevated the nation's broadcasting landscape. In 2023-2024 alone, MIB made substantial strides in developing this sector. MIB has prioritised the nationwide rollout of Digital Terrestrial Television (DTT); focused on making India the 'global content powerhouse' by promoting content in regional languages and promoting cultural diversity; supported development of news and information media, growth of animation, visual effects and gaming (AVGC) and the advertising sector. Overall, MIB has consistently prioritised economic growth, cultural development, and digital inclusion, to foster the thriving broadcasting landscape.

BIF has contributed in shaping this future, actively influencing the development of policies, regulations, and standards that are essential for achieving India's broadcasting goals. I specifically commend BIF's ongoing commitment to engaging with broadcasting policies, especially through the continuous and consistent engagement with policymakers, industry stakeholders and civil society organisations.

As India aspires to establish itself as a global content powerhouse, BIF's thought leadership and expertise will help position India at the forefront of digital innovation and also ensure broadcasting system is equipped to meet the evolving needs of our diverse population. BIF's effort in this sector will help create and develop a vibrant and inclusive broadcasting ecosystem that encourages creativity, competition, and innovation. I look forward to continued collaboration and wish BIF continued success in its endeavours.


(Sanjay Jaju)

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डॉ. पवन कुमार गोयनका
Dr. Pawan Kumar Goenka



अध्यक्ष, इन-स्पेस
Chairman, IN-SPACE

Message



I am pleased to extend my best wishes to Broadband India Forum on its 9th anniversary. BIF has been making significant contributions to the Space and Satellite Communication policy landscape. I am quite confident and hopeful that they shall continue to add value to the growth of the sector and help facilitate affordable and ubiquitous Satellite Communications to every nook and corner of the country.

Globally these are very exciting times for the space sector. We are entering a new era – with declining launch costs to highly advanced earth observation and communication capabilities, the space sector is truly taking off for newer orbits.

Satellite communication is one of the largest revenue drivers of the global space economy. India's satellite communication market, currently at \$4.2 billion, aims to grow to \$14.9 billion by 2033, as is brought out by IN-SPACE in its Decadal Vision and Strategy for Indian Space Ecosystem. Satellite technology is crucial for India's digital economy and global tech presence, offering ubiquitous coverage, high bandwidth, and low latency.

India is yet to catch up with many other nations in satellite broadband and internet. The digital divide between rural and urban areas leaves much of rural India without broadband, and many areas still require reliable cellular and fiber connectivity.

There has to be a collective effort to bridge this digital divide. The Satcom industry, which is working hand in hand with the Telecom industry, should aspire to make India the most connected country in the world.

The New Space Policy through the NGP (Norms, Guidelines and Procedures in respect of Authorization of Space Activities) will further enable both Indian/Global private sector participation & provide a level-playing field for private sector in the Space industry.

There is a lot of progressive work going on in different aspects and domains related to enhancement of the nation's digital connectivity and strengthening the digital economy. I am sure BIF is already playing and will continue to play an active part in most of these areas, especially in satellite connectivity. On the 9th anniversary, I wish BIF all the best in their endeavours!

(Dr. Pawan Goenka)

October 09, 2024



भारतीय राष्ट्रीय अंतरिक्ष संवर्धन एवं प्राधिकरण केन्द्र मुख्यालय, बोपल, अहमदाबाद-380058
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From the President's Desk



Dear Stakeholders,

The FY 2023-2024 year and subsequent months, marked a landmark period for India's Telecom, IT, and Broadcasting sectors. With an aim to achieve a \$1 trillion digital economy by 2028, these sectors have demonstrated remarkable resilience and innovation in response to the evolving digital landscape. Being a think tank with the mission to help achieve digital transformation of the entire ecosystem, BIF is pleased to have played a part in shaping this transformative journey through its active involvement in policy and regulatory advocacy. We extend our sincere gratitude to the Government, Regulators, our members from startups, academia, industry and our Principal advisors whose support has been instrumental in enabling BIF to contribute meaningfully to the growth of these sectors and the realisation of India's digital aspirations.

This year saw several milestone developments in the Digital Communications and Services Sectors:

I. Accelerating Digital Connectivity

1. A 138-year-old Telegraph Act was finally replaced with a fresh new and innovative Telecommunications Act, 2023

The Telecommunications Act 2023, is a historic milestone in the telecommunications landscape of the country as it replaces the 138-year-old archaic Indian Telegraph, 1885. This progressive legislation is a crucial step towards fostering a robust digital economy. This landmark legislation is a cornerstone of the nation's digital transformation, providing a modern regulatory framework that supports innovation, investment, and competition while facilitating ease of doing business. In this rapidly growing technological age, the Telecommunications Act brought clarity on some key issues, including:

- ➔ **Reinforcing Regulatory Autonomy:** The Act reinforces the Telecom & Broadcasting Regulator- Telecom Regulatory Authority of India's independence and authority.
- ➔ **Streamlined Methodology for Spectrum Assignment and Allocation:** Satellite spectrum is now assigned through administrative means, thereby providing much needed regulatory clarity required for the growth of Satcom in the country.
- ➔ **Regulatory Clarity:** The Telecommunications Act has clarified that OTTs do not fall under its purview and are therefore not part of 'telecommunication services' as defined in the Act.
- ➔ **Simplification of Process and Ease of Doing Business:** Simplified and standardized Right of Way provisions under the Central Act would facilitate efficient infrastructure deployment. The Act has also provided a legislative handle which shall facilitate expeditious implementation of RoW Rules.



2. Quick Steps to Operationalise the Telecom Act

After the notification of the Act, the Ministry of Communications has spearheaded and doubled its efforts to come out with a number of Rules to operationalise the Act. The Right of Way Rules 2024 was among the first few rules that were notified after an extensive round of public consultations -both in writing and through three separate open houses conducted with all stakeholders. The Right of Way Rules are a significant reform that would apply uniformly across all states and shall pave the way for a transformation in ushering a new era of Digital Connectivity. The simplified process for right of way, clear timelines for grant of right of way by public entities, provision of right of way permission for a period coterminous with the term of authorisation or license, among other provisions in the Rules would lead to expeditious deployment of digital infrastructure and expansion of broadband services across the vast expanse of India. Overall, the process of issuing the remaining Rules is work in progress and all Rules are likely to be notified by the end of 2024.

TRAI CP Authorisation

In June 2024, the Department of Telecommunications (DoT) tasked the Telecom Regulatory Authority of India (TRAI) with establishing a framework for granting telecommunication service authorizations under the newly enacted Telecommunications Act,

2023. Following a public consultation process, TRAI issued its final recommendations in September. This marks a significant milestone, as it represents the first major overhaul of telecommunication licensing in three decades. If adopted, these recommendations could substantially reshape the telecom industry.

These reforms in Rules-making and implementation of various aspects of the Telecom Act will set a new standard in enabling digital infrastructure deployment, maintenance, and safety and security for consumers and citizens.

3. Enhanced Role of Satellite Communications

BIF has consistently worked towards enhancing the role of Satellite Communications in India. As we know, one of the biggest developments in the sector is the Indian Space Policy 2023, which has further liberalized the satellite communication sector, casting India into a new role akin to that of a cosmic pioneer. This coupled with the promulgation under Section 3, sub-section 4 read along with Schedule 1 of the new Telecommunications Act 2023, Satcom spectrum is to be assigned only in an administrative manner. This has been a major shot in the arm for the Satcom sector. This policy shift has attracted significant investments in satellite broadband services, especially in remote and underserved regions for bridging the digital divide and enhancing digital connectivity across the country. Moreover, on February 21, 2024, the Union Cabinet of India allowed up to



It is also important to note that TRAI has subsequently come out with a CP to decide the Terms and Conditions of Satcom Spectrum Assignment for different services viz. FSS & MSS, GSO based vis-à-vis NGSO based, formula-based charging vis-à-vis AGR based. BIF would provide extensive comments on both these documents.

4. License exempt full 1200 MHz in 6 GHz band: A Technological and Economic Necessity for India to be 5 Trillion Economy

Throughout the year, BIF has consistently advocated for the delicensing of the entire 6GHz spectrum band to support a wide range of advanced technologies and applications. This includes:

- (a) **Upgrading to modern WiFi standards:** Delicensing 6GHz would enable the adoption of WiFi 6E and WiFi 7, enhancing indoor 5G coverage and supporting the growing demand for high-speed wireless connectivity.
- (b) **Expanding fixed broadband:** The 6GHz band could be used to support fiber-to-the-home (FTTX) based fixed broadband services, both in urban and rural areas.
- (c) **Enabling innovative applications:** The 6GHz spectrum is essential for advanced use cases like augmented reality (AR), virtual reality (VR), extended reality (XR), metaverse, gaming, enterprise applications, education, healthcare, and more.
- (d) **Supporting public WiFi:** Delicensing 6GHz would help meet the increasing demand for public WiFi networks across the country



100 per cent FDI through the automatic route in the space sector to lower entry barriers for foreign players, fostering a more inclusive environment for international investments, technology transfers, and collaborative research in space technology. 100% FDI is permitted for the manufacturing of components, systems, and sub-systems for satellites, ground segments, and user segments as well as for satellite-based communication services.

TRAI's recommendations on Satcom service authorisations issued on September 18, aims to replace the century-old licensing regime with a more liberalised and modern regime of authorisation. These recommendations, including the clear demarcation between 'Satellite-based Telecommunication Services' and Access Services, merger of Commercial VSAT and GMPCS licenses, removal of CUG restriction in VSAT and removal of separate ISP license requirements for providing Internet access, have paved the way for ease of doing business for Satcom service providers.

5. Expansion of Public Wi-Fi and PM-WANI Initiative

We wholeheartedly support the PM-WANI initiative as a pivotal step in bridging the digital divide, particularly in rural India. As of July 2024, the number of PM-WANI public Wi-Fi hotspots has surpassed 207,000, driven by the government's entrepreneurial focus and a recent update to the PM WANI Guidelines.

The key amendment to the PM-WANI Guidelines, effective September 16, eliminates the requirement for a commercial agreement between Public Data Office (PDO) operators and TSPs/ISPs and just requires an agreement between PDOs and TSP's. This simplification allows PDOs to procure internet connectivity more easily. Additionally, TRAI has proposed a draft Telecommunications Tariff Order (70th amendment) to align the tariffs for PM-WANI with those of fibre-to-the-home (FTTH) services. With ongoing efforts to delicense the entire 6GHz spectrum band, India is poised to become a global leader in Wi-Fi technology. This development will not only boost connectivity but also create new opportunities for local manufacturers and innovators.

6. Public 5G and Private Networks Expansion

India's 5G rollout has been impressive with over 450,000 5G BTS had been deployed by 2024, bringing next-generation connectivity to nearly 90% of urban and semi-urban areas. However, private 5G networks have floundered by the wayside. For a country as vast as India with a sixth of the Global population, we should have had at least a similar share in terms of total Private 5G Networks which are more than 1300 today. However, there are only a handful of such networks in place in India today. This is despite the fact



that the Government had simultaneously approved both Private and Public 5G policies. The government's reluctance to allocate spectrum directly to enterprises remains a significant barrier, delaying their ability to deploy private 5G infrastructure

7. 6G Research and Development

India has entered the global 6G race with resolve and vision. The establishment of the India 6G Innovation Hub, in collaboration with leading universities and technology firms, marks a significant leap towards developing key 6G technologies and securing a substantial share of global intellectual property. The Bharat 6G Alliance has expanded its ambit to include international partnerships, fostering cross-border collaboration in research and development.

8. Neutral Digital Connectivity inside the buildings and Quality of Experience

The Ministry of Housing and Urban Affairs is in the process of implementing a policy that promotes neutral digital infrastructure inside the buildings, allowing for a diverse range of service providers and fostering competition to offer more affordable services.

Further, TRAI, is leading the way in establishing frameworks for rating buildings based on their digital infrastructure. This initiative aims to provide clear information to both current and prospective occupants about the digital services available in various buildings. This policy would open the gateway to bigger business opportunities for IP1s. BIF has provided very detailed inputs on the TRAI CP on this subject and TRAI has even had a discussion with the BIF team to understand our comments in detail.

For the proliferation of broadband and other telecommunication facilities "Model Building Bye Laws 2016 (MBBL)" was also amended by the Ministry of Housing and Urban Affairs and nearly 26 states have adopted the same. Now, efforts are underway to include a dedicated chapter on Information and Communication Technology (ICT) in the upcoming National Building Code. This move will ensure that modern digital needs are integrated into building standards, enhancing the overall infrastructure and service options available to residents. BIF is a member of this Committee which is finalising the BIS standards on NBC.



II. Navigating the Intersection of Technology, Law and Policy

1. Marching towards India's AI aspirations

The year 2024 has been a pivotal year for India's AI ambitions. The government's launch of the IndiaAI Mission in 2023, with its 7 focused working groups, and the substantial investment of approximately INR 10,000 crores in developing India's GPUs, demonstrates a clear commitment to AI development. These initiatives highlight India's unique approach to regulating AI technology while fostering innovation, positioning the country as a leader in the field

A significant milestone in BIF is the establishment of the Special Taskforce on AI (STaFAI) under the ICAG Committee. STaFAI, comprised of diverse members and advisors, was tasked with developing the 'White Paper on Responsible AI Innovation'.

The comprehensive paper delves into eleven critical areas, including AI integration across sectors, AI adoption trends and maturity, the research and innovation landscape, the nuances of generative AI and its applications, the fundamental principles for responsible AI development, deployment, and use, and the necessary interventions to cultivate a thriving AI ecosystem in India. We are eager to present the key findings and recommendations of the White Paper to MeitY and solicit their valuable feedback.

2. Reconsidering the Proposed Ex-Ante Approach in the Draft DCB

As we might be aware, the Committee for Digital Competition Law (CDCL) instituted by the Ministry of Corporate Affairs (MCA) released a 236-page Report and the Draft Digital Competition Bill (Draft Bill) in March 2024. The draft bill proposed an ex-ante framework for the regulation of Digital Markets in India. We understand that the DCB took a similar approach to the EU's DMA. BIF has extensively worked on this subject with two major deliverables:

➔ Comments to the CDCL Report and Draft DCB: BIF submitted 23-page comments on the CDCL Report and Draft DCB essentially analysing the following points:

- There is a need for extensive, inclusive and balanced multi-stakeholder discussion regarding the Draft Bill
- Prioritising the strengthening of the current Ex-Post framework would be beneficial at this stage
- Contextual and Phased Application of the proposed Ex-Ante Framework would be more effective for regulating digital markets, at this stage
- Core Suggestions on Improving the Draft Bill: A Clause by Clause Analysis and Principle-Based Recommendations

➔ White Paper on 'Platforms, Markets and Competition': CDCL Report and DCB": BIF is working on a long-term study on the Digital Competition Law landscape. The Paper is authored by Prof. Rekha Jain, Mr. Abhishek Malhotra and the BIF team. BIF will be conducting workshops/webinars/panel discussions on the Report in the following months and then publishing the final Report subsequently.





3. BIF's Role in Misleading Ads Case in Supreme Court.

On May 7, 2024, the Supreme Court of India passed an order (SC Order) in *Indian Medical Association & Anr v. Union of India* & issuing guidelines for advertising agencies and advertisers to submit a self-declaration certificate (SDC) before running advertisements on print, broadcast media as well as the internet. This was followed by a series of advisories by the Ministry of Information and Broadcasting (MIB), including the latest one (dated 03.07.2024) that narrowed the scope of the SDC mandate to (a) advertisers/advertising agencies (b) Food and Health Sectors (c) who are now required to upload an Annual SDC on government portals (d) make the proof of uploading the SDC to the concerned media stakeholders/publishers.

BIF filed an Intervening Application in June 2024, well before the last advisory of MIB dated on July 3, 2023. Amongst other arguments, BIF argued for 'online advertising' to be excluded from the scope of the Order given a robust mechanism already exists to deal with concerns relating to misleading ads. It was highlighted that the SC order has the potential to harm consumers, MSMEs, platforms and the general digital advertising ecosystem. There were other interveners in the said matter pleading on similar lines.

MIB conducted several consultations with the stakeholders, BIF attended all of them and argued for

'proof of publishers' to not be included within the scope of their recommendation to SC.

The litigation is ongoing and BIF is eager to research as well as litigate in the misleading ads sector.

4. India's very own broadcasting policy: A new way forward

BIF has submitted detailed comments and participated in the OHD on the National Broadcasting Policy to ensure it aligns with the evolving needs of the industry and promotes a healthy media and entertainment ecosystem.

Post release of the NBP Recommendations by TRAI, MIB conducted a series of stakeholders' discussions on the TRAI Recommendations. BIF attended one of the discussions on July 22 2024 and reiterated its position on certain aspects related to the National Broadcasting Policy. In this discussion, BIF said that the key thrust of BIF's submission to TRAI on the NBP was on the following 4 issues:

- Bridging the viewership gap: BIF proposed measures to bring affordable media and broadcasting services to ~90 million 'TV Dark Households';
- Tariff forbearance: Given sufficient competition prevailing in the market, BIF urged for tariff forbearance akin to telecom;



- OTTs/OCCPs are not Broadcasting Services: BIF argued for differential treatment of OTT/OCCPs since they differ from traditional broadcasting services;
- Market-driven innovation for choice of D2M Technology: BIF advocated for a market-driven approach to D2M technology, instead of a Government driven mandate, allowing market forces to determine the most appropriate technology.

Miscellaneous

5. Forwarding of BIFs Recommendation for the Governments 100-day Plan

Aligned with the country's ambition of reaching 1 trillion digital economy by 2028 and 7 trillion overall economy by 2030, BIF had made suggestions for the comprehensive 100-day action plan being formulated by the Government of India, soon after the new Government was formed. BIF's plan had put forward specific recommendations for various ministries, encompassing critical aspects such as Spectrum policy, Promoting public good through Delicensed 6GHz Wi-Fi Spectrum, Digital economy growth, OTT regulation, Online Gaming, Internet governance, Satellite communications, Network and Device manufacturing, Broadband infrastructure, Cybersecurity, Broadcasting, and Accessibility & Inclusivity. BIF has submitted the plan to relevant ministries, including the Department of Telecommunications, the Ministry of Electronics and Information Technology, the Ministry of Information and Broadcasting, the Telecom Regulatory Authority of India, the Department of Science and Technology, NITI Aayog, and the Department of Empowerment of Persons with Disabilities (DEPwD)

6. BIF's work on Accessibility and Inclusion

BIF's commitment to accessibility and inclusion remains strong with the support of Dr. Nirmita Narasimhan and Mr. Dinesh Chand (the Chair and Co-Chair of the Accessibility and Inclusion Committee). We are particularly happy to release the Report on "ICT for Empowering Accessibility/Inclusion: The Impact of Digital Integration on the Lives of Persons with Disabilities (PwDs)" of a collaborative effort between BIF, Digital Empowerment Foundation (DEF) & Center for Development Policy and Practice (CDPP), by the end of this year.

III. Given below is a summary of the key highlights of BIF's activities and achievements since the last AGM held in September 2023, for quick reference:

1. **17th November 2023:** BIF – Saksham conducted a program for the DoT officials at Sanchar Bhawan to promote awareness on how to create accessible content on social media so that everyone can enjoy the possibilities it offers. The program was presided over by Shri Ajay Kumar Sahu, Member (Services), Department of Telecommunications, Member (Services), Department of Telecommunications. This session was also joined by experts Mr. Dipendra Manocha, Founder, Saksham, Dr. Nirmita Narasimhan, Chair, BIF's Accessibility & Inclusion Committee and Programme Director, Saksham and the training session was conducted by Mr. Amar Jain of Saksham. A similar program is being planned for the officials of TRAI, MeitY and NITI Aayog.
2. **5th–6th December 2023:** India Internet Governance Forum (IIGF) – The India Internet Governance Forum (IIGF 2023) was jointly organized by Ministry of Electronics and Information Technology (MeitY) and NIXI from 5th – 6th December 2023, centered around the theme "Moving Forward: Accelerating Bharat's Digital Agenda. The event successfully brought diverse stakeholders of internet governance together to discuss the roadmap for digitization, reaffirm India as an essential participant globally and towards developing inclusive, democratic and multi-stakeholder-based internet governance policy and practices. Besides the opening and closing sessions, there were 3 panel discussions. The Hon'ble Minister of State for Electronics and

Information Technology and Secretary (MoSE & IT) and Secretary (MeitY) participated in IIGF 2023. Ms. Carol Roach, IGF MAG Chair emphasised the importance of India's participation in global forums such as the UN IGF to ensure its involvement and representation in the opening session.

BIF being the main initiator of this historic measure in 2021, has been heavily involved in the entire proceedings of IIGF 2023 to its execution, with myself being the Vice Chairman of the main Coordination Committee, and several Members, Advisors and the Directorate team involved and participating actively throughout, besides steering several critical workshops and articles. I also contribute as one of the signatories in the IIGF Association of Persons made on 29th October 2022.

3. **30 January 2024:** Wireless Broadband Alliance co-hosted its Annual Wireless Global Congress (WGC) APAC event in Delhi, together with Broadband India Forum, with the objective to discuss and deliberate on the important topic of 'Wi-Fi Innovations Connecting our Digital World' at the Lalit, New Delhi. The event covered interesting and relevant themes like Global Perspectives towards Wi-Fi 7; Public Wi-Fi with OpenRoaming and PM WAN; Enabling Broadband through Next Gen Wi-Fi Technologies; Convergence of 5G and Wi-Fi; Importance of delicensed Spectrum and Bridging the Digital Divide using FTTX and Wi-Fi.
4. **26 February 2024:** A Chatham House Workshop on Deepfakes was organised in New Delhi. It was generally considered to be a very useful discussion by most participants. Key takeaways from the workshop were shared with the participants.
5. **6 March 2024:** A National Workshop on "Neutral DCI in Buildings" was organised in New Delhi by BIF supported by MoHUA, DoT, and BIS. The key takeaways and notes from the Workshop were shared with key stakeholders.
6. **13 May 2024:** A Conference on "A Robust Digital Infrastructure for Bharat - A Path to Achieving Multi-Gigabit to Every Household by 2030" was organised to highlight the growing importance of multi gigabit availability for every household to meet the digital requirements of the modern era. The conference was divided into three-panel discussions which particularly stressed the paramount need for much higher availability of optic fiber to cater to the exponentially increasing thresholds of data. It was generally considered to be a very useful discussion by most participants and very well covered by Media.

7. **15 May 2024:** The World Telecommunication and Information Society Day (WTISD) 2024, which falls on May 17, was hosted by Broadband India Forum (BIF) on May 15, 2024, at Hotel Le Meridien, New Delhi. The theme for the event was "Digital Innovation for Sustainable Development". Shri Anil Kumar Lahoti, Chairman, TRAI, was the Chief Guest, while the Introductory Address was given by Ms. Aruna Sundararajan, Chairperson, BIF. Shri Manish Sinha, Member (Finance), DoT, Shri Akhilesh Srivastava, Advisor, ITDA, Uttarakhand, Shri Kishore Babu, the Senior Advisor ITU Area Office for South East Asia & Pacific, Jakarta and Shri Radhacharan Shakya, Senior Advisor ITU Area Office, South Asia also gave Special Addresses at the event.

8. **20 June 2024:** BIF celebrated the World Wi-Fi Day and organised a Conference and Exhibition on the theme of "Together for a better Internet - Wi-Fi: The enabler of affordable and inclusive Broadband for India. The Conference was supported by DoT, MeitY, DST, C-DOT. It was also supported by Meta, ACT Fibernet, Qualcomm and important associations like IAFI, IEEE, Wi-Fi Alliance and WBA.
9. **2 July 2024:** BIF organised a virtual workshop conducted by Telecom Sector Skill Council to create awareness on National Apprenticeship Promotion Scheme (NAPS).





Shri S. Krishnan, Secretary, MeitY, Mr. Ricardo Tavares, Chair, BIF Devices Ecosystem Committee & Senior Corporate Affairs Manager, Government Affairs & Public Policy (GAPP), Google Inc; and Dr. Harsha Vardhana Singh, Chairman, Ikdhvaj Advisers LLP, all of whom provided keynote, special and industry addresses respectively. Dr. Naveen Bali and Mr. Dhruv Shekhar of Koan Advisory provided a detailed presentation on the key highlights of the BIF Report.

IV. Other Key Events & Engagements: BIF also co-hosted, as well as participated in a number of events during the period, as follows (September 2023 till 30 September 2024)

- 10. 16 July 2024:** A 'Digital Dialogue' (webinar) organised on the important topic of Cyber Security Considerations in Mobile and Wi-Fi. Mr Abhishek Singh, Additional Secretary, MeitY was the Chief guest at the event.
- 11. 7th August 2024:** The 9th edition of BIF's Annual Flagship Conference - India SatCom 2024, with the theme "Liberalized Satcom – the beginning of a new era" was organised successfully with the Inaugural Session having Shri Anil Kumar Lahoti, Chairman TRAI as the Chief Guest, with Smt Madhu Arora, Member (T), Department of Telecommunications; Mr. V.J. Christopher, Wireless Advisor, WPC, DoT and Dr. PK Jain – Director (Program Management & Authorisation), IN-SPACE as Special Guests of Honour, along with esteemed industry stalwarts and with senior government dignitaries from DoT, DoS, ISRO as well as other leading government stakeholders. The Key Takeaways of India Satcom 2024 have subsequently been shared with key stakeholders.
- 12. 18th September 2024:** BIF released a research-based study report titled "India's Mobile Manufacturing Ecosystem: Challenges and Opportunities". This Report which is based on Primary Research and Secondary data, has been prepared with specific and strategic inputs by BIF's device ecosystem committee, by Koan Advisory – a think tank and research body. The event witnessed eminent dignitaries and speakers who released the Report, which included-

- ➔ **2-4 November 2023:** BIF was an Associate Partner at the 5th Digital Citizen Summit organised by Digital Empowerment Foundation (DEF) and Centre for Development Policy and Practice in Hyderabad. The theme of the Summit was "Commoning the Internet for a Vibrant Democracy". BIF curated one Workshop for the Summit on the topic "Last-mile Secured Broadband connectivity: For Unconnected, Remote and Rural areas on 3rd November. Dr. Shiv Kumar, former Principal Advisor, BIF also spoke at one of the sessions.
- ➔ **20 November -15 December (ITU WRC Dubai 2023):** BIF was represented by Brig. Anil Tandan, DG, BIF and Mr Debashish Bhattacharya, Sr. DDG, BIF.
- ➔ **24-26 November 2023:** BIF participated in the First International Social Workers Conference 2023 organised by Ankitgram Sewadham Ashram in Ujjain, lifetime shelter and rehabilitation center for the homeless, helpless, differently able, mentally ill, dying and destitute people from across the nation of all caste, creed, region, age and gender. Mr. Atul Jain, Director, Technology and Standards participated in the Conference.
- ➔ **28-30 November 2023:** Municipalika is India's leading event on Safe, Smart and Sustainable City Solutions. BIF participated actively in Municipalika 2023 which was organized along with CAPEX in Bangalore with the support of Ministry of Housing and Urban Affairs (MoHUA) as well as Government of Karnataka as Host State. BIF also had its booth along-with M/s Nanovise, a leading and fully CDOT certified Stack Provider and PM-WANI PDOA to demonstrate all the functionalities of PM-WANI first-time along-with monetization use cases. Dr. Shiv Kumar former Principal Advisor, BIF also spoke at one of the sessions in Municipalika 2023.

- **7 December 2023:** 4th Indo-European Dialogue on Standards & Emerging Technologies organised by SESEI - I provided an Industry Address in the Director General and Industry Dialogue at the event. The BIF Team Members also attended the event.
- **12th December 2023:** BIS panel on change in NBC codes-2025 was represented by Dr Shiv Kumar, former Principal Advisor, BIF.
- **16 February 2024:** BIF co-organised along with Bharat Exhibitions, the 3rd Open RAN India 2024 Conference. Mr. Anil Tandan, DG-BIF delivered the welcome address at this Conference during the Inaugural session.
- **5 March 2024:** Meeting with new TRAI Chairman – Shri. Anil Kumar Lahoti: BIF made a detailed presentation on “India’s Digital Infrastructure – A Holistic View” and shared BIF’s work and thought leadership on key thrust areas and main areas of work of BIF.
- **13-15th May 2024:** Critical Communications World (CCW) Conference in Dubai 2024: Mr. Debashish Bhattacharya, Sr. DDG, BIF attended the event and also conducted a meeting with the top management of TCCA
- **15 May 2024:** Keeping in mind the Indian Government initiative on 6G, Bharat Exhibitions and Broadband India Forum co-organised the 2nd

edition of Bharat 6G 2024 International Conference & Exhibition scheduled on the topic 5G & Beyond – Connectivity for a Digital World.

- **15 May 2024:** BIF supported and attended the ITU Opening Ceremony of Girls in ICT Day India 2024 celebrations with participants joining on-site and online from all across India.
- **27-31 May 2024:** BIF supported the 3GPP CT WG Meetings hosted by TSDSI in Hyderabad.
- **27 September 2024:** BIF co-organised along with Bharat Exhibitions, the 2nd Broadband India Summit 2024 Conference. Mr. TV Ramachandran, President BIF delivered the welcome address at this Conference during the Inaugural session.

V. BIF was also invited to important meetings organised by TRAI, DoT, MoHUA, MeitY, DoS, MoF and MIB on various aspects of Digital Communications:

- BIF participated in the PCG#52 and OP#51 meeting on 23-24 April virtually.
- Mr. Debashish Bhattacharya, Sr. DDG, presented the BIF recommendations on the Pre-budget meeting on Union Budget 2024-25 to the Ministry of Finance.





- BIF attended the Meeting of the Panel for Information and Communication Enabled Installations, CED 46: P21 in Gandhinagar. BIF also gave the members in the sector an opportunity to participate in this important event. This allowed the BIF Members and the Directorate team to take a tour inside the GIFT City.
- BIF has been invited by DoT, NTIPRIT and TEC to participate and contribute in meetings on important subjects like "The Telecommunications Act 2023", IoT/M2M devices and applications, WRC 2023 conference, NBM 2.0, D2M, Proliferation of broadband in rural areas, Mobile Technologies, Assessing and rating robustness of AI systems in telecom networks & digital infrastructure etc.
- BIF has participated and contributed in the meetings of National Study Group -4 for ITU-R study circle 2023-27 organised by WPC, DoT.
- BIF has participated and contributed to all relevant meetings of NWG -2,9,11,13,15 and 20 corresponding to ITU – T SG - 2,9, 11, 13,15 and 20 organised by TEC.
- BIF is one of the key members in the WG constituted by TEC's Standard Committee for "Assessing and rating robustness of AI systems in telecom networks & digital infrastructure"
- BIF is a member and active participant in the panel on Information & Communication Enabled Installations, CED 46: P21, of BIS on National Building Codes (NBC 2025) due to be launched in 2025. Two of our Dte people were part of two WGs to suggest modifications for the NBC 2025.
- BIF attended the meeting organised by MeitY to discuss the views/comments on draft Digital Competition Law.

- Participated in Industry Stakeholders meeting on Digital Competition Bill on 20th June. BIF was represented by Mr. Shivnath Thukral, Vice President, BIF & Ms. Mira Swaminathan from the BIF Directorate.
- BIF was invited to be a panelist by Pahle India Foundation on the subject of "Ease of Doing Business in the Telecom Sector: A consultative webinar "on September 13th, 2024. Mr. Debashish Bhattacharya, Sr. DDG represented BIF in this panel discussion which also featured Ms. Archana Gulati, Shri Rajat Kathuria, Shri Vivan Sharan & Lt. Genl. Kochhar.
- BIF has participated and contributed to all relevant meetings of NSG-1, NWP 1C,1A, 1B & 4A-1, ,4A2, 4B, 4C organised by DoS.
- BIF participated in the third meeting of APT Preparatory Group for WTSA-24 (APT WTSA24-3).
- BIF has participated and contributed in the meetings of ITU-R Working groups on a vast range of Agenda Items during the period 2023-27 organised by WPC, DoT.
- BIF participated in the MIB Industry Stakeholder Meeting on Compliance for Misleading Advertisements.
- BIF has been actively contributing and participating in the Working Group meetings for the revision of NFAP 2022.





- BIF attended several meetings of the Committee on Misleading Ads organised by MIB.
- BIF attended the meeting of the Committee on National Broadcasting Policy organised by MIB.
- BIF attended the meetings under the Chairmanship of Joint Secretary (T), DoT to discuss the inputs received regarding the draft Right of Way Rules, 2024.
- BIF attended the meeting to discuss the Digital Communications Policy with National Communications Academy.
- BIF attended all relevant Open House Discussions on various aspects of Digital Communications organised by TRAI.
- BIF made a contribution for the WTSA Meeting of the ITU to be held in Oct 2024. The same had been accepted by the TEC and was forwarded to the next level for consideration at the APAC level. It was finally decided to include it as a Work Item in an existing study instead of creating a new Work Item.

VI. BIF's Senior Leadership team has been invited by the Government and various industry forums to participate as Speakers

- BIF also participated in some important Industry events on important topics like Bharat 6G Mission, D2M Bharat, UA Day 2024, Voice & Data Telecom Leadership Forum, IAFI's India Space Policy Conference, Fourth IN-SPACe Industry Meet, 14th Annual conference on OFC Networks organised by tele.net, National Space Day etc.
- Mira Swaminathan from BIF's Directorate was a panelist at an event organized by Primus Partners on "Impact of Online Advertisements on Misleading Ads."

VII. BIF Directorate was invited to participate in important Committees to provide inputs on:

Drafting Committees for the formulation of Technical Reports in Radio Division, TEC

BIS Committee on Modification of the National Building Code (NBC):

- Working Group on Wireless Systems
- Working Group on Indoor & Outdoor plants





TEC Committee on MATCOF for preparing:

- Essential Requirements (ERs) for telecom equipment/products pertaining for MT Division, TEC under MTCTE.
- Essential Requirements (ER) of 5G CPE.

DoTs Committee to respond to World Bank's B-Ready Framework (Mr. Debashish Bhattacharya is the Primary Nominee)

A chronological summary of the Events, Activities and Engagements by BIF during the Financial Year 2023-24 is presented in details in the other sections of the report.

VIII. Research Reports & Publications:

A number of insightful and interesting White Papers and Reports were published by BIF during the period, as follows:

- BIF Position Paper on 'License Exempt 1200 MHz in 6GHz – A Technology and Economic Necessity for India to be 5 Trillion Economy' was shared in November 2023 with relevant key stakeholders in PMO, TRAI, and DoT.
- Advisory Note submitted to Smt. D Thara, Additional Secretary, MoHUA on accelerating implementation of Addendum to MBBL in states for DCI/IBS and mandating OC/CC. Workshop on awareness of DCI/IBS proposed in Delhi.
- A Study Report titled 'India's Mobile Manufacturing Ecosystem-Challenges and Opportunities' – This paper was prepared jointly by BIF's Device Ecosystems Committee and Koan Advisory.

IX. Members, Advisors, and Directorate:

➤ New members who joined the BIF family:

- **Patrons:** Samsung
- **Corporates:** AWS, Zoom
- **Startups, Academia & Professionals:** Altice Labs

➤ Shri Rajeev Khattar joined BIF's Advisory Council as Hon. Principal Advisor w.e.f. 1st May 2024.

➤ Ms. Mira Swaminathan joined the BIF Directorate as Director - Policy Advocacy and Communications on 4 March 2024.

➤ Mr. Sundeep Kathuria joined the BIF Directorate as Sr. DDG and Ms. Shubhika Saluja as Research Analyst with effect from 1 July 2024.

➤ Dr Shiv Kumar moves on from the BIF Directorate with a new assignment.

➤ Mr. Arun Mukarji, Sr. Director, Operations, BIF relocated to Australia

X. Committee updates:

➤ Mr. Naresh Vattikuti, WiSiG has accepted the position as the Co-Chair of the Working Group on Academia & Standards.

➤ Ms. Koel Chakrabarty, STL has accepted the position as the Co-Chair of the AI & IoT Committee.



- Mr. Harish Krishnan, CISCO has accepted the position as the Chair of the Manufacturing Network Committee. Ms. Vibha Mehra, Nokia has accepted the position of Co-Chair, post vacation of the same by Shri Amit Marwaha.

XI. New Projects & Partnerships:

- BIF signed an MoU with TSDSI on 2nd February in a formal meeting organised in the BIF office.
- BIF is a 3GPP Market Representation Partner(MRP). BIF supported the 3GPP CT (Core Trunking) WG meeting which was hosted by TSDSI in Hyderabad from 27-31 May 2024.
- BIF has enrolled as a member of the Wireless Broadband Alliance (WBA)
- BIF signed a collaboration MoU with The Critical Communication Association (TCCA).
- BIF is a Member of the Global Encryption Coalition (GEC).

XII. Articles and Interactions for Advocacy and Creating Awareness:

A wide number of authored articles and interaction-based news features have been published in well-known mainstream and relevant trade media publications, throughout the financial year 2023-24. The wide gamut of pertinent topics, necessary issues and various critical aspects related to the broadband ecosystem in the country, were addressed via these different by-lined opinion pieces. The overall objective of all these articles were to drive the message forward

for facilitating proliferation of ubiquitous, affordable and more accessible broadband services across the vast expanse of India, in a technology neutral, service neutral and all-inclusive manner. This added to BIF's positioning and credibility as a leading think-tank, with a knowledgeable, unbiased and progressive approach towards technology and its benefits for the citizens of India. Please refer to the Articles & Interviews section for more.

XIII. Public Relations:

Glimpses of the nature of media coverage received throughout the FY is provided in the BIF in Media section.

XIV. Social Media:

BIF continues to leverage its digital/social media platforms for enhanced and effective communications with all our members and other stakeholders. The BIF social media handles are gaining good traction and followership amongst the relevant online audience base, and regular communications and updates on the Forum's activities and engagements are being disseminated through them.

XV. Accounts:

Necessary extracts of the Society's Audited Statement of Accounts for the Financial Year 2023-2024, have been circulated to the Members prior to the Annual General Meeting.

I would like to place on record my special thanks to the Chairperson; my gratitude towards the entire BIF family, including all our esteemed Members, Advisors and Associates, and also a special word of thanks to the Executive Council and Office Bearers, for the guidance, leadership, commitment and contributions to the Forum's many initiatives, achievements and progress. I would also like to convey my appreciation and thanks to the entire BIF Directorate, the small yet highly dedicated and dynamic team.

I wish the Forum and its members all the success and assure my continued participation and support in all the future activities of the Society in the coming year.

T.V. Ramachandran,
President

BIF's Research and Policy Advocacy Initiatives (FY 2023-24)

Spectrum:

• 6GHz

- Letter sent to Secretary (Telecom) regarding why delicensing of 6GHz spectrum is important for the overall socio-economic development in contrast to giving it for use for commercial 5G purposes.
- BIF also wrote to other relevant Government and Regulatory authorities on the Adoption of a License-Exempt Full 6 GHz Band for modern Wi-Fi applications through Wi-Fi 6E and Wi-Fi 7, for Short Range Devices and for boosting research and innovation.
- BIF wrote to Chair, National Committee on 6GHz in WPC/DoT along with detailed inputs and a joint dissent note with IAFI, on the Final Report of the National Committee on 6GHz.
- BIF wrote to DoT for opening up entire 6GHz (5925-7125MHz) band on a license-exempt basis.



• Others

- BIF wrote to DoT with a request for alignment of the 24 GHz band for Non-Specific SRD Applications.
- BIF wrote to Secretary (T) on Improving Efficiency of Spectrum Utilisation Through Exchange of Spectrum.

Activities Related to ITU:

- BIF submitted a proposal to ITU-D on PMGDISHA and also presented the proposal to ITU-D assembly held in Geneva in online mode.
- BIF also submitted a fresh resolution for adoption by ITU-T on rating framework of buildings. Presented the proposal to ITU-T twice at APAC level.
- BIF contributed towards Question 5/1 of SG01 of ITU-D rapporteur group meetings for the 2022-2025 study period.





Satcom:

- ➔ Detailed submission was made to all concerned Government and Regulatory authorities on Methodology of Assignment of Satellite Spectrum in India.
- ➔ BIF commissioned an independent Legal Opinion from a renowned legal luminary on the Methodology of Assignment of Satellite Spectrum. This opinion was then shared with the highest Policy makers and the Regulator.
- ➔ Submitted inputs to DoT Consultation on simplification of licensing framework in accordance with the new Indian Space Policy, 2023.
- ➔ Response to IN-SPACe's Consultation regarding Draft Norms, Guidelines & Procedures (NGP) for implementation of Indian Space Policy 2023.
- ➔ Submitted Inputs to WPC, DoT on WG-4 of WRC-23, pertaining to PACP and WRC-23 positions - dealing with Satellite Agenda.
- ➔ BIF provided inputs to DoT on Agenda Item 10 pertaining to WG-5 of NPC-23 dealing with General Issues.
- ➔ Submitted inputs to DoT Consultation for permitting Sat-phones, Satellite-based IoT/M2M terminals & GSM Mobile phones with Satellite Connectivity in India.
- ➔ BIF wrote to DoT on the assignment of Spectrum for Satellite Communication Services.



Public Wi-Fi/Wi-Fi:

- ➔ BIF submitted a note to the Secretary (Telecom) on the Proliferation of Public Wi-Fi based on PM WANI.
- ➔ BIF wrote to Secretary (Telecom) on Improving Security in Telecom Usage in Public Wi-Fi Hotspots (PWHs) through PM WANI.
- ➔ BIF had meeting with the senior officers in TRAI to apprise them about challenges being faced in proliferation of PM WANI. BIF also submitted a response to the TRAI queries on PMWANI Tariffs & backhaul based on Internet Leased Circuits.
- ➔ BIF submitted a position paper to Member (Finance), DoT and other senior officers about importance of delicensing 6GHz spectrum for the use of WiFi and other services.

Network Manufacturing:

- BIF wrote to Secretary (T) on Ease of doing business in Telecom PLI Policy.
- BIF wrote to Secretary (T) on the COMSEC Scheme with a request for an extension of the implementation timeline by two years.
- BIF wrote to DoT with a request for support on the resolution of the 'Country of origin' issue under MTCTE.
- BIF wrote to DoT for necessary amendments in guidelines to promote Domestic Manufacturing and Indigenous Telecom Products as part of the 'Make-in-India' Initiative.
- BIF wrote to DoT on the proposed amendments in PPP-MII order, 2017- Regarding Telecom Equipment Manufacturing.



OTTs:

- ➡ Submission on aspects related to Network Usage Fees for OTTs was made to concerned relevant Government and Regulatory Authorities.
- ➡ BIF wrote to DoT on the lack of objectivity and rationality in demand for sharing of revenues by OTT with Telcos.

Al:

- ➡ TEC Standard on “Fairness Assessment and Rating of AI Systems” was officially released on 7th July, 2023. BIF worked very closely on this.



Accessibility & Inclusion:

- BIF submitted a note to Hon'ble MoSEIT on Digital India Vision for Persons with Disabilities and Older Persons. This was aligned to the interventions made by BIF during the first pre-consultation on the proposed Digital India Act, which was chaired by Shri Rajeev Chandrasekhar, Hon'ble Minister for Electronics and IT & Skill Development and Entrepreneurship in Bengaluru on 9th March.



- BIF submitted comments on Technical Report on Audio-Visual Content Accessibility Roadmap for India to TEC.
- BIF wrote to Secretary (MeitY) requesting to include a category on the GeM Portal, where vendors, startups, SMEs, or larger organisations can publish their products with Assistive Technologies.



Broadcasting:

- BIF submitted comments and recommendations on the Draft Broadcasting Services (Regulation) Bill, 2023.
- BIF submitted inputs to the Annual Action Plan of Convergence & Broadcasting (C &B) Division of TEC for FY 2024-2025.

DPDP Act:

- BIF made a detailed Submission to the Ministry of Electronics & Information Technology on Timeline Extension for implementing the Digital Personal Data Protection Act, 2023.





Digi Infra:

- BIF submitted its recommendations on the upcoming Bharat Net Project.
- BIF wrote to MoHUA with a request for provisions of safety measures and suitable cable standards for Common Telecom Infrastructure (CTI) inside the buildings.
- BIF submitted a draft Advisory Note for the issue of necessary instructions to States/UTs for smooth implementation of Addendum to Model Building Bye-Laws (MBBL) to the Additional Secretary, MoHUA.

Others:

- BIF has made submissions to all the relevant TRAI Consultation papers released in the period April 2023 to March 2024.
- BIF attended all the relevant TRAI Open House Discussions (OHD) held.
- Representation to DoT was made on certain views pertaining to the TRAI recommendations on Regulation of CDNs.
- Representation to the Ministry of Finance on the levy of Anti-Dumping Duty on Single Mode Optical Fibre (SMOF) based on DGTR Recommendations.
- A Study Group has been set up to study the impact of digital infrastructure/ Broadband Internet by quantifying the impact of spillover effect on macro and micro level, that's state/region wise and nationwide. Prof. N.Yoshino, Former Dean, ADBI Japan is the Mentor of the Study Group and the group is chaired by Shri Akhilesh Srivastava, Advisor (IT), Government of Uttarakhand, Mr. Manoj Tandon, RailTel, Dr. S N Gupta, Bluetown, Dr N. Sarat Chandra Babu, Hon'y Principal Advisor, BIF, are other members of this Study Group. This is supported by some of the BIF Directorate Team Members. Brig. Anil Tandan, DG, BIF is the Convener and Ms. Neha Hathiari, Advisory@TVR is the Co-Convener.

- BIF wrote to DoT with a request for Notification of Definition of “Structural Support” for Apparatus.
- BIF provided its views to DoT on TRAI Recommendations on ‘Regulation of Data centers, Content Delivery Networks and Internet Exchanges’ issued on 18th November, 2022.
- BIF wrote to DoT on License Fee Waiver on Fixed Line Broadband.
- BIF provided response to Ministry of Consumer Affairs on the Draft Guidelines for Prevention and Regulation of Dark Patterns, 2023.
- BIF wrote to the Ministry of Finance on India’s transition to be the global hub in “End to End Manufacturing Optical Fibre Cables”.
- BIF wrote to MeitY on Zero licensing for Internet Exchanges in India.
- BIF provided inputs to the Ministry of Finance to the Pre Budget recommendations for the Union Budget FY 24-25 regarding amendments in Direct & Indirect Taxes and rationalization of Import Duties.
- BIF wrote to Secretary, MeitY on Internet Exchange for faster Domestic Internet for better User Experience.
- BIF submitted inputs for the Annual Action Plan of Telecom Engineering Centre (TEC) for the Financial Year 2024-25.
- BIF wrote to DoT on the sale of Illegal Repeaters and Boosters on e-Commerce platforms and outlet.
- BIF submitted its views on the Vision document on National Broadband Mission (NBM 2.0) to the Administrator, Digital Bharat Nidhi, DoT based on the inputs given by BIF team during the meeting on the same chaired by the Administrator, Digital Bharat Nidhi.



TIMELINE OF EVENTS

Apr 2023 – Mar 2024

APRIL 2023

11th April 2023: A joint physical event was organized by WBA & BIF on 'Wi-Fi and Delicensing of 6GHz: The Driving Force of Broadband for All.'



On this occasion, an MoU was signed between WBA and BIF during the event.



MAY, 2023

23rd May 2023: Ms. Aruna Sundararajan, IAS (Retd.), Chairperson, Broadband India Forum (BIF) & Former Secretary (Telecom), Department of Telecommunications (DoT) was part of the panellist in the **USTDA hosted U.S.-India 5G and Next Generation Networks Workshop**.



JUNE, 2023

30th June 2023: A BIF Commissioned Research paper on the “**The Economic Value of the App Economy in India**” which was authored by 3 senior Professors of IIMA, was publicly released by **Shri Rajeev Chandrasekhar, Hon’ble Minister for Electronics and IT & Skill Development and Entrepreneurship**.



JULY, 2023

20th July 2023: The 4th edition of the AI – India Summit 2023 Summit organized by BE, with BIF as the Presenting Partner where Smt. Aruna Sundararajan, Chairperson, BIF & Former Secretary (Telecom), Department of Telecommunications (DoT) gave the Introductory Address.





25th July 2023: Mr. Debashish Bhattacharya, Senior DDG represented BIF at the IN-SPACe मंथन on Decadal Vision and Strategy and presented in the session on Augment Interactive Communication Platform and Broadcast Services.

AUGUST, 2023



03rd August 2023: Mr. Debashish Bhattacharya, Senior DDG represented BIF at the follow-up session of IN-SPACe - Brainstorming Session on Augment Interactive Communication Platform and Broadcast Services.

SEPTEMBER, 2023



15th September 2023: President BIF, Mr. TV Ramachandran gave special address as Special Guest and Chair in the inaugural session of Voice & Data 5G+ Conference.



16th September 2023: Mr. Debashish Bhattacharya represented BIF at the Nokia 6G event in Bangalore. Mr. Atul Jain from Directorate also attended the event.



21st September 2023: Mr. Atul Jain represented BIF at the online workshop on Digital Signatures, which was organized by the Bureau of Indian Standards (BIS) in collaboration with the European Telecommunications Standards Institute (ETSI).



21st September 2023: AGM (2022-2023) of IPTV Society (BIF) was held on 21st September, 2023.



28th September 2023: An exclusive virtual discussion was organised LIVE on TwitterSpaces by 'The Plunge Daily' at 7:00pm, with esteemed panellist Mr. TV Ramachandran, Prof. Rekha, Mr. Mahesh Uppal and Mr. Ashutosh on the topic "Auction vs administrative- Assignment of Satellite Spectrum".



29th September 2023: Mr. Debashish Bhattacharya participated in a private, closed door, and off the record interaction with Meredith Whittaker, the President of the Signal Foundation and Co-Founder and Chief Advisor of AI Now.

29th September 2023: President BIF, Mr. TV Ramachandran participated in a CNBC interview on the subject Telcos vs OTT

OCTOBER, 2023

12th October 2023: President BIF, spoke at Qualcomm Future Tech India Wireless Broadband and Connectivity day



12th October 2023: Mr. Debashish Bhattacharya, Sr DDG was invited as a Panelist by USISPF on "Discussion on the Upcoming Digital India Act" on Thursday, 12th October, New Delhi - Taj Ambassador, New Delhi





16-18th October 2023: Mr. Debashish Bhattacharya, Sr DDG participated in the 3rd India Spectrum Management Conference from 16th to 18th October 2023 at New Delhi, India

NOVEMBER, 2023



2-4th November 2023: 5th Digital Citizen Summit: BIF was an Associate Partner at the 5th Digital Citizen Summit organised by Digital Empowerment Foundation (DEF) and Centre for Development Policy and Practice in Hyderabad. BIF curated one Workshop for the Summit on the topic “Last-mile Secured Broadband connectivity: For Unconnected, Remote and Rural areas” on 3rd November. Dr. Shiv Kumar, Principal Advisor, BIF also spoke at one of the sessions.



17th November 2023: BIF – Saksham conducted a program for the DoT officials at Sanchar Bhawan to promote awareness on how to create accessible content on social media so that everyone can enjoy the possibilities it offers.



20th November - 15th December (ITU WRC Dubai 2023): BIF was represented by Brig. Anil Tandan, DG, BIF and Mr. Debashish Bhattacharya, Sr DDG, BIF.



24-26th November: BIF participated in the First International Social Workers Conference 2023 organised by Ankitgram Sewadham Ashram in Ujjain, lifetime shelter and rehabilitation center for the homeless, helpless, differently able, mentally ill, dying and destitute people from across the nation of all caste, creed, region, age and gender. Mr. Atul Jain, Director, Technology and Standards represented BIF in the Conference.



28-30th November - Municipalika 2023: Municipalika is India's leading event on Safe, Smart and Sustainable City Solutions. BIF participated actively in Municipalika 2023 which was organized along with CAPEX in Bangalore with the support of Ministry of Housing and Urban Affairs (MoHUA) as well as Government of Karnataka as Host State. BIF also had its booth along-with M/s Nanovise, a leading and fully CDOT certified Stack Provider and PM-WANI PDOA to demonstrate all the functionalities of PM-WANI first-time along-with monetization use cases. Mr. Gopa Kumar, CEO, RANext (BIF Patron Member) and Dr Shiv Kumar, Principal Advisor, BIF also spoke at one of the sessions on DCI in Municipalika 2023.



DECEMBER, 2023

5th December - IIGF 2023: The Third edition of IIGF was organised on 5th December with the overall theme of 'Moving forward - Calibrating Bharat's Digital Agenda'. BIF was actively involved in the organisation of IIGF 2023. The Inaugural session was graced by Shri Rajeev Chandrasekhar, Hon'ble Minister of State for Electronics and Information Technology. Shri S Krishnan, Secretary, MeitY provided the Special Address and Shri Sushil Pal, Joint Secretary, MeitY gave the Introductory remarks in the Inaugural Session.



7th December 2023: BIF participated at the 4th Indo-European Dialogue on Standards & Emerging Technologies organised by SESEI



JANUARY, 2024

9th January 2024: Bharat 5G Mission 2024 titled "Forging Digital Democracy – Trusted Technology Collaboration" was organised by Bharat Exhibitions and supported by BIF at Le Meridien, New Delhi



30th January 2024: Wireless Broadband Alliance co-hosted its Annual Wireless Global Congress (WGC) APAC, together with BIF, event in Delhi with the objective to discuss and deliberate on the important topic of 'Wi-Fi Innovations Connecting our Digital World'. Mr. T V Ramachandran, President, BIF delivered a special address in the Inaugural session of the conference. Mr. Anil Tandan, DG, BIF moderated a panel discussion on a related subject.

FEBRUARY, 2024

15-17th February 2024: BIF participated in the BES EXPO 2023 organised by BES(I) from 16-18 Feb'23 in New Delhi



16th February 2024: BIF co-organised along with Bharat Exhibitions, the 3rd Open RAN India 2024 Conference. Mr. Anil Tandan delivered the welcome address at this Conference during the Inaugural session.



26th February 2024: A Chatham House Workshop on Deepfakes was organised in New Delhi. It was generally considered to be a very useful discussion by most participants. Key takeaways from the workshop were shared with the participants.

It was attended by key policymakers, members from the industry and academia.

MARCH, 2024

1st March 2024: IEEE Standards Workshop on Rural Connectivity was held on 1st March 2024 at Bengaluru. Mr. Debashish Bhattacharya, Sr DDG moderated the policy panel during the workshop. Mr. Arun Mukarji from BIF Directorate also attended the workshop.



6th March 2024: A National Workshop on "Neutral DCI in Buildings" was organised in New Delhi by BIF supported by MoHUA, DoT and BIS.



15th March 2024: National Telecommunications Institute for Policy Research Innovation & Training (NTIPRIT) organised a One Day Workshop on the topic “Creating Ecosystem for faster Proliferation of Broadband Services in Rural India” on 15th March 2024 at SCOPE Convention Centre, CGO Complex, Lodhi Road, New Delhi. Brig. Anil Tandon (Retd.), DG, was part of panellist for the session on “Affordable Broadband Services in Rural India.”



BIF IN MEDIA

APR 2023 – MAR 2024

Broadband India Forum Advocates for Inclusive Development on World Telecommunication and Information Society Day 2023

New Delhi, 17th May 2023: World Telecommunication and Information Society Day (WTISD) is observed each year on May 17th. The global observance marks the historical presence of the regional and information and communication technology (ICT) through collaborative efforts on a global scale.

HISTORY OF WORLD TELECOMMUNICATION AND INFORMATION SOCIETY DAY (WTISD) World: The inaugural 'Telecom Day' was observed on May 17, 1988, in honor of two significant milestones: the establishment of the International Telecommunication Union (ITU) and the signing of the pioneering International Telegraph Convention in 1865. Later, in March 2006, the UN General Assembly designated May 17 as the official World Telecommunication Society Day, highlighting the importance of information society in the 21st century. Subsequently, in November 2006, during the ITU Plenipotentiary Conference held in Dubai, Turkey, it was decided to celebrate World Telecommunication and Information Society Day (WTISD) as a unified observance known as World Telecom and Information Society Day (WTISD) starting from May 17 each year.

WTISD 2023: The theme for the 2023 WTISD is 'Inclusive Development through Information and Communication Technology'. The theme for the 2023 WTISD is 'Inclusive Development through Information and Communication Technology'.

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6 GHz band spectrum for Wi-Fi to drive broadband penetration : BIF

"Wi-Fi will not be a competitor to 5G but will complement it," said Raj Kumar Singhania, chief executive officer of 5G-India.

Written by: [Sudhakar](#)
April 12, 2023 10:00:00



6 GHz band spectrum for Wi-Fi to drive broadband penetration across the country.

New Delhi-based policy think tank Broadband India Forum (BIF) has urged the government to allocate 6 GHz band spectrum for Wi-Fi to drive broadband penetration across the country.

The comments from the think tank came in response to a report by the Telecom Regulatory Authority of India (TRAI) that suggested the allocation of 6 GHz band spectrum for Wi-Fi.

The comments from the think tank came in response to a report by the Telecom Regulatory Authority of India (TRAI) that suggested the allocation of 6 GHz band spectrum for Wi-Fi.

Govt shouldn't have powers to censor online content: BIF

BIF suggests that there is a clear risk of frequency of the government using online content to block or limit access to the internet.

Written by: [Sudhakar](#)
March 16, 2023 10:00:00



With the Digital India Bill in the works to replace the decade-old IT Act, 2008, BIF has urged the government to ensure that the new law does not give the government the power to censor online content.

Delhi-based think tank Broadband India Forum (BIF) on Thursday said the government should not have powers under the new law to block access to online content.

Telecom Bill consumer-centric, pro-investor; clarifies on key issues: BIF

Broadband India Forum (BIF) on Wednesday said the new telecom bill brings clarity on a slew of important issues facing the sector.

Written by: [Sudhakar](#)
October 26, 2023 09:00:00

Business News | Business | Broadband India Forum | Not OTTs, but telcos' users directly driving data traffic, says BIF

Currently, about 19 out of 27 EU nations have rejected the telcos' proposition of sharing of network costs by OTTs (CAPs).

Written by: [Sudhakar](#)
October 26, 2023 09:00:00

Comments from BIF have come a week after a media report said that Cellular Operators Association of India (COAI) has asked telcos including Reliance Jio, Bharti Airtel, and Vodafone Idea, to provide data on the amount of bandwidth consumed by companies like WhatsApp, Facebook, and Netflix.

Forum (BIF), which represents major technology firms such as Google, Amazon, and Netflix, has said that telecom operators are in agreement with their arguments that OTTs (over-the-top service providers) are not responsible for the bandwidths on their networks.

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India's app market to reach at \$800 billion by 2030

Updated: June 30, 2023 at 04:22 PM (New Delhi)

A study by Broadband India Forum (BIF) reveals that the growth in the app economy is around 32 per cent, which is more than four times the GDP growth.

BY: [Sudhakar](#)

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IT'S TIME TO RESOLVE THE SPECTRUM CONUNDRUM

India needs a balanced policy that can protect the spectrum rights of the incumbent broadcasting sector and also accommodate the 5G players



Permissivity is a critical characteristic of Indian consumers, making the affordability of communication media crucial in the field of information and broadcasting. Undoubtedly, broadcasting serves as a highly non-effective and reliable source of entertainment, education, and knowledge for the masses. Moreover, it plays a significant role in expanding the reach of education and awareness to rural, remote, and economically disadvantaged citizens. Governments also utilize broadcasting for public welfare and promoting socioeconomic development. Hence, it merits considerable importance in the communication landscape.

The Cable and Satellite (C&S) sector holds significant importance for the nation as it caters to communication and entertainment services for 207 million TV households, including both rural and urban areas. With nearly 100 registered TV channels transmitted through satellites using the C-Band radio spectrum (4-8 GHz)

NEWSLINES OF THE DAY

BIF signs MoU with WBA to expand NextGen Wireless Ecosystem

April 11, 2023

Broadband India Forum (BIF) and Wireless Broadband Alliance (WBA) concluded their inaugural event on "Wi-Fi and Licensing of 6GHz - The Driving Force of Broadband for All" on April 11, 2023 at Le Meridien Hotel, Delhi. The event jointly focused on the importance of the globally harmonised unlicensed 6GHz spectrum band and the benefits it brings by addressing the Digital Divide, make spectrum available for next generation Wi products based on standardised IEEE 802.11 technologies via Wi-Fi 6E and Wi-Fi 7. The event also highlighted the importance of the 6GHz spectrum band in accelerating technology innovations including new applications like AR/VR, Holographic systems. CT is the exclusive media partner.

The event brought together policymakers, industry leaders, subject matter experts, and other stakeholders to discuss and deliberate on aspects around how latest Wi-Fi technologies viz. Wi-Fi 6E (and upcoming Wi-Fi 7) that work exclusively in the delineated 6GHz spectrum band can help complement 5G and thereby help bridge the connectivity gap besides spotting new innovations and research & development of new applications & services.

India urgently needs the 6GHz spectrum to be opened up for Wi-Fi to achieve its broadband goals as well as meeting the growth opportunities for business and societal needs, as has already been agreed in over 50 countries worldwide.

The event also focused on how next-gen Wi-Fi technologies, riding on the delineated 6GHz spectrum band, could help provide ultra-high speed and low latency connectivity across and corner of the country, thereby complementing 5G in a tower and fiber infrastructure deployment may also.



Forum Unveils Visionary Proposals for 2024-25 Budget Boost

By Team BIF | January 10, 2024



As the Union Budget 2024-25 approaches, Broadband India Forum (BIF), a prominent Policy & Regulatory Think Tank, articulates key measures to foster the growth of Digital Public Infrastructure. In the context of the government's active pursuit of digital transformation and efforts to enhance investor confidence, BIF views the upcoming budget as a strategic opportunity for the implementation of vital initiatives.

6 GHz not used for 5G globally, should be licensed: BIF to DoT

Stating that the entire 6 GHz band should be allocated for WFT services, the tech industry has highlighted that enough spectrum is not available for 5G services. BIF has also stated that the international telecommunication union (ITU) is deliberating on allocating spectrum in 3.24 GHz bands as well as an additional 6GHz band for 5G.



New Delhi The tech industry has opposed calls by telecom for auctioning of the 6 GHz band of spectrum for 5G services, saying that spectrum in the world are close alternative used for the next-gen technology.

Stressing that the entire 6 GHz band should be delineated for WFT services, the tech industry has highlighted that enough spectrum is not available for 5G services. BIF has also stated that the international telecommunication union (ITU) is deliberating on allocating spectrum in 3.24 GHz bands as well as an additional 6GHz band for 5G.

NEWSLINES OF THE DAY

Telecom Bill - A giant leap forward, BIF

December 10, 2023

In its apex Executive Council meeting on such instance, Broadband India Forum (BIF), the leading independent Think Tank and Policy Forum for Digital Communications in the country, discussed the Telecommunications Bill 2023, which was tabled in the Lok Sabha by Hon'ble Minister for Communications & IT, Shri Ashwini Vaishnaw on 18th December 2023. It praised the bill and unanimously adopted the following resolution formally: -

The EC was of the view that this was a historic milestone in the annals of Indian Telecom and truly a giant leap forward for the Bharat Digital Economy. This extremely progressive Bill that consolidates different laws of 1980, 1997 and 2020, to further catalyse this rapidly growing technological age was warmly hailed by the EC. It brings in clarity on a plethora of key issues that have been before the sector - the TRAI power & functions, protection and duties of telecom users, clarity in definition of telecommunication service, exclusion of OTTs from the purview of Telecom regulations, administrative allocation of satellite spectrum and certain other types of spectrum, Right of Way issues, spurring of Universal Service and Innovation/R&D through a Digital Bharat Nidhi and Regulatory Sandbox and many other important aspects.

The BIF EC believes that the landmark Bill will help achieve increased acceleration of internet/broadband penetration and will provide a huge impetus to the growth of the digital economy. It will bring about many consumer benefits besides boosting investor confidence and fetching billions of dollars of FDI in the digital sector. Further, it would help incentivise the exponential growth of the space startups segment which already has 100 startups, thereby boosting India's Space Mission.

The Executive Council solemnly resolved that BIF and its members will spare no efforts to leverage the Bill and support the Government to further speeding India's Journey on the Digital Highway.

While praising the Bill, Mr. TV Ramachandran, President, Broadband India Forum, commented, "The Indian Telecommunications Bill 2023 will serve as a strong enabler for the larger digital ecosystem and, in particular, the innovative OTT Apps and Satellite Sectors in the country. It seeks to address several inhibiting issues and would lead to tremendous boost to investor confidence, thereby causing a quantum jump in the growth of the sector."

TRAI RECOMMENDATIONS ON PROMOTION OF NATEM – EXTREMELY COMPREHENSIVE & FORWARD LOOKING RECOMMENDATIONS



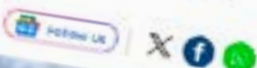
The Broadband India Forum (BIF) warmly welcomes the TRAI recommendations on the Promotion of Networking & Telecom Equipment Manufacturing (NATEM) for its excellent assessment of India's true potential in Telecom Equipment Manufacturing and for delineating measures that would enable the sector to transition from high import dependency to becoming a global manufacturing hub.

“

COMMENTING ON THE TRAI RECOMMENDATIONS, SHRI T.V. RAMACHANDRAN, PRESIDENT OF THE BROADBAND INDIA FORUM, SAID, “TRAI MUST BE LAuded FOR THE MEASURES THAT THEY HAVE RECOMMENDED TO MAKE INDIA A GLOBAL MANUFACTURING HUB WITH A FOCUS ON EXPORTS BESIDES LOCAL MANUFACTURING OF NETWORKING & TELECOM EQUIPMENT. THE DETAILED RECOMMENDATIONS INCLUDE, AMONG OTHERS, A REVIEW OF THE PMA-PME POLICY GUIDELINES, INCLUDING THE VALUE ADDITION NORMS, SO THAT THEY ARE ALIGNED WITH MARKET REALITIES. ADDITIONAL FINANCIAL INCENTIVES BEYOND THE EXISTING PGI SCHEME AND POLICY GUIDELINES ARE PROPOSED, ALONG WITH PROCEDURAL SIMPLIFICATION FOR POSITIONING INDIA AS A GLOBAL R&D AND REPAIR HUB.” HE ALSO ADDED, “SOME OF THESE PROVISIONS COULD BE APPLICABLE TO THE SATCOM INDUSTRY, AS APPROPRIATE.”

Must OTTs pay telcos?

This line of argument ignores the substantive findings of globally reputed agencies, such as the EU's BEREC
Written by **Expert**
Updated: September 23, 2023 14:57 IST



Hype, hope, and hard truths



TV RAMACHANDRAN
Vice President, Broadband India Forum, Former IAS Officer

5G Fixed Wireless Access is being touted as a saviour for 5G in India. But, the truth is it can only provide temporary success

As a result it was asked to step back for the 5G scene. (PTI)
By TV Ramachandran, President, Broadband India Forum
In the on going box-office run of the OTT tragi-comedy, recent newsletter came up recently to offer the grat-a-service—“Perha should just pay Airtel”. Such a piece of bold alternative action is critical attention by the stakeholder community at large.

ONE YEAR AFTER the launch of 5G in India, it is an open secret that the technology does not provide business viability. This being couched in euphemistic terms as “inability to support 5G”. India is not alone in this failing, the global experience is revealing over two years of operation. This is ever-growing, since the real use-case of 5G is only speed and, generally speaking, 4G speeds are more than adequate to provide good quality of experience for customers using smart phones. In fact, 10-15 Mbps speeds are enough to get good video streaming experience and suffice for handling most other applications in everyday use including casual online gaming. Advanced specialized applications like AR, VR, immersive gaming etc would require higher speeds but such usage alone is not enough for business viability. Further, experts believe that 4G will continue to deliver much higher speeds than 5G.

have not yielded results. In fact, the latest phase of BharatNet approved by the Cabinet and involving an outlay of ₹3.39 trillion includes the government's plan to build 5G PWA and Satcom to reach unconnected villages. Much Overton, to improve the success of 5G PWA.

In the above context, some facts need to be understood. Firstly, 5G PWA is neither a one-time cost but a heavily-dis-

and that too, when tariffs are extremely low compared to the earlier 4G. Hence, 5G PWA would need to be replaced sooner rather than later with OPEX and India would incur a double whammy in cost. Incidentally, such replacement would become necessary since utilization of 5G data-rich apps through PWA and external networks would soon lead to network congestion and lower customer experience, as envisaged by the ITI.

Third, since PWA is not a one-time cost, we are still looking for enough volume of high-bandwidth applications. Even such use cases are becoming available, examples being advanced gaming, AR, VR, SE video etc. While these can be covered by 5G in the near future, it is not clear if they would be capable of handling the data-intensive signals. Only then would the benefits of 5G be derived to the end users in India. Hence, the current 80% of the data traffic (the current 80% in India based on 4G) is not 5G. It is 4G. Hence, we need to adapt 5G to the 4G spectrum, which works on the 4.8-8.8 GHz range, to complement the 4G spectrum. To complement the 4G spectrum, we need to adapt 5G to the 4.8-8.8 GHz range, to complement the 4G spectrum. To complement the 4G spectrum, we need to adapt 5G to the 4.8-8.8 GHz range, to complement the 4G spectrum.

Fourth, while 5G PWA cannot be used with current spectrum of 200 MHz, private wireless spectrum, the government has allocated telecom spectrum in the 6 GHz band, which appears at extremely low power and therefore 6 GHz (WIFI) can be used in the 6 GHz band.

BIF Hails Epoch Making Cabinet Approval for Connecting all 6.4L villages

© August 8, 2023 | [Main Story](#) | [Business](#) | [Comments \(0\)](#)

New Delhi, 8th August, 2023: BIF, a prominent policy forum, and think-tank, celebrates the cabinet approval aimed at providing broadband connectivity to every village in the country. The approval of the BharatNet project, with an outlay of Rs. 1.39 lakh crore, marks a historic step towards achieving the goals of Digital India and Inclusion and promises to catalyze socio-economic development and progress for the nation.

This government initiative presents a unique opportunity to deliver affordable and reliable connectivity to every individual in rural areas, bridging the digital divide and fostering Digital Transformation. By leveraging this effort with the flagship program of PM-WANI Public Wi-Fi Hotspots and utilizing cutting-edge Wi-Fi products like Wi-Fi 6E & Wi-Fi 7, every villager can potentially access high-speed and reliable broadband, comparable to their urban counterparts in cities, aligning with the Hon'ble Prime Minister's vision of Sabka Saath, Sabka Vikas, and Sabka Progress. The ripple effects of this government initiative will pave the way for the creation of local self-employment opportunities and entrepreneurship at the village level.

USHERING IN THE ERA OF INDIAN TELECOM RESURGENCE

The new Telecom Act addresses key issues hindering the sector's growth, paving the way for innovation, investments, and better customer services



The Telecommunications Act, 2023 which replaces the 33-year-old Indian Telegraph Act of 1885 and two other Acts, represents a milestone in India's telecom sector. It signifies the evolution of digital communications, addressing key issues that previously hindered sector growth and protecting it to new heights of performance potential.

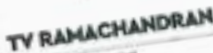
CLARITY ON SPECTRUM ASSIGNMENT
One of the primary features of this Act is that it provides clear and concise guidelines for the assignment of spectrum for the first time in nearly 30 years since the opening of the telecom sector. The spectrum, the lifeblood of the sector, has unfortunately been the source of numerous disputes, disagreements and controversies that have plagued the industry. The Act eliminates all uncertainty while clearly outlining directions for transparency and predictability in the assignment of various forms of spectrum for different applications or end users, it effectively provides clarity on what can and cannot be auctioned.

While the Supreme Court judgment in the 2G spectrum matter was considered a necessary course correction for



Data protection Act: Mind the gaps

While the focus on consent as the corner processing makes for a robust mechanism to ask businesses to give microscopic, §



Details often referred to the new bill, through the description is a gross misstatement. The bill does not prohibit the teacher from using any of his or her own personal data for research or teaching purposes. It does prohibit the teacher from using any of his or her own personal data for commercial purposes. This is a very important distinction. The bill does not prohibit the teacher from using any of his or her own personal data for research or teaching purposes. It does prohibit the teacher from using any of his or her own personal data for commercial purposes. This is a very important distinction. The bill does not prohibit the teacher from using any of his or her own personal data for research or teaching purposes. It does prohibit the teacher from using any of his or her own personal data for commercial purposes. This is a very important distinction.

ment agency, but the let us assume like sovereignty and integrity of India, security of the state, friendly relations with foreign states, law and order, economic, social and educational aspects of the state, these are the four basic principles of the Preamble. But these four principles do not go well with these four principles of sovereignty and integrity of the state. The four principles of the Preamble are not in line with the four principles of the Preamble. The four principles of the Preamble are not in line with the four principles of the Preamble. The four principles of the Preamble are not in line with the four principles of the Preamble.

primary ground for data processing is to be welcomed, it is equally important to address the difficulties this could pose for both individuals and businesses. There are two ways of approach, emphasis on 'data and plain language' must be given while giving organisations time to adjust their privacy policy.

...denying
...to foreign data
...also needs to
...looked at, to
...give the law with
...sections accorded
...jurisdictions

The clause denying protection to foreign data principals also needs to be relooked at, to harmonise the law with the protections accorded in other jurisdictions.

By 2026, India will have 120 crore Internet users: Rajeev Chandrabekhar

...the country's largest computer business by the world today. By 2010, Microsoft's revenue will have grown from \$10.5 billion to \$100 billion, according to the company's latest projections. Microsoft's revenue will be the largest single source of revenue for the world's largest computer business by the world today.



2004, fueling the up economy in the country, minister of state for IT and Electronics Rajeev Chandra's office Puri said.

"We are certainly the largest consumer community in the world today. By 2005, our coast industries will have increased across. And by 2010, we will be the largest single source of income," he said.

Not OTTs, but telco users driving data traffic: Broadband forum

ALLEN GROVER
10000 COLUMBIA RD

[illegible]

NETWORK FEE ROW

- Comments from Gill have come after a report said that CO2AL has asked telcos to provide data on the amount of bandwidth consumed by companies like iStockphoto, not a
- It said that telecom operators are misjudging the government with their arguments that OTT are directly consuming major part of the bandwidth on their networks

Monitors are provided to pay installed apps when the phone is brought, by the stretch of the imagination, into some claim that the CEO's ACA Policy was a "business transaction" under the

Comment: I am a 28-year-old male

are still after positive reports such as that by the United Operators Association of India (UOAI) members who include Birla Group, ITC, and Alkerm, and local union ideas, to provide data on the amount of bandwidth consumed by companies like Alkerm, ITC, and Birla. The COAI would award 30% of the bandwidth consumed by these four players in a scenario they should provide about all major service providers in the market.

a thorough evaluation of the effectiveness of the action in assignment in achieving policy goals and regulations. The nine specific criteria, including effective utilisation by service providers, ensuring a fair and transparent allocation process, competition, ensuring a fair and transparent allocation process, institutional best practices, maximising productive spectrum use, encouraging diversity in the TV industry, fostering satellite global competitiveness for Indian telecom companies.

comprehensive analysis is a resounding indictment of exclusive
mechanisms that fall short of fulfilling the critical objectives
and regulation. Importantly, the authors emphasize that satellite
resource, and existing empirical and practical models of assignment
grant. Instead, the authors advocate for an administrative assignment
allocation spectrum on a shared basis, in line with international best

lication spect...

The government wants to optimise the use of the spectrum. To that end, it is allowing re-farming (repurposing of frequency range for a different use than for which it is used by an existing assignee) and harmonisation (rearrangement of a frequency range), long-standing demands from industry. It also wants to allocate spectrum that is already assigned to an entity (the primary assignee) to one or more other entities (secondary assignees) as long as their is not harmful interference for the primary assignee. The government also wants to allow sharing, trading, leasing and surrendering of assigned spectrum.

Both the IAMAI and Broadband India Forum (BIF) lauded the inclusion of allocation of satellite spectrum through administrative process as a positive move that safeguards the space sector. This will help connect remote areas and global mobile personal communication by satellites (GMPCS) through administrative process is a positive move that safeguards the space sector. This will help connect remote areas and global mobile personal communication by satellites (GMPCS) through administrative process is a positive move that safeguards the space sector.

POWERING NEXT-GEN WIFI AND BROADBAND FOR ALL

India needs the full 6 GHz band unlicensed to leverage the power of wireless connectivity, empower communities, and transform the country's digital landscape



The assignment of an increased quantum of suitable unlicensed spectrum for Wi-Fi has become a driving force for demand around the world.

modern world and the world. The adoption of established, accessible, high-quality broadband, such as Wi-Fi, offers a solution. This is essential with remaining affordable for the common user wireless services that will every aspect of day-to-day living, including healthcare, education, work and entertainment. The target is all major countries in need to have high-speed broadband connection in every household and can be used for access to innovative cloud-based applications including HD video, gaming and social media.

In this scenario, there is, naturally, heightened priority in all major regions to make available the widest contiguous frequency range of 200 MHz in the 5 GHz band (5.925 GHz–7.125 GHz) for Wi-Fi to boost broadband connectivity. And innovation, driven by growth targets and digital ambitions, India naturally has to take a leadership position in the critical area.

IS IT REASONABLE FOR 5G TO DEMAND 6 GHZ?
While global cellular data continues to grow, services, the rate of growth is slowing. The industry has achieved a lot of success in the past few years, but it's not clear if the same growth can be sustained.

REASONABLE FOR 5G TO DEMAND 4G/5G?
While global cellular data continues to grow to fuel wireless services, the rate of growth is no longer skyrocketing and has actually slowed down from more than 90% in 2018 to 34% in 2021 and further to about 22% in 2022, according to Analysys Mason. Data usage per mobile broadband subscription in the OECD countries grew a modest 17%

MEANWHILES OF THE DAY
BIF supports ICRIER working paper's findings against satellite spectrum auctions

August 12, 2014

The Broadband India Forum (BIF), an independent policy forum and knowledge-based think tank, today highlighted the compelling findings of the recently released ICRIER Working Paper (No.41) of July 2013. The paper, authored by ICRIER and Prof Richa Jain, scrutinises the implications of Satellite Spectrum Allocations through auctions and underscores the failure of auctions in achieving vital spectrum management and regulatory objectives.

Authored Articles from BIF Leadership

Apr 2023 – Mar 2024

APRIL 2023

- [Auction of satellite spectrum?](#) - Article by BIF President Mr. TV Ramachandran in ET Telecom
- [Harnessing the 'Made in India' Potential](#) - Article by BIF President Mr. TV Ramachandran in Voice & Data
- [Protection of incumbent broadcasters C-band spectrum from poaching – Essential in the public interest](#) - Article by BIF President in Broadcast & Cablesat

MAY 2023

- [BSNL – Building the 4G bridge to prosperity](#) – Critical to success could be some unique pillars - Article by BIF President in Communications Today
- [India's own SpaceX](#): Why boosting FDI in space sector is the need of the hour - Article by BIF President in The Economic Times

JUNE 2023

- [Unlocking Opportunities: Enhancing the scope of IP-1s critical for India's digital success](#) – Article in tele.net by Mr. TV Ramachandran, President, BIF
- [Spillover benefits from digital communications infrastructure – The overflow is greater than the mainstream!](#) - Article by BIF President in Communications Today
- [Are telcos indirectly charging customers more?](#) - Article by BIF President in Financial Express

JULY 2023

- [The telcos' golden goose](#) - Article by BIF President in Financial Express
- [A case for the non-competing CUG](#) - Article by BIF President in Voice & Data
- [A losing gamble](#) - Article by Mr. TV Ramachandran, President, BIF, in Financial Express

AUGUST 2023

- [Internet exchange points](#) – The golden key to growth of India's digital economy - Article by Mr. TV Ramachandran, President, BIF, in Communications Today
- [It's time to resolve the spectrum conundrum](#) - Article by BIF President in Voice & Data
- [Why Should OTTs Pay?](#) - Article by BIF President in Economic Times

SEPTEMBER 2023

- [Digital Personal Data Protection: Mind the gaps](#) - Article by BIF President in Financial Express
- [Powering next-gen WiFi and broadband for all](#) - Article by BIF President in Voice and Data
- [Unlocking inclusivity navigating the world of mobile app accessibility](#) - Article by Dr Nirmita Narsimhan & BIF President in Communications Today
- [Must OTTs pay telcos?](#) - Article by Mr. TV Ramachandran, President, BIF in the Financial Express

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- **[Path ahead for BharatNet can benefit from past lessons](#)** - Article by BIF President in Voice & Data
- **[The flood of OTT misinformation](#)** - Article in Communications Today by BIF President

NOVEMBER 2023

- **[FTTH + Wi-Fi = Solution for India's digital economy](#)** - Article by Mr. TV Ramachandran, President, BIF in Voice & Data
- **[Hype, hope, and hard truths](#)** - Article by BIF President in Financial Express
- **[Satellite communication](#)** - A force for public good - Article by BIF President in Communications Today
- **[Tech players say govt to lose Rs 2 trillion if WiFi band not opened up](#)** - Article in Financial Express based on BIF's submission to the Government on the "Adoption of License-Exempt Full 6 GHz Band for Advancing 5G and Beyond"

DECEMBER 2023

- **[India's digital backbone: Crafting a resilient Internet future](#)** - Our net security scores a global high - Article in Communications Today, authored by Mr. TV Ramachandran, President, BIF

JANUARY 2024

- **[Ushering in the era of Indian Telecom Resurgence](#)** - Article by BIF President Mr. TV Ramachandran in Voice & Data
- **[Affordable Broadband Access to Hi-Quality Content](#)** - Article by Mr. TV Ramachandran, President, BIF in Communications Today

FEBRUARY 2024

- **[Driving Home the Gigabit Economy Dream](#)** - Article by BIF President Mr. TV Ramachandran in the February edition of Voice & Data magazine
- **[Tapping PwDs' potential](#)** - Article in The Hindu Business Line, authored by Mr. TV Ramachandran, President, BIF
- **[Private 5G: India lags China](#)** - Article in The Economic Times, authored by Mr. TV Ramachandran, President, BIF
- **[Reaching New Heights](#)** - Article by BIF President in tele.net

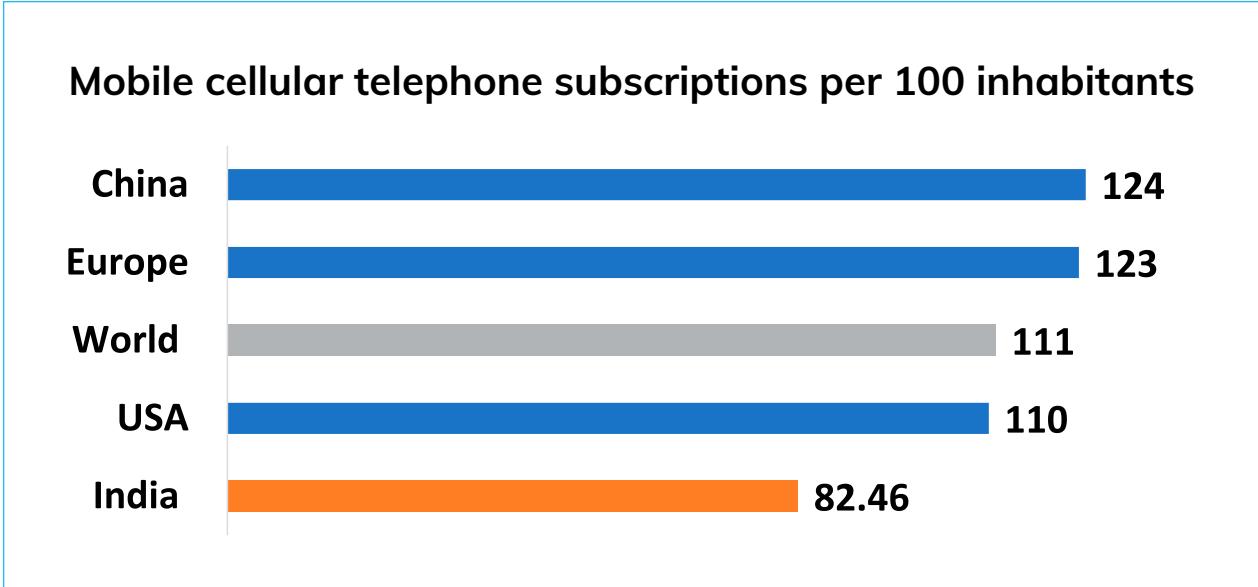
MARCH 2024

- **[Digital Inside: In-building connectivity infrastructure emerges as a key utility service](#)** - Article by BIF President in India Infrastructure Magazine

Telecom Sector-Stats & Insights

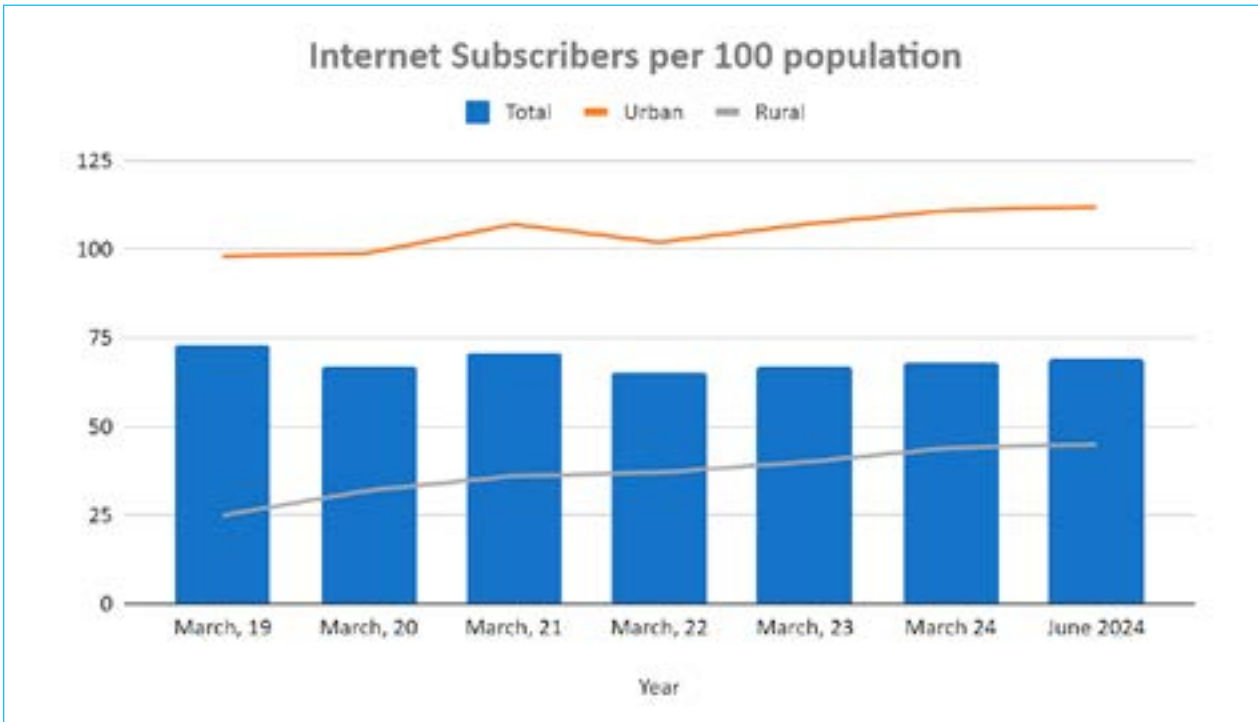
(FY 2022-23)

1. Mobile cellular telephone subscriptions per 100 inhabitants



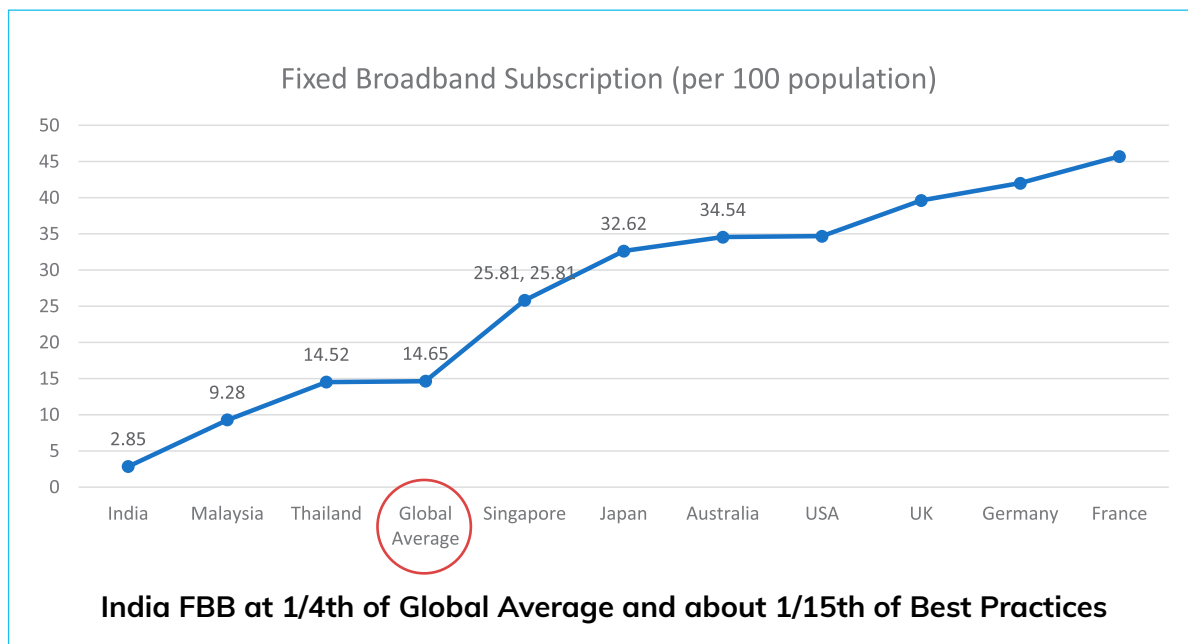
Source : Facts and Figures Report, ITU

2. Internet penetration -Urban Rural India



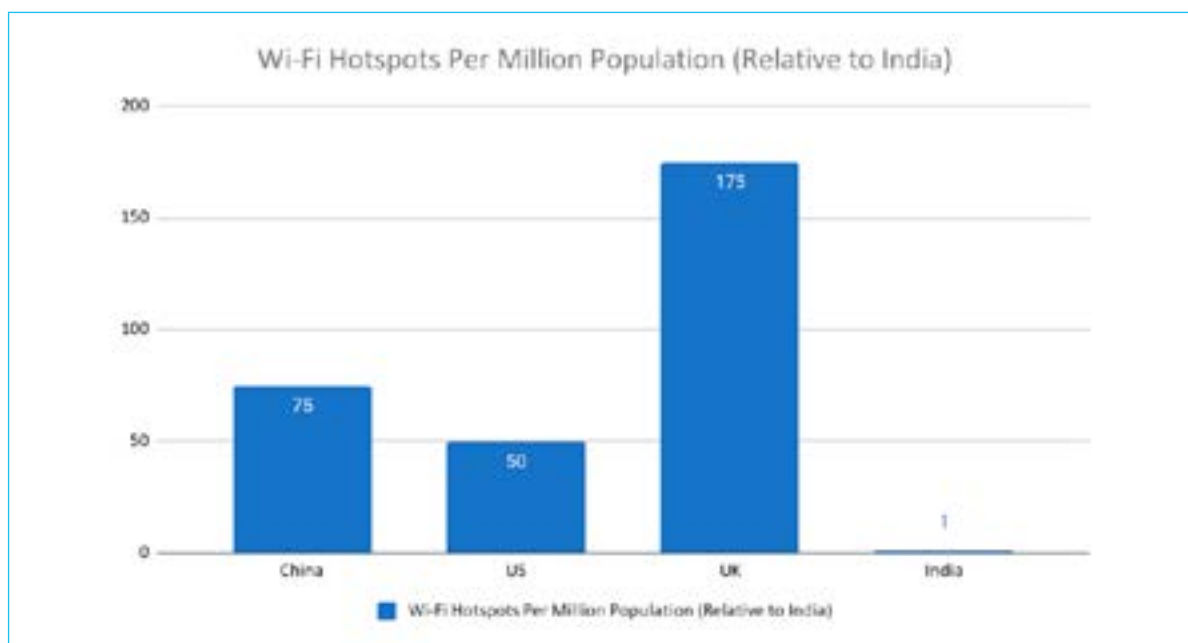
Source: TRAI Quarterly performance indicator report

3. Fixed Broadband Penetration : India and the world



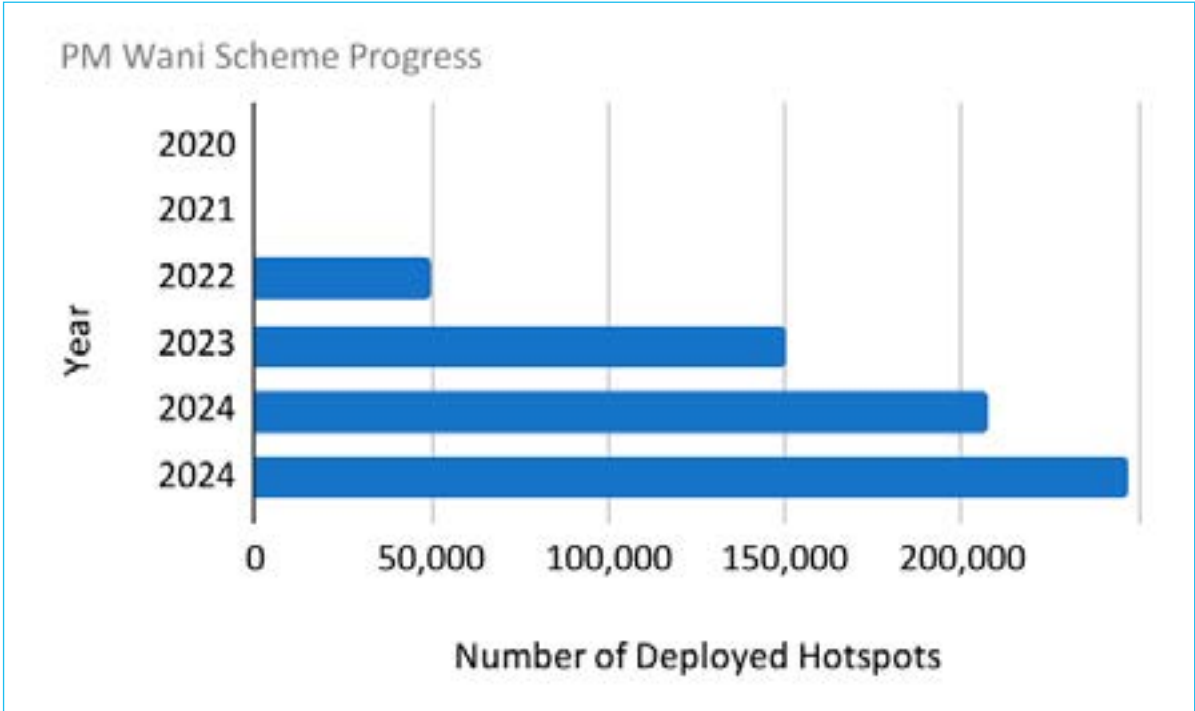
Source: PM Wani Central Registry

4. Public WiFi vis a- vis Rest of the World



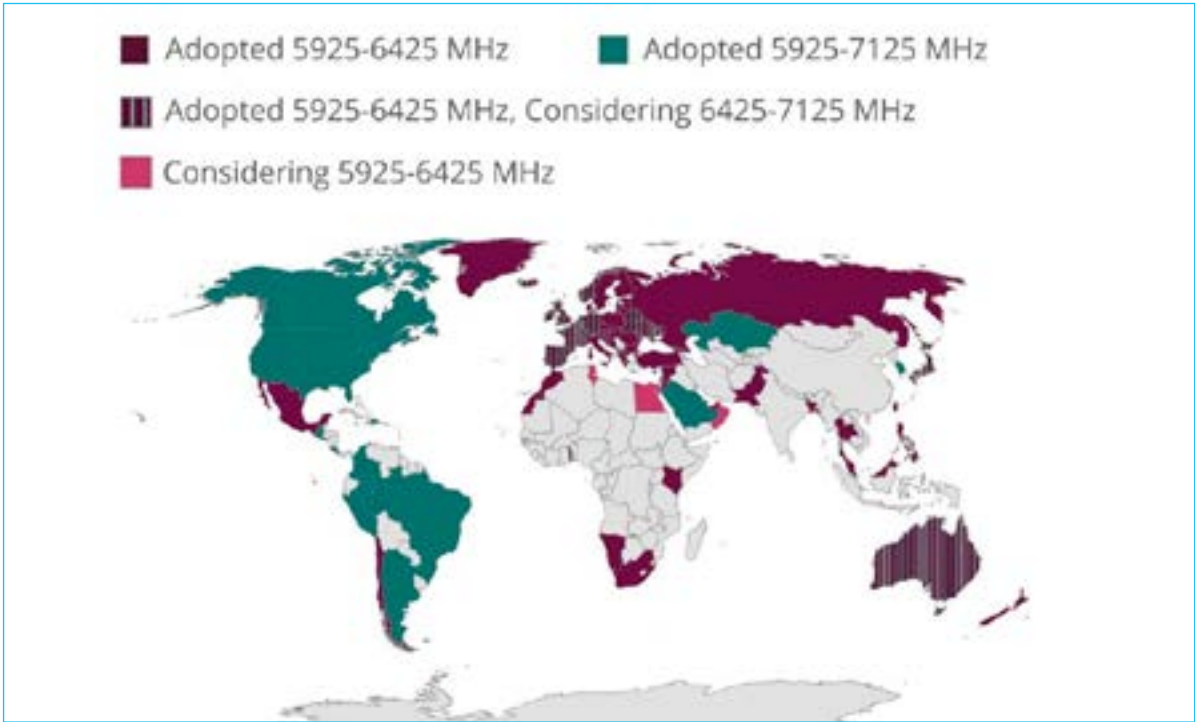
Source: Statista

5. Proliferation of WiFi- PM Wani Scheme



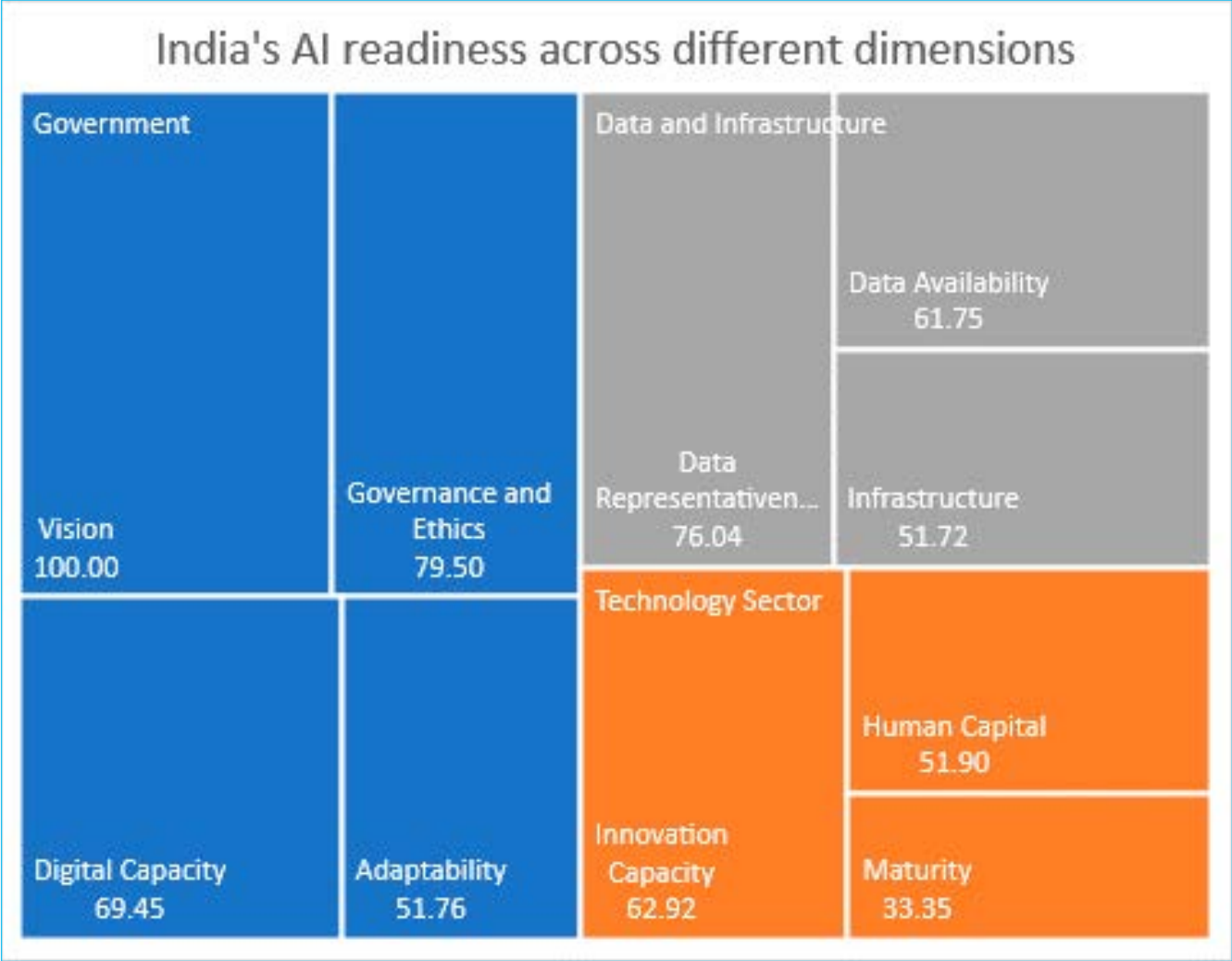
Source: PM Wani Central Registry

6. Countries that have delicensed 6GHz Globally



Source: Wifi Alliance

7. India' AI readiness across different dimensions



Source: Government AI Readiness Index 2023, Oxford Insights

Methodology: The index measures 10 dimensions across three pillars
(Pillar 1: Government, Pillar 2: Technology Sector, Pillar 3: Data & Infrastructure)



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