DESCRIPTION OF REQUEST

By the associated application, and pursuant to Section 5.54 of the FCC's rules,[1/] T-Mobile License, LLC requests special temporary authority ("STA") from March 20, 2022 to March 30, 2022 for its affiliate, T-Mobile USA, Inc. ("T-Mobile"), to operate a Cell on Wheels ("COW") and associated mobile devices in the 3700-3980 MHz band (the "C-band") at and around a site in Dallas, Texas. As described more fully below, T-Mobile is participating in joint industry/government testing of C-band operations to assess the potential impact of Fifth Generation ("5G") services in the C-band on radio altimeters operating in adjacent spectrum. The requested STA will allow T-Mobile to appropriately prepare for that testing. The operations proposed by this STA request will have no impact on any of the airports identified by the Federal Aviation Administration ("FAA") as requiring protection from 5G C-band operations or otherwise affect other primary users of the spectrum.

A. Purpose of Operation and Need for Experimental License

As the Commission is aware, wireless carriers are actively working with the FAA to determine how 5G C-band signals interact with aircraft instruments and ensure aviation safety.[2/] Pursuant to this effort, T-Mobile and other wireless providers are cooperating with the National Telecommunications and Information Administration ("NTIA"), the Department of Defense ("DoD"), and the FAA to conduct testing of 5G C-band signals and altimeter radio performance at Majors Airport, located in Greenville, Texas.

Grant of this application would serve the public interest because it will permit T-Mobile to conduct initial testing, *prior to* the testing in April, of the *same* COW that will be used in tests with the FAA and NTIA. That, in turn, will ensure that any issues with the COW are addressed promptly and that testing with the FAA and NTIA in April will proceed smoothly and efficiently. T-Mobile previously received experimental authorization to assess the potential use of C-band spectrum for 5G NR operations pending the approval of its long-form application for permanent authorization.[3/] Grant of the instant request for STA will be consistent with that approval and, more importantly, accelerate the deployment of the spectrum to bring next-generation services to the public, while safeguarding aircraft operations.

1/ *See* 47 C.F.R. § 5.54; *see also id.* § 5.61.

2/ *See* Federal Aviation Administration, FAA Statements on 5G, https://www.faa.gov/newsroom/faa-statements-5g (last visited Mar. 2, 2022); News Release, *Chairwoman Rosenworcel Statement on 5G Deployment Agreement*, FCC (Jan. 18, 2022), https://docs.fcc.gov/public/attachments/DOC-379352A1.pdf.

3/ *See* FCC Experimental Authorization (Call Sign WL2XDE) (modified by ELS File No. 0140-EX-CM-2021 (filed July 14, 2021)).

B. Restrictions on Operation

T-Mobile will enable approximately 10 handsets and connect them to the COW that will be able to access the spectrum for which it seeks authorization. T-Mobile will conduct its operations consistent with the Commission's equipment marketing and importation rules.[4/]

C. Protection Against Causing Interference

T-Mobile's proposed experimental operations will not affect altimeter use near any of the airports identified by the FAA that will have "buffer zones" related to 5G operations in the C-band.[5/] As indicated in the STA request, T-Mobile will only operate its limited number of mobile devices within 5 kilometers (or 3.1 miles) of the COW (which itself is a low-profile transmitter with a maximum power of 200 watts effective radiated power). The FAA's "buffer zones" reportedly encompass only slightly more than a mile,[6/] if not smaller.[7/] T-Mobile's limited area of operation will be substantially removed from those limited buffer zones – the two closest airports, Dallas-Fort Worth International and Dallas Love Field, are both 40-50 miles away from T-Mobile's proposed testing site.

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 spectrum covered by the STA. T-Mobile will coordinate its experimental operations with any earth station operators in the proposed region in order to avoid any potential disruptions and immediately cease transmissions if those operators experience harmful interference.[8/]

4/ *See* 47 C.F.R. § 2.803. The Commission recently revised its equipment marketing and importation rules, but those rules are not yet effective. *See Allowing Earlier Equipment Marketing and Importation Opportunities*, Report and Order, FCC 21-72 (rel. June 17, 2021). If those rules become effective prior to the preliminary testing in March, T-Mobile will comply with the new requirements.

5/ *See* FAA, *Airports with 5G Buffer* (Jan. 2, 2022), https://www.faa.gov/sites/faa.gov/files/2022-01/50%20Airports%20with%205G%20Buffer.pdf.

6/ *See* David Lumb, *FAA Lists 50 Airports Getting Temporary Buffer Zones Blocking New 5G Signals*, CNET (Jan. 11, 2022), https://www.cnet.com/tech/mobile/faa-lists-50-airports-getting-temporary-buffer-zones-blocking-new-5g-signals/.

7/ *See* Federal Aviation Administration, FAA Statements on 5G, https://www.faa.gov/newsroom/faa-statements-5g (last visited Mar. 2, 2022) (announcing that the FAA reached an agreement with AT&T and Verizon to further "shrink[] the areas where wireless operators are deferring their antenna activations").

8/ Pursuant to the Phase I clearing deadline for the C-band, satellite operators are required to certify that they have cleared earth station operations in the lower 120 megahertz of the C-band in the top 46 Partial Economic Areas ("PEAs"), which includes PEA 8 (Dallas, TX), by December 5, 2021. *See Expanding Flexible Use of the 3.7-4.2 GHz Band*, Report and Order and Order of Proposed Modification, 35 FCC Rcd 2343 (2020); *see also* News Release, *C-Band Spectrum Will Be Made Available for 5G Services on an Accelerated Basis*, FCC (June 1, 2020), https://docs.fcc.gov/public/attachments/DOC-364655A1.pdf ("Specifically, these companies must first clear 120 megahertz of spectrum in 46 Partial Economic Areas by December 5, 2021. In a second phase, they must clear the lower 120 megahertz in the remaining PEAs, plus an additional 180 megahertz nationwide, by December 5, 2023.") All five incumbent satellite operators have filed their Phase I certifications and have further suggested they are

T-Mobile does not anticipate use of the spectrum by other terrestrial wireless service providers during the period covered by the STA. Nevertheless, to the extent other entities are authorized to use the spectrum on an experimental or other basis and could receive potential interference from the proposed operations, T-Mobile will coordinate its spectrum use to remediate interference and, if required, terminate operations on any affected spectrum.

T-Mobile has established a point of contact identified below with "kill switch" authority should any interference occur to primary licensed services:

Chris Wieczorek
T-Mobile USA, Inc.
601 Pennsylvania Ave., NW
Washington, DC 20004
202-654-5913
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Should there be any questions regarding this application, the Commission is asked to contact Mr. Wieczorek.

ahead of the Phase II clearing deadline. And all Phase I certifications have been validated by the Wireless Telecommunications Bureau – meaning there likely few remaining earth stations that will be impacted by grant of this STA. *See, e.g., Expanding Flexible Use of the 3.7-4.2 GHz Band; Phase I Certification of Accelerated Relocation of SES Americom, Inc., as Amended*, Order, DA-21-1472 (rel. Nov. 24, 2021).