STATEMENT OF
COMMISSIONER BRENDAN CARR

Re: *Use of the 5.850-5.925 GHz Band*, ET Docket No. 19-308.

The conversation around U.S. leadership in 5G has tended to focus on two topics: infrastructure and spectrum. On infrastructure, we are modernizing our rules so that more Americans can get next-gen services. On spectrum, we are working to clear the wide channels needed to support the new, high-speed services that are increasingly important to our daily lives.

Licensed spectrum, in particular, tends to grab the headlines with 5G. You can understand that given the money involved. This week alone, we commenced an auction that has already raised about $1 billion in bids, and we also approved licenses from two prior auctions that netted around $3 billion.

The high-dollar sums involved with licensed spectrum can obscure the key role that unlicensed spectrum plays in securing U.S. leadership in 5G. You can see the value of Wi-Fi in so many contexts: it powers the primary Internet access point for most Americans (the one in their homes), most wireless traffic is handled on Wi-Fi, and without Wi-Fi offloading, our commercial wireless networks would strain to meet demand. Yet there are even more ways in which unlicensed spectrum will be critical to growing the 5G ecosystem.

Take augmented reality, as an example. AR promises to bring the knowledge and computational power of the Internet into our lives, without the need to stare at a screen and click until we find an answer. AR, when fully implemented, should sense what we are doing and provide aid—directions, recommendations, warnings—without our prompting. Its power is in disintermediating the Internet and life, eliminating the distraction of a device.

To really work, this requires what we've come to describe as 5G performance. AR needs a network that can respond in an instant. AR needs a network that can push data to the user quickly to provide rich graphics and videos. And AR needs a network with the capacity to handle the multitude of devices that Americans will demand.

5G networks using licensed spectrum can provide this performance. But in many cases, unlicensed spectrum will serve as the final link between the cloud and the consumer's device. That's because unlicensed spectrum, at least in the near-term, may be cost-advantaged for delivering massive data streams, may conserve battery life, and may assist in bridging the time for designers and technologists to improve the form factors of 5G devices, especially wearables.

To stimulate the services, devices, and ultimately the networks that make 5G meaningful to everyday Americans, we must have a 5G ecosystem that works everywhere Americans are. 5G services must work at home and in the car, at a coffee shop or in a park. And that means we will need a lot of unlicensed spectrum to help power 5G devices.

The good news is that much of this challenge already has been met. Cable providers have built gigabit speed capabilities to homes and businesses across their footprints. Billions of dollars of investment is made each year in upgrading those wired networks and in researching how to push them to higher gigabit speeds. The bottleneck soon may be not that last mile but those last few feet or inches. As devices demand more data and wired networks deliver more data, a lack of unlicensed spectrum, especially in the home, could leave all of that innovation for not.

I am proud of the Commission for getting ahead of this problem. We now have 580 MHz of unlicensed spectrum in the 5 GHz band. And the Commission actively is looking at 1,200 MHz in the 6 and lower 7 GHz bands as candidates for more unlicensed uses. In between those large swaths of spectrum sits the small but mighty band we consider in this item. The 45 MHz at the bottom of the 5.9 GHz band that we propose to free up for unlicensed use can be combined with the similar spectrum adjacent to it. Together, that would enable the first contiguous 160 MHz channel for unlicensed devices, free of any need to use coordination technologies that slow throughput. This is the type of clear spectrum

channels that Wi-Fi advocates have asked for in 6 GHz, and we have a chance through this item to meet that need starting in 5 GHz.

Growing the 5G ecosystem requires smart spectrum policy. It requires low-, mid-, and high-bands. And it requires both licensed and unlicensed spectrum.

I want to thank the Office of Engineering and Technology for its work on this item. It has my support.