

## Economic Value of Wi-Fi in unlicensed spectrum bands to be almost INR 12.7 lakh crores in India: BIF Report

- BIF Report on “The Economic Value of Wi-Fi Spectrum for India” released on occasion of World Telecommunication & Information Society Day (WTISD) 2021

**17<sup>th</sup> May 2021, New Delhi:** Broadband India Forum (BIF), released a report on “*The Economic Value of Wi-Fi Spectrum for India*”, on the occasion of the **World Telecommunication & Information Society Day (WTISD) 2021**, via an engaging session of The Digital Dialogues. The report was jointly released by **Shri K Ramchand, former Director General Telecom, DoT; Shri R Shakya, DDG, Satellite, DoT; and Ms. Nivruti Rai, Country Head, Intel, India**, who participated in the virtual session. **Mr. Houlin Zhao, Secretary-General, ITU** and **Mr. Mats Granryd, Director General, GSMA**, conveyed their views on the occasion through vibrant video messages.

**Mr. TV Ramachandran, President, Broadband India Forum**, commented on the release of the report: “*Globally, Wi-Fi is being offered through delicensed 6 GHz and 60 GHz bands in several countries, ensuring large benefits to both the people, and the economies. Delicensing these bands in India would greatly augment our broadband quality and speeds, boost the Government’s PM WANI Public Wi-Fi program, and also contribute significantly to other critical segments and applications such as SRDs. As the study indicates, devices/equipment ecosystem in V-band could alone contribute almost INR 50k crores to the national GDP by 2025, if delicensed. Such potential must be tapped for the nation’s benefit.*”

He further said that, “*While this report presents the potential economic benefits of delicensing these bands - so that appropriate policy measures may be actioned - one must also consider the spillover social benefits of the same. The resultant proliferation of access to quality data connectivity for people via Wi-Fi will lead to increased inclusion, empowerment, knowledge, productivity, job opportunities, security, etc., thereby adding considerably to the people’s progress and wellbeing, especially in rural areas.*”

The BIF Report on “The Economic Value of Wi-Fi Spectrum for India” is authored by **Professor Rekha Jain, a renowned academician, Sr. Visiting Professor at ICRIER, and former Chair of the IIMA TCOE (Telecom Center of Excellence)**. The report examines the current and potential economic value of the key unlicensed existing Wi-Fi bands, the potential economic value for V-Band (60 GHz) and 6 GHz band in India, which is expected to be released in 2021. This was done by estimating the present economic value generated by various uses and applications of the current unlicensed spectrum band for Wi-Fi Access and by estimating the potential for future.

**Prof. Rekha Jain** shared on the Report: “*India presently has around 689 MHz of spectrum available for unlicensed use across various bands, which is very low in comparison to other countries. There appears to be a fair degree of policy reluctance towards making more Unlicensed Spectrum available here. The perception seems limited to the view that unlicensed spectrum does not provide direct revenues to the government, such as through license fee, auction, etc. But unlicensed bands have huge economic value. Such studies, indicating the economic value of unlicensed bands for Wi-Fi Access are very limited in India. The present study attempts to address this gap.*”

## Key Findings:

- **The estimated Economic Value of Wi-Fi in the considered unlicensed spectrum bands in India is significant for 2025: INR 12,69,998 crores** (for GDP at current prices). This is nearly 6% of the projected GDP in 2025.
- The **Economic Value rises significantly from 2020 to 2025 (an almost four-fold increase)**.
- The **Avg. Economic Value of key applications for Wi-Fi in 2020 (in existing unlicensed bands): INR 1.33 lakh crores** - significantly more than the telecom sector's expected revenue as per the 2020-21 budget.
- **Mobile Data Offloading (MDO) to account for nearly 81% of the total Economic Value of Wi-Fi by 2025.**
- **Higher speeds on Wi-Fi** in comparison to mobile networks make a **significant GDP contribution of INR 32,715 crores**, from the existing and potential unlicensed bands (60 GHz and 6 GHz).
- **GDP contribution due to V-Band Device/Equipment Ecosystem: INR 50,116 crores.**
- **V-Band could contribute to nearly 11% of the Total Economic Value in 2025** (*assuming that V-Band is unlicensed in 2023 and grows to 5% of its base value in 2025*).
- The potential **GDP contribution due to Short Range Devices (SRDs) in V-band: INR 39,897 crores** (*significant - nearly 3% of the Total Economic Value in the considered bands*).
- **Wi-Fi 6E to contribute nearly 9.5% (significant)** to the total Economic Value in 2025.
- GDP contributions due to increase in **IoT penetration would amount to INR 17,609 crores in 2025**, while that **from the device ecosystem would be INR 18,602 crores**. This constitutes **nearly 30% of the Economic Value of Wi-Fi 6E**.

## Recommendations:

- **Wi-Fi Penetration:** Wi-Fi needs to be allowed to proliferate, given their significant Economic Value across different bands. India stands at 1/4<sup>th</sup> of US and half of China in penetration of Wi-Fi hotspots, which increased by 568% globally, but merely by 12% in India.
- **Unlicensing More Spectrum Bands:** India has very little unlicensed spectrum available for use, compared to the world. The decision-making process needs to be sped up and many more bands need to be unlicensed in India, as in other countries.
- **Need to Unlicense Higher Bands:** Higher frequency bands offer higher speeds, which contribute significantly to increased GDP. This rationale should be used to support progressive unlicensing.
- **Last Mile Connectivity:** India has a major issue of last mile connectivity, especially in the case of high-speed data. Public Wi-Fi via unlicensed spectrum would be a cost-effective mechanism for addressing this and providing rural connectivity.

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## About Broadband India Forum

Broadband India Forum (BIF) functions as an independent policy forum and knowledge-based think-tank that works for the development and enhancement of the entire broadband ecosystem in a holistic, technology-neutral and service-neutral manner. BIF has established itself as a thought leader and a credible and effective voice, to help propel the nation to achieve the country's ambitious vision of creating a Digital India. To achieve this, BIF works to promote the rapid development of policies, so as to facilitate affordable and high-speed ubiquitous broadband throughout the country.

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