

# 6 GHz Unlicensed Sharing

## *Unlicensed Sharing Across the 6 GHz Band is Essential to Next Gen Wi-Fi 6 and 5G Wireless for All Americans*

### WHAT IS THE 6 GHZ BAND?

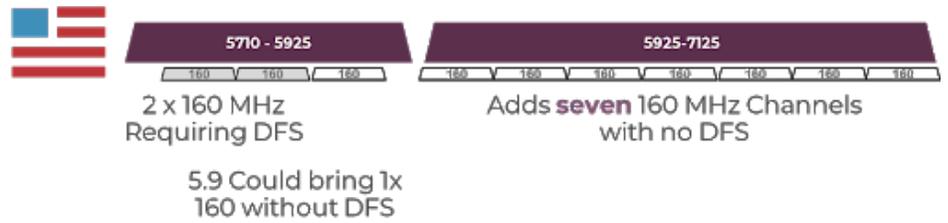
- The 6 GHz band (5925 – 7125 MHz) is extensively used but could be shared without interference by very low power Wi-Fi and other unlicensed devices.
- Incumbent licensees include fixed point-to-point services, Fixed-Satellite Service, Broadcast Auxiliary Service, and Cable Television Relay Service.
- The 6 GHz band can extend the current 5 GHz Wi-Fi band. It is the only spectrum available for the very wide and contiguous channels needed for gigabit-fast Wi-Fi 6 – the next generation of Wi-Fi with capabilities similar to cellular 5G.

### NEXT GENERATION WI-FI 6: CENTRAL TO OUR WIRELESS FUTURE

- Wi-Fi and other unlicensed devices play a central role in making wireless connectivity ubiquitous, fast and affordable at home, at work, in schools, libraries, hospitals and an increasing share of public spaces.
- Wi-Fi networks have a relatively low cost of deployment and install time.
- 70 to 80% of mobile device data traffic is over Wi-Fi, making wireless affordable for all.
- Economists estimate that Wi-Fi generates roughly \$500 billion each year in consumer surplus, as well as at least \$30 billion in GDP.
- Next Generation Wi-Fi 6 has the same capabilities promised by cellular “5G”: gigabit-fast, low latency, ability to connect hundreds of devices.
- Cities recognize the value of free public Wi-Fi networks. Although they can have limited speeds and security risks, public access helps ensure that residents, visitors, students have designated places to stay connected.
- Firms, schools and smart city applications can customize Wi-Fi 6 more affordably for their own needs – including future Internet of Things (IoT) networking.
- For schools and libraries, high-capacity Wi-Fi is crucial. For instance, 70% of teachers assign homework that requires internet access, making Wi-Fi an important tool in closing the “homework gap.”

*In a pending rulemaking, the FCC has proposed that a geolocation database can enable unlicensed sharing across the entire band (1200 megahertz total) without undue risk of harmful interference to incumbent users.*

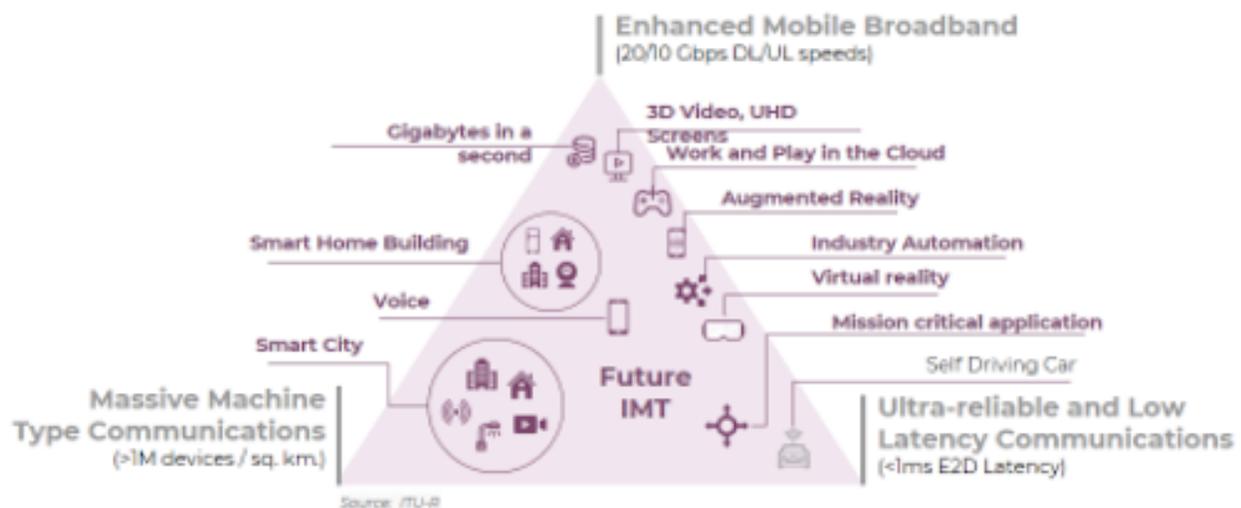
Unlicensed sharing of 6 GHz can add 7 gigabit-fast channels for Next Generation Wi-Fi



## 6 GHZ BAND IS *THE PRIME OPPORTUNITY TO OPEN SPECTRUM NEEDED FOR NEXT GEN WI-FI*

- The 6 GHz band is adjacent to the unlicensed bands most heavily used for Wi-Fi – the 5 GHz band.
- Wi-Fi 6, the next generation of Wi-Fi technology, is a critical part of the 5G wireless revolution.
- Wi-Fi bands need more capacity to handle the surge in mobile traffic expected from next-generation, internet-connected services such as virtual reality and interactive, high-def video.
- As the chart below shows, the coming Internet of Things (IoT) will hugely boost this demand and Wi-Fi’s value.
- In addition to serving as a foundation for mobile 5G services, Wi-Fi access to 6 GHz enables very high-capacity FIXED WIRELESS connections to homes and businesses in rural and exurban areas, extending 5G speeds and capabilities at a fraction of the cost of fiber or cable.

## Wi-Fi 6 in 6 GHz delivers for 5G services



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## WI-FI BANDS ARE INCREASINGLY CONGESTED, WITH MOST DEMAND AND USE INDOORS

- Wi-Fi carries the vast majority of mobile traffic, and that percentage is expected to grow as 5G applications proliferate.
- **Low power indoor use** free from a database control requirement (DFS) across the entire 6 GHz band is most critical to ensuring the benefits of 5G-capable and affordable Wi-Fi 6 for *all* Americans.
- More than 80% of mobile data is consumed indoors. Wi-Fi carries the majority of all internet traffic — and greatly exceeds the data traffic over cellular networks.
- Current Wi-Fi bands at 2.4 and 5 GHz are increasingly congested and struggling to meet demand as U.S. consumers and firms rely primarily on Wi-Fi for fast and affordable internet connections.
- The offloading of mobile device data traffic via Wi-Fi cellular generates over \$25 billion in economic value (as of 2017).

***Get engaged:** Anyone may submit a public comment to the FCC on this topic. Find an easy step-by-step guide to filing comments [here](#). This proceeding's docket number is 18-295.*