

The case for extending the unlicensed 6 GHz band into 7 GHz

Wi-Fi technology is improving to meet **rapidly growing demand** and applications, and *requires more contiguous spectrum* to build larger channels to deliver multi-gigabit Wi-Fi speeds and carry the increasing number of Wi-Fi-powered consumer devices.



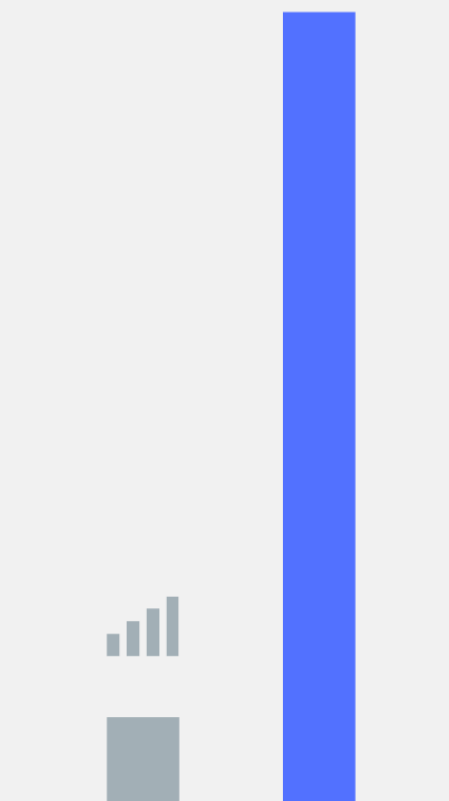
The latest Wi-Fi 7 standard uses channels up to 320 MHz in size to **promote spectral efficiency** (the data transmission can be much shorter in time and can get off the air more quickly) and to support data-hungry applications such as AR/VR.



The FCC's 2020 decision on the 6 GHz band left technologists **125 MHz SHORT** of the spectrum needed to fully deploy four 320 MHz channels now available in Wi-Fi 7.



Wi-Fi 7 is on track for the **fastest adoption of any Wi-Fi generation to date**, with improvements in spectral efficiency, traffic prioritization, latency, throughput, security and much more. Wi-Fi 7 cannot be optimized without additional spectrum.



WI-FI DATA IS 10X
that of **mobile networks**,
and continues to grow

In the US, Wi-Fi data consumed at home and at work, as well as in transportation hubs, arenas and beyond, is 10 times the data consumed on licensed mobile networks.

Extending a radio's capabilities into an adjacent band, such as from 6 GHz into 7 GHz, contributes to a consistent consumer experience, keeps costs low, and streamlines deployments

- Consumer Wi-Fi exists in 3 bands: 2.4 GHz, 5 GHz, and 6 GHz. These bands have similar radio propagation characteristics which means, for example, that your television set will receive streaming data from your router regardless of which band your router is using.
- There is a consumer benefit to contiguous spectrum since a second radio is not typically needed in devices, thereby keeping costs low.

Robust Wi-Fi is essential to our broadband future as our broadband networks speed up

- Broadband providers such as the cable industry are already implementing ambitious plans to raise the top speed of our broadband networks to 10 Gbps, and soon to 25 Gbps.
- Wi-Fi 7 is critically needed for Wi-Fi not to become a choke point in broadband delivery.
- Consumers do not want their streaming video to freeze; nor do AR/VR users want to become disoriented by poor data latency.
- If Wi-Fi speed do not keep pace with the capabilities of wired broadband, consumers will no longer be able to enjoy wireless connectivity in the home that they have come to depend upon.

Wi-Fi is a strong option for band sharing with federal incumbents at 7 GHz

- Cultivating solutions that allow multiple users, and multiple radio systems, to share the same frequencies is a U.S. “superpower,” and Wi-Fi has proven its ability to deliver.
- Federal incumbents in 7 GHz can coexist with Wi-Fi; implementation of the FCC's 6 GHz rules demonstrates this to be true for Low Power Indoor devices and for outdoor devices controlled by a database that enables Wi-Fi avoid incumbent radio use.