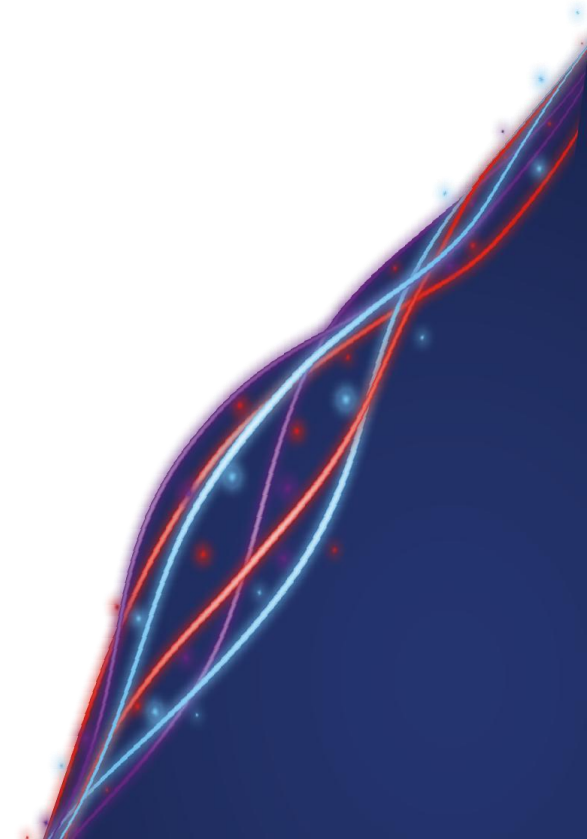


6 GHz Wi-Fi Use Cases For the Indian Economy

Munesh Kumar

JWA, RLO, WPC Wing



Next generation use cases require much faster data

- Immersive experiences such as robotic surgeries, Industrial automation, AR/VR
- Require expansive computational resources and connectivity hundreds, if not thousands, of times faster than 5G
 - Cannot be delivered by a wide-area networks such as IMT
 - Require local-area, short range communications such as the next generation Wi-Fi technologies designed for extremely high throughput and spectral reuse



Public Wi-Fi Use Case

- ❑ Public Wi-Fi is the key to bringing the next billion Indians online.
- ❑ While there are multiple access options to the internet, it is the most stable and scalable infrastructure across the country.
- ❑ It will provide an array of opportunities for different stakeholders to improve their competitiveness, market share and margins.
- ❑ The lower cost of Wi-Fi delivery translates into lower prices per MB for the end users, making it more affordable service.
- ❑ For telecom operators, it offers the promise of cheap mobile data offload. It will also ease pressure on spectrum.

Current Wi-Fi spectrum is inadequate to meet this demand

Currently only 2.4 GHz and 5 GHz bands have less than 1 GHz shared spectrum for all users of Wi-Fi

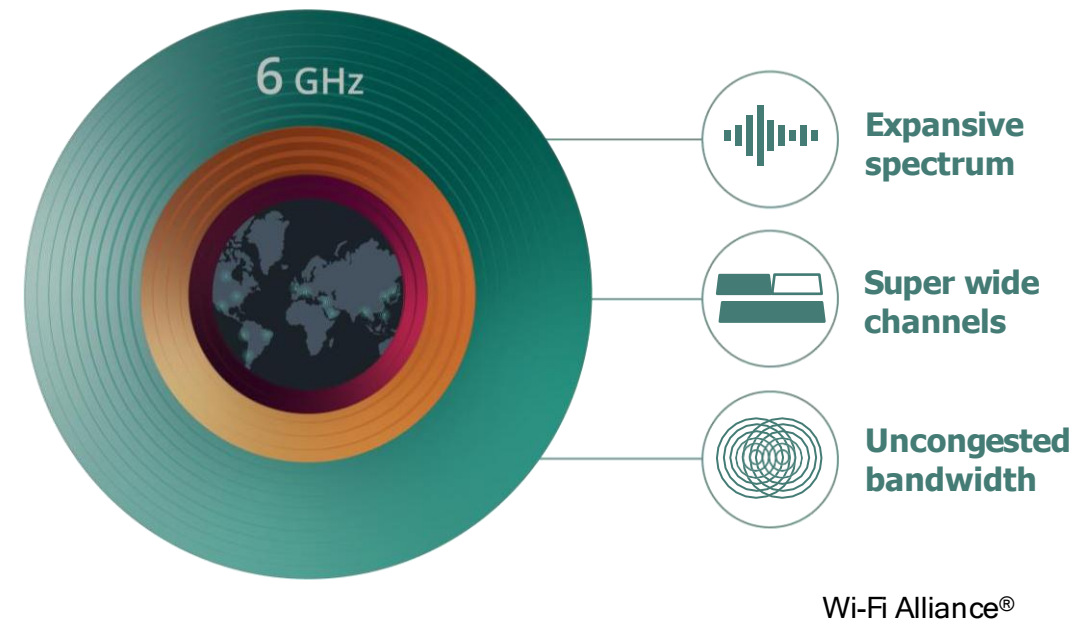
INDIA unlicensed bands
for Wi-Fi (2.4 GHz)
2400-2483.5 MHz (83 MHz);

INDIA unlicensed bands for Wi-Fi (5GHz):
5150-5350 MHz & 5470-5875 MHz (IND 29)
605 MHz

AS per current draft rules issued by the DOT, additional 500 MHz is to be released in 5925-6425 MHz

6 GHz has transformed Wi-Fi technology**

- Wi-Fi 6E: capabilities required for advanced use cases: faster speed, lower latency, higher efficiency, higher density
- Wi-Fi 7: enhanced VR/AR/XR, Industrial IoT, automotive, telepresence, immersive 3-D support with higher data rates, stringent latency, reliability, and QoS



Wi-Fi® delivers an IoT advantage

- **Standards-based, interoperable technology:** Wi-Fi provides a common platform to deliver a growing range of IoT applications that vary in performance, power, and latency requirements
- **Pervasive connectivity:** IoT systems are often controlled through mobile devices: Wi-Fi allows seamless control of smartphones, tablets.
- **Cost effective, simple deployment:** Wi-Fi is an easy-to-deploy and cost-effective foundation that requires no separate gateways or specialized skills to deliver IoT applications
- Backward compatibility, location awareness, sophistication among other core competencies for IoT



[Learn more](#) about Wi-Fi's role in IoT

Summary and Conclusion

- Wi-Fi is optimized for high performance indoor, and therefore delivers the bulk of the world's data traffic, including most data traffic on mobile devices.
- Demand for Wi-Fi will continue to grow with increased fiber deployments and cellular generations
- Wi-Fi 7 and Wi-Fi 8 will depend on availability of 6GHz spectrum
- 6GHz is perfectly suited for Wi-Fi to continue to deliver the connectivity users



THANK
YOU

