Understanding Consumer Perspectives on 6GHz Band

Background and Context

The internet has had a pervasive impact on human life and has accelerated a 'connected living' future. This need was further compounded and realised during the COVID-19 pandemic, post which the demand for internet in India increased by over 50 percent. With estimates suggesting the trend to accelerate further,[1] access to high-speed internet has become necessary for socio-economic growth.[2] Internet access has been crucial for services such as online education,[3] healthcare services,[4, 5] and financial services (including digital payments and online e-commerce).

High-speed internet can be accessed through broadband services (WiFi). In India, WiFi primarily operates on the 2.4 GHz and 5 GHz spectrum bands. However, experts opine that these spectrum bands are congested and overcrowded.[6] Despite increasing device density and availability of lesser bandwidth for internet usage, survey findings indicated that 2 in 3 broadband users in India struggle with either connectivity issues or lower speeds than what they paid for.[7]

In light of these woes, experts have raised concerns regarding the adequacy of existing bands to support current internet needs and evolving technologies such as Augmented Reality (AR)/ Virtual Reality (VR).

There have been representations by subject experts to open frequencies, particularly in the 6 GHz band, as it is expected that freeing the spectrum would decongest existing spectrum bands and lead to better connectivity.[8] Further, the 6 GHz band may have several additional benefits, including lower latency, better security, and support for several devices such as routers, laptops, and phones.

CUTS Project

In light of the above, it is imperative to understand and highlight consumer perspectives regarding challenges and concerns arising from broadband services operating in the existing bands, preferences, possible benefits and expectations from the new 6 GHz band. Accordingly, CUTS is executing a **six-month study (October 2022-March 2023)** to understand and build a nuanced understanding of consumers' current experiences, challenges, expectations and the need for WiFi 6E.

Such evidence-based research complements the existing literature on spectrum availability and future needs in India, helping inform policy/regulatory discourse.

Research Methodology

The study would adopt a bottom-up, evidence-based research approach using primary and secondary research methodologies. The step-wise methodology that shall be adopted for the project is mentioned below:

- **Literature Review:**
  Extensive literature review of research reports, op-eds, international practices, etc., will be conducted on the subject to understand challenges and concerns arising from the existing bands, preferences and expectations from the new band and possible benefits of the 6 GHz band. A comparative analysis of various jurisdictions on making the 6GHz spectrum available and its possible impact on consumers will also be conducted.

- **Gap Analysis:**
  A gap analysis will be conducted based on the literature review to identify issues requiring validation from primary research and information gaps that need to be plugged in from a consumer perspective. This will also help frame the hypothesis to be tested through primary research.

- **Primary Research:**
  Focused Group Discussions (FGDs) shall be conducted in physical or virtual mode, with consumers and consumer groups (representing

different consumer demographics and profiles such as location, gender, occupation, age, income, occupation, and internet usage, among others). Techniques like stated preference methods, technology acceptance models, simulation exercises, or the like, as may be appropriate, would be deployed for testing the hypothesis through the exercise.

- **Analysis:**
  The primary and secondary research findings shall be analysed and captured in an appropriate format (presentation/ report).

- **Advocacy and Dissemination:**
  Focused one-to-one communication shall be sent to relevant government agencies (such as MeitY, TRAI, MCA, Standing Committee on Information Technology, NITI Aayog, etc.) and relevant policy influencers. An op-ed in a national daily would also be published for dissemination of findings to the larger audience, which includes: consumer groups,

industry players, and academicians, among others. The outputs prepared as a part of the project would be released on CUTS email forums and social media accounts.

Project Outputs

The following outputs are expected to be prepared as a part of the project:
1. A briefing paper or consumer explainer highlighting challenges and concerns arising from the existing bands, preferences and expectations from the new band and possible benefits of the 6 GHz band;
2. A policy brief that conducts a comparative analysis of policies/ practices regarding the extended 6 GHz spectrum in other jurisdictions;
3. Presentation/report capturing findings from the FGDs;
4. Representations to relevant government officials and other stakeholders; and
5. Op-ed in a national daily

Endnotes

[1] https://telecom.economictimes.indiatimes.com/news/delicensing-of-6ghz-band-to-enable-local-companies-corner-large-global-wi-fi-6e-market-pie-iafi-to-dot/87535870

[2] https://www.worldbank.org/en/topic/digitaldevelopment/brief/connecting-for-inclusion-broadband-access-for-all

[3] https://www.igauge.in/admin/uploaded/report/files/QSIGAUGECOVIDISPReportApril2020_1606732097.pdf

[4] https://www.heart.org/en/news/2020/08/05/high-speed-internet-offers-key-connection-to-health-but-millions-lack-it

[5] https://blogs.lse.ac.uk/southasia/2021/06/28/india-digital-divide-and-the-promise-of-vaccination-for-all/

[6] https://www.trai.gov.in/sites/default/files/201608260616254662529Wi-Fi_Alliance.pdf

[7] https://theprint.in/tech/2-in-3-broadband-users-in-india-struggle-with-connectivity-issues-or-low-speeds-survey-shows/830814/

[8] https://trai.gov.in/sites/default/files/201609011026048541407ISPAI.pdf