

T-Mobile License, LLC
FCC Form 442
Request for Experimental Authorization

Narrative Statement

By the associated FCC Form 442 and pursuant to Section 5.61 of the Commission's rules,^{1/} T-Mobile License, LLC seeks experimental authorization for a period of two years from the date of grant, and an associated waiver of the rules, so that its affiliate T-Mobile USA, Inc. ("T-Mobile") may continue to operate on spectrum in the 37.6-40 GHz band (the "39 GHz band") in and around the Dallas/Ft. Worth, TX, Irvine, CA, and San Diego, CA areas. Grant of this request will permit T-Mobile to continue to experiment, in cooperation with equipment manufacturers, for the future use of the 39 GHz band.

A. Background:

On May 21, 2020, T-Mobile submitted a request for Special Temporary Authority ("STA"), for a period of 180 days, to use spectrum in the 39 GHz band to begin testing base station and handset use of 800 megahertz of 39 GHz band spectrum in three markets – Dallas/Ft. Worth, TX, Irvine, CA, and San Diego, CA.^{2/} T-Mobile explained that the STA would help accelerate its ability to provide wider-bandwidth services using 39 GHz spectrum. The Office of Engineering and Technology ("OET") granted T-Mobile's request for STA under call sign WQ9XNJ, allowing T-Mobile to operate on an experimental basis until December 8, 2020.^{3/} On December 1, 2020, T-Mobile submitted a request for an extension of its current STA for a period of 180 days – *i.e.*, until June 7, 2021.^{4/} That application remains pending.

B. Purpose of Operation, Need for Experimental License, and Request for Waiver:

Section 5.61 of the Commission's rules states that an experimental licensee may continue operating under its current STA pending the disposition of its STA extension request, provided: (i) the licensee files an application for a conventional experimental license that is consistent with the terms and conditions of that STA; and (ii) the application for a conventional experiment license is filed at least 15 days prior to the expiration of the STA.^{5/} Consistent with its current STA, T-Mobile seeks experimental authorization so that it may continue to work with equipment manufacturers to conduct experimental testing using the spectrum below. All of the terms and conditions and T-Mobile's operational parameters will remain the same as those under its current

^{1/} See 47 C.F.R. § 5.61.

^{2/} See Application for Special Temporary Authority of T-Mobile License LLC, ELS File No. 0836-EX-ST-2020 (filed May 21, 2020) (amended June 17, 2020).

^{3/} See FCC Experimental Special Temporary Authorization (Call Sign WQ9XNJ).

^{4/} See Application for Extension of Special Temporary Authority of T-Mobile License LLC, ELS File No. 1818-EX-ST-2020 (filed Dec. 1, 2020). Because 180 days from December 8, 2020 is June 6, 2021, which is a Sunday, T-Mobile requested an extension until the next business day – June 7, 2021.

^{5/} See 47 C.F.R. § 5.61(c).

STA. T-Mobile also respectfully requests a waiver of the 15-day requirement so that it may immediately continue its experimental operations.^{6/} As discussed in further detail below, grant of the application and request for waiver will serve the public interest because it will allow T-Mobile to continue conducting testing in the 39 GHz band that will be vital to ensuring its use for innovative next-generation, including Fifth Generation (“5G”), services.

The chart below shows the spectrum for which T-Mobile seeks experimental authorization in the left column. The middle column shows the incumbent licensee of that spectrum, and the right column shows the new licensee of the spectrum, each of which has received approval of its long-form application for the 39 GHz spectrum listed.^{7/}

Dallas, TX – PEA008

Frequency (GHz)	Previous Licensee	New Licensee
38.6 – 38.7	StraightPath	StraightPath
38.7 – 38.8	StraightPath	High Band License
38.8 – 38.9	StraightPath: 38.80-38.85 GHz FiberTower: 38.85-38.90 GHz	High Band License
38.9 – 39.0	StraightPath: 38.90-38.95 GHz FiberTower: 38.95-39.00 GHz	T-Mobile
39.0 – 39.1	Nothing listed in ULS	T-Mobile
39.1 – 39.2	StraightPath: 39.10-39.15 GHz FiberTower: 39.10-39.20 GHz	T-Mobile
39.2 – 39.3	Teleport Communications America: 39.2-39.25 GHz	FiberTower
39.3 – 39.4	StraightPath	FiberTower

^{6/} Section 5.61(c) of the rules suggest that extensions of *an STA* may be granted if the two specified conditions are satisfied. Accordingly, T-Mobile requests waiver of the rules so that it may re-initiate operations pursuant to the already-submitted request for STA renewal. If the Commission grants this application for a conventional authorization, permitting T-Mobile to resume experimental operations for a two-year term, before granting waiver of the 15-day requirement, which would otherwise permit T-Mobile to continue operating under the current STA, T-Mobile expects that the Commission will dismiss as moot the currently pending application for STA renewal.

^{7/} See *Wireless Telecommunications Bureau Grants Auction 103 Upper Microwave Flexible Use Service Licenses*, Public Notice, DA 20-582, at Attachment A (rel. June 4, 2020).

Irvine, CA – PEA002^{8/}

Frequency (GHz)	Previous Licensee	New Licensee
38.6 – 38.7	FiberTower	StraightPath
38.7 – 38.8	StraightPath	High Band License
38.8 – 38.9	StraightPath: 38.80-38.85 MHz FiberTower: 38.85-38.90 MHz	T-Mobile
38.9 – 39.0	StraightPath: 38.90-38.95 GHz FiberTower: 38.95-39.00 GHz	T-Mobile
39.0 – 39.1	StraightPath: 39.0-39.05 GHz	T-Mobile
39.1 – 39.2	StraightPath: 39.10-39.15 GHz	T-Mobile
39.2 – 39.3	StraightPath: 39.20-39.25 GHz	FiberTower
39.3 – 39.4	FiberTower	FiberTower

San Diego, CA – PEA018

Frequency (GHz)	Previous Licensee	New Licensee
39.2 – 39.3	Teleport Communications America: 39.20-39.25 GHz	FiberTower
39.3 – 39.4	FiberTower: 39.30-39.35 GHz Verizon: 39.35-39.40 GHz	FiberTower
39.4 – 39.5	StraightPath: 39.40-39.50 GHz FiberTower: 39.45-39.50 GHz	FiberTower
39.5 – 39.6	StraightPath: 39.50-39.55 GHz Verizon: 39.55-39.60 GHz FiberTower: 39.55-39.60 GHz	FiberTower
39.6 – 39.7	StraightPath: 39.60-39.65 GHz FiberTower: 39.65-39.70 GHz	FiberTower
39.7 – 39.8	StraightPath	FiberTower
39.8 – 39.9	FiberTower: 39.85-39.90 GHz	T-Mobile
39.9 – 40.0	Teleport Communications America: 39.90-39.95 GHz	T-Mobile

C. Protection Against Causing Interference:

Consistent with its current STA, T-Mobile will notify each of the new licensees listed above before it re-initiates transmission on the requested 39 GHz frequency assignments. And, T-Mobile has established a point of contact identified below with “kill switch” authority should any interference occur to primary licensed services:

^{8/} Because T-Mobile’s operations has been, and will continue to be, limited to a single site in Irvine, CA, which is in Orange County, the chart shows only the previous licensees in Orange County, not the previous licensees throughout the entire Los Angeles PEA, in which Orange County is situated.

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D. Restrictions on Operation:

To minimize the impact on the spectrum environment in each market, T-Mobile will continue to limit its experimental operations in time and geographic scope. As the attached FCC Form 442 indicates, T-Mobile proposes to transmit using 39 GHz from a total of 19 base stations in the Dallas/Ft. Worth area in two small clusters, 1 base station in Irvine, and 1 base station in San Diego. The end user handsets with which each base station will be able to communicate are those that already include 39 GHz spectrum. There are a limited number of those handsets in operation today, and because of the limited range of 39 GHz signals, they will only be able to communicate when they are near one of the limited number of base stations T-Mobile will operate.^{9/}

E. Public Interest:

Grant of this request for experimental authorization and the associated request for waiver would serve the public interest because it will allow T-Mobile to continue the testing it is already engaged in today under its current STA. That testing has been critical in allowing T-Mobile to assess how networks incorporating significant contiguous spectrum in the 39 GHz band can be optimized. Not only has it enabled T-Mobile to test new and innovative base stations and handsets, but it has also given T-Mobile the opportunity to test their full capabilities and features, many of which require wide bandwidths for optimal functioning.

T-Mobile recognizes that experimental authorizations are issued on a secondary basis only and that grant of the application and request for waiver will provide it with no additional rights to operate permanently on the spectrum covered by the experimental authorization. As noted above, 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, unless they have agreed otherwise, terminate its operations immediately upon notification that those other licensees have initiated operations.

Should there be any questions regarding this application, the Commission is asked to contact Mr. Wieczorek.

^{9/} While the Form 442 lists 220 handsets, that is because T-Mobile shows the same 10 handsets in the market associated with each base station listed. These numbers are estimates, given the limited number of 39 GHz capable handsets available to consumers today. Actual testing handsets has been, and will continue to be, more limited.