T-Mobile Licensee LLC
Request for Experimental Authorization
ELS File No. 1072-EX-CN-2019

Narrative Statement

By this application, T-Mobile License, LLC ("T-Mobile") seeks experimental authorization for a period of two years from the date of grant so that its affiliate, T-Mobile, USA, Inc., may test Fifth Generation ("5G") wireless technologies across the full 600 MHz band at certain sites located in the following Partial Economic Areas ("PEAs"): PEA 2 (Los Angeles, CA); PEA 8 (Dallas, TX); PEA 16 (Seattle, WA); PEA 18 (San Diego, CA); and PEA 26 (Las Vegas, NV). The Commission has already issued T-Mobile experimental authorization for the same operations at other sites in PEA 2 (Los Angeles, CA).[1/] This application requests the identical authority at additional sites in the same market as well as in four other areas. As explained below, T-Mobile is the licensee of 600 MHz spectrum in each of these markets. If it is able to access the additional spectrum – spectrum that would otherwise remain temporarily unused – at specific sites in those areas covered by this application, it will gain a better understanding of the new innovative services that the 600 MHz band can offer during the technology development phase of the various advanced features and functionalities of 5G NR. Accordingly, consistent with the Commission's issuance of authorization under call sign WK2XQF, grant of this application is in the public interest.

A. Background:

T-Mobile is licensed to operate on the 600 MHz band C, D, and E Blocks in both PEA 2 (Los Angeles, CA) and PEA 18 (San Diego, CA). Other entities hold authorizations for the 600 MHz band A, B, and F Blocks in PEA 2 (Los Angeles, CA) and for the F and G Blocks in PEA 18 (San Diego, CA).[2/] The 600 MHz band G Block in Los Angeles and the A and B Blocks in San Diego remained unassigned and unused since the conclusion of the broadcast incentive auction.

T-Mobile is also licensed to operate on the 600 MHz A and B Blocks in PEA 8 (Dallas, TX); the B, C, and D Blocks in PEA 16 (Seattle, WA); and the C, D, and E Blocks in PEA 26 (Las Vegas, NV). Other entities hold authorizations for the other 600 MHz band blocks in PEA 8 (Dallas, TX); PEA 16 (Seattle, WA); and PEA 26 (Las Vegas, NV).[3/] There are no unlicensed 600 MHz blocks in those PEAs.

1/ *See* T-Mobile License, LLC Experimental Authorization WK2XQF, ELS File No. 0987-EX-CN-2019 (filed Nov. 21, 2019) (granted Dec. 20, 2019).

2/ The 600 MHz band A and B Blocks in PEA 2 (Los Angeles, CA) are licensed to ParkerB.com Wireless L.L.C. ("ParkerB.com"), and the F Block is licensed to Channel 51 License Co LLC. In PEA 18 (San Diego, CA), the 600 MHz band F and G Blocks are licensed to ParkerB.com.

3/ In PEA 8 (Dallas, TX), LB License Co is authorized to operate on the 600 MHz C, D, and E Blocks, and ParkerB.com is authorized to operate on the F and G Blocks. In PEA 16 (Seattle, WA), CC Wireless Investment, LLC is authorized to operate on the 600 MHz A Block; LB License Co is authorized to operate on the E Block; and ParkerB.com is authorized to operate on the F and G Blocks. In PEA 26 (Las Vegas, NV), Bluewater Wireless II, L.P. is authorized to operate on the 600 MHz A Block; Star 600 is authorized to operate on the B Block; and ParkerB.com is authorized to operate on the F and G Blocks.

B. Purpose of Operation and Need for Experimental License:

T-Mobile has been a leader in clearing the 600 MHz spectrum it won in the broadcast incentive auction and deploying that spectrum for mobile broadband operations. As it recently reported, T-Mobile is proceeding on, or ahead of, the schedule the Commission established for clearing the 600 MHz band.[4/] Indeed, T-Mobile recently launched its 5G network on 600 MHz spectrum – the country's first nationwide 5G network – and it now covers more than 200 million people and more than 60 percent of the population across more than one million square miles, much of which is in rural areas.[5/]

T-Mobile seeks to make its 600 MHz service even better. That is why, among other things, it is conducting the tests permitted pursuant to the authorization the Commission granted under the call sign WK2XQF, which will allow T-Mobile to work with equipment vendors to test innovative 5G technologies. The test the Commission already authorized, and that T-Mobile would continue under the requested authorization, would evaluate 5G NR across wider bandwidths, especially in densely populated areas. As it noted in its earlier request, T-Mobile can best conduct that evaluation by using spectrum that is currently not deployed. Accordingly, T-Mobile seeks experimental authorization to test 5G NR technologies across the entire 600 MHz band at certain sites in PEA 2 (Los Angeles, CA); PEA 8 (Dallas, TX); PEA 16 (Seattle, WA); PEA 18 (San Diego, CA); and PEA 26 (Las Vegas, NV). In PEA 2 (Los Angeles, CA) and PEA 18 (San Diego, CA), T-Mobile seeks to use a combination of the 600 MHz spectrum blocks: (i) for which it is licensed; (ii) that have been licensed to other entities but are unused; and (iii) that remained unassigned after the broadcast incentive auction. In PEA 8 (Dallas, TX), PEA 16 (Seattle, WA), and PEA 26 (Las Vegas, NV), T-Mobile seeks to use a combination of the 600 MHz spectrum blocks: (i) for which it is licensed; and (ii) that have been licensed to other entities but are unused. Grant of the application would allow T-Mobile to continue to assess the full characteristics of the 600 MHz band using different technology vendors, particularly in congested markets, and gain a better understanding of the new, innovative services that this low-band spectrum can offer, without causing harmful interference to existing users of the band.

C. Protection Against Causing Interference:

Consistent with Special Condition 4 of its existing experimental authorization for the 600 MHz band, T-Mobile has established a point of contact identified below with "kill switch" authority should any interference occur to primary licensed services:

Christopher Wieczorek
T-Mobile USA, Inc.
601 Pennsylvania Ave., NW

4/ *See* Letter from Steve B. Sharkey, Vice President, Government Affairs, Technology and Engineering Policy, T-Mobile, to Ms. Marlene H. Dortch, Secretary, FCC, GN Docket No. 12-268, *et al.*, at 1 (filed Oct. 24, 2019).

5/ *See* T-Mobile News, *T-Mobile 5G: It's On! America's First Nationwide 5G Network Is Here* (Dec. 2, 2019), https://www.t-mobile.com/news/americas-first-nationwide-5g-network.

Washington, DC 20004
202-654-5913
chris.wieczorek@t-mobile.com

The following are the three other Special Conditions contained in the authorization for station WK2XQF. T-Mobile agrees to comply with these additional conditions upon grant of this application as well:

- T-Mobile is aware that other stations may be licensed on these frequencies and, if any interference occurs, it will be subject to immediate shut down.
- In lieu of frequency tolerance, the occupied bandwidth of the emission shall not extend beyond the band limits in the authorization.
- Operation is subject to prior coordination with the local Society of Broadcast Engineers frequency coordinator in each proposed area to protect the Broadcast Auxiliary Service operations.

D. Restrictions on Operation:

To implement the testing, T-Mobile will enable approximately 10 retail or experimental handsets per a site and connect them to certain base stations that will be able to access the spectrum for which it seeks authorization. T-Mobile will not activate either customer units or base stations for the exclusive purpose of using the 600 MHz spectrum to which T-Mobile is seeking access.

E. Public Interest:

Grant of the application is in the public interest because it will allow T-Mobile to further develop its plans for its 5G network using low-band spectrum and provide innovative services to consumers. In addition, grant of the application would allow T-Mobile to put the otherwise fallow spectrum to productive use without harming other licensees.

T-Mobile recognizes that experimental authorizations are issued on a secondary basis only and that grant of the application will provide it with no additional rights to permanently operate on the channels blocks covered by the experimental authorization. Where T-Mobile proposes to use spectrum licensed to others that is unused today, it will notify those other licensees of its proposed operations and, consistent with the authorization for station WK2XQF and the commitments noted above, it will terminate its operations immediately upon notification that those other licensees have initiated operations on their otherwise unused licensed spectrum. For currently unlicensed spectrum in PEA 2 (Los Angeles, CA) and PEA 18 (San Diego, CA), T-Mobile expects that the Commission will ultimately initiate a process to make those 600 MHz blocks available for the provision of service on a permanent basis. When that occurs, T-Mobile will cease all operations on the unassigned blocks under this authorization.