



The Daily Dish

“Infrastructure,” 5G Edition

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Eakinomics: “Infrastructure,” 5G Edition

Part of the road to a 5G wireless broadband future is making sure there is enough high-quality spectrum available for these applications. One part of this effort is the Federal Communications Commission’s (FCC) recent [final rule](#) on the 5.9 GHz band; Jennifer Huddleston has the complete [blow-by-blow](#).

If you are like me, it is a bit hard to get your arms around these spectrum issues – especially if you are simultaneously getting your morning reboot dose of caffeine. Here’s the simple version.

The “5.9 GHz band” is the shorthand for the 75 MHz band of spectrum between 5.850 GHz and 5.925 GHz. (You can drop this lingo at your next/first cocktail reception and people will think you spent the pandemic studying spectrum issues.) As Huddleston summarizes the role of this band, “The transition of the 5.9 GHz band plays a critical role in the growing demand for connectivity and would likely accelerate next-generation telecommunications technologies by serving as a backbone for innovative connected devices in a range of industries, including transportation. The spectrum available in the 5.9 GHz band is uniquely valuable as it has less interference and a higher bandwidth than many lower frequencies and is adjacent to those bands already used for Wi-Fi and telecommunications purposes. It is a particularly useful band for these technologies that are facing increasing crowding at lower levels. In this way, the transition of the 5.9 GHz band supports the further development of next-generation Wi-Fi and 5G technologies.”

As it turns out, in 1999 the FCC gave the rights to this valuable band to the Department of Transportation (DoT). The theory of the case at that time was that autos would increasingly communicate with one another for safety and other purposes using dedicated short-range communications (DSRC) in this band. As can happen with forecasts, this one was off base, as automakers have largely used other technologies for self-driving vehicles and safety efforts. In light of this reality, it makes sense to shift the spectrum to more broad-based applications, and this is exactly what the FCC voted to do.

For the transportation advocates who are concerned about the move, there are two things to note. First, the FCC did not reallocate all of the 5.9 GHz band, and DoT will continue to have access to a portion for the DSRC projects that have come to fruition. Second, there is nothing that precludes a transportation application using the general-purpose band. In fact, like other connected technologies, transportation innovation may even benefit from the reallocation of this band. This is a pure win from the perspective of the economics of spectrum allocation.

Finally, the potential gains are quite substantial: “A [RAND analysis](#) suggests that transitioning the 5.9 GHz band to unlicensed spectrum could boost the economy by as much as \$106.3 billion based only on 2018 household smartphone, laptop, and tablet usage. As the analysis notes, this value increases when taking into account the growing number of other data-using and connected devices, from gaming consoles to smart-home connected devices. In the last year, Wi-Fi traffic has increased, and so it is likely that the economic impact will be even higher now as the band prepares to transition.”

A very large fraction of policy issues has divided along partisan lines in recent years. Reallocating the 5.9 GHz band is a good FCC policy that has been supported on a [bipartisan basis](#).